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The Canadian Patent Office

RECORD

Vol. XX.—No. 4.

APRIL, 1892.

Price free by post in Canada and the United States, \$2.00.

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INVENTIONS PATENTED.

NOTE.—Patents are granted for 15 years. The term of years for which the fee has been paid, is given after the date of the patent.

No. 38,503. Machine for Treating Leaf Tobacco.

(Machine pour le traitement des feuilles de tabac.)

Richard Emanuel Ellis and Frederick Bastable, both of Syracuse, New York, U. S. A., 1st April, 1892; 5 years.

Claim.—1st. In combination with the cutting roller, pressure roller and their supporting frame, a tray for receiving the treated tobacco leaves, and a chute for delivering said leaves to the tray, as set forth. 2nd. In combination with the cutting roller R¹, pressure-roller R, and their supporting frame, the chute r, pivoted at its lower end, the pulley r¹, fixed to the axis of the chute, a spring forcing the chute with upper end toward the cutting roller, and a cord wound on the said pulley in opposite direction from that of the force of the spring, and a lever connected to said cord for operating the same, as set forth. 3rd. In combination with the cutting roller R¹, pressure-roller R, and their supporting frame, the arms f, f, the chute r, pivoted to said arms, the pulley r¹, on the axis of the chute, a spring connected to the pulley and one of the arms f, and holding the chute normally inclined to the cutting roller, the cam g, on the shaft of said roller, the lever h, pivoted to the frame and having one end lying on the cam, and a cord or chain h¹, connecting the opposite end of the lever to the pulley r¹, substantially as described and shown.

No. 38,604. Clothes Washer. (Machine à blanchir.)

Alphonse Rousseau and Marie Louise Rousseau, Fall River, Massachusetts, U.S.A., 1st April, 1892; 5 years.

Claim.—A clothes pounder comprising the funnel-shaped shell 10 provided with the handle socket 12, the openings 20, in its upper portion, the apertured transverse partition 14, near the bottom, the inclined transverse partition 19, above the partition 14, and sloping towards the aperture thereof, the valve 15, and the spring 17, having one end secured to the valve and the other to the handle socket, substantially as herein shown and described.

No. 38,605. Monkey Wrench. (Clé à écrou.)

Alexander Edward Gundlaek and William B. Poulton, both of Toronto, Ontario, Canada, 1st April, 1892; 5 years.

Claim.—As an improved monkey wrench, a spindle or shank having ratchet teeth cut on it and a head fixed on its end and projecting on either side of the shank and shaped substantially as described, in combination with a head adjustably fitted upon the shank and provided with a ratchet pawl and a block F, movably connected to the adjustable head, substantially as and for the purpose specified.

No. 38,606. Steam Radiator Attachment.

(Attache pour calorifère à vapeur.)

James Edwin Woodworth, assignee of Henry Ehrman Stager, both of Milwaukee, Wisconsin, U. S. A., 1st April, 1892; 5 years.

Claim.—1st. An attachment for steam-radiators, that comprises a shell having an air-escape opening, a standard arranged within the shell, a counterbalanced float-controlled lever fulcrumed to the standard, and a rod-valve connected to the lever in opposition to the air-escape opening, substantially as set forth. 2nd. An attachment for steam-radiators, that comprises a shell having the lower portion thereof provided with a fitting for connection with a radiator-coil, an air-escape opening in the shell, a float controlled valve arranged within said shell to oppose the air-escape opening, and a pipe for connecting the upper portion of the aforesaid shell with the radiator at a point above said fitting, substantially as set forth. 3rd. An attachment for steam-radiators, that comprises a shell having an air-escape opening, a plate detachably connected to the inner side of the shell bottom and provided with a standard, an irregular-shaped lever fulcrumed to the standard, a float and counter-weight carried on opposite ends of the lever, and a rod-valve pivoted to said lever in opposition to the air-escape opening in said shell, substantially as set forth. 4th. An attachment for steam-radiators, that comprises a shell having an air-escape opening, a standard arranged within the shell, a counterbalanced float-controlled lever fulcrumed to the standard, a rod-valve connected to the lever in opposition to the air-escape opening, and an expansion-valve supported on said shell to also oppose said air-escape opening, substantially as set forth.

No. 38,607. Return Bend for Steam Radiators.

(Coude de retour pour calorifère à vapeur.)

James Edwin Woodworth, assignee of Henry Ehrman Stager, both of Milwaukee, Wisconsin, U. S. A., 1st April, 1892; 5 years.

Claim.—1st. A return-bend for steam radiators, having a transverse partition provided with an opening, a pivoted valve for the opening, a float connected to the valve on the inlet side of the partition, and a counter-weight also connected to said valve on the outlet side of said partition, substantially as set forth. 2nd. A return-bend for steam radiators, that comprises a shell provided with a transverse partition having an opening therein, couplings on opposite sides of the partition, a pivoted valve for the opening in said partition, a rod extended on opposite sides of the valve, a float attached to the inner end of the rod, and a counter-weight arranged on the outer end of said rod, substantially as set forth. 3rd. A return-bend for steam radiators, that comprises a shell provided with extensions at approximately right angles to each other, a transverse partition arranged in the shell between the extensions thereof and provided with an opening, a bracket detachably connected to the interior of the vertically disposed shell extension on the outlet side of the partition, a counter-weighted float-controlled valve for the partition opening, an arm projected from the valve and pivotally connected to the bracket, and a cap detachably fitted to the outer end of said shell, substantially as set forth.

No. 38,608. Apparatus for the Manufacture of Sulphuric Acid. (Appareil pour la fabrication de l'acide sulphurique.)

Emile Deplace and Jules Deplace, both of Aubervilliers, France, 2nd April, 1892; 5 years.

Claim.—1st. In apparatus for the manufacture of sulphuric acid, a leaden chamber having a gas inlet and an outlet, and walls of such a shape, that the gases passing from one end to the other are deflected from their straight course and are forced to describe a cir-

cutious path, substantially as described, and for the purposes specified. 2nd. In apparatus for the manufacture of sulphuric acid, a leaden chamber adapted to form a circular path for the gases, passing from the inlet to the outlet of the chamber, substantially as described. 3rd. In apparatus for the manufacture of sulphuric acid, a leaden chamber adapted to form a circular path for the gases travelling through the chamber, and provided with two inlets at unequal distances from the centre or axis of the chamber, substantially as described and for the purposes specified. 4th. In apparatus for the manufacture of sulphuric acid, a leaden chamber having the shape of a circular ring with a sector cut out, the said chamber being provided at one end with two gas inlets at unequal distances from the centre and at the other end with a gas outlet, substantially as described and for the purposes specified. 5th. In apparatus for the manufacture of sulphuric acid, a leaden chamber adapted to form a circuitous path for the gases travelling from one end to the other, and provided with distributing pipes leading from the upper part, to the lower part of the chamber along the inner or outer wall, substantially as described and for the purposes specified. 6th. In apparatus for the manufacture of sulphuric acid, a concentrating or denitrating tower filled with natural acid-proof stone, such as feldspar, trachyte, granite, porphyry, basalt and lava, substantially as described and for the purposes specified. 7th. In apparatus for the manufacture of sulphuric acid, the combination of a leaden chamber adapted to form a circuitous path for the gases passing through the chamber and having two gas inlets at unequal distances from the centre, with a dividing chamber interposed between the denitrating tower and the leaden chamber, the said dividing chamber having in the centre a gas inlet and at each end an outlet towards the leaden chamber, and being filled with parallel rows of tubes or with natural acid-proof stone adapted to sub-divide the two currents of gases on their passage from the centre to the ends of the dividing chamber, substantially as described and for the purposes specified. 8th. In apparatus for the manufacture of sulphuric acid, the combination of a concentrating tower A, with a denitrating tower C, connected with each other and filled with natural acid-proof stones, substantially as described and for the purposes specified.

No. 38,600. Electric Motor for Wheeled Vehicles.

(*Moteur électrique pour voitures à roues.*)

Robert S. Dobbie, Brooklyn, New York, U.S.A., 2nd April, 1892; 5 years.

Claim.—1st. A wheeled vehicle, having an electric motor elastically supported, and having its rotary part secured to a hollow sleeve, which surrounds an axle of the vehicle, and is provided with elastic or yielding bearings at its opposite ends between it and the axle, substantially as described. 2nd. A wheeled vehicle, in combination with the following elements, an electric motor elastically sustained or supported beneath the vehicle, and having its moving part secured to the driving wheels by one or more link connections, a hollow sleeve, which surrounds a shaft of the vehicle, and elastic or yielding bearings between the sleeve and the shaft, substantially as described. 3rd. A wheeled vehicle, having an electric motor sustained or supported entirely by elastic means, and having its rotary or movable part attached to the driving wheels or shaft by a hollow sleeve, being provided with journal bearings at its opposite ends, and elastic or yielding bearings between it and the shaft, substantially as described. 4th. A wheeled vehicle, having an electric propelling motor entirely sustained or supported by elastic supporting devices, the armature or rotary part thereof being supported by a hollow sleeve, which surrounds the axle, uniting the drive wheels, said sleeve being mechanically attached to the drive wheels by link connections, and provided with yielding or elastic bearings between it and the axle, substantially as described. 5th. In a wheeled vehicle, a pair of driving wheels united by an axle, in combination with a hollow sleeve, surrounding the axle, said sleeve having mechanical connection with the rotary part of an electric motor, and the aforesaid driving wheels and elastic or yielding connection between it and the shaft, which joins said driving wheels, substantially as described. 6th. A wheeled vehicle, having a pair of driving wheels united by a shaft, in combination with a hollow sleeve surrounding said shaft, said sleeve being rigidly secured to the rotary part of an electric motor, and connected mechanically to the driving wheels, and provided with one or more elastic bearings between it and the axle, substantially as described. 7th. A wheeled vehicle, having an electric motor, the rotary part of which is connected to the driving wheels by a link connection, and the entire motor sustained against vertical and lateral or longitudinal motion by vertical and lateral springs, substantially as described. 8th. A wheeled vehicle, having an electric motor sustained or supported by springs, and its armature connected through a two-part sleeve and link connection with the driving wheels, said sleeve having elastic or yielding bearings at each end with the axle which joins the driving wheels, substantially as shown and described. 9th. A wheeled vehicle, having a pair of driving wheels connected by a rigid shaft, in combination with a hollow sleeve surrounding said shaft, said sleeve having spring bearings between it and the shaft, and journal bearings at its opposite ends connected to the body of an electric motor, and additional mechanical connections with the rotary part of said motor and driving wheels, the said motor being

sustained or supported by springs, substantially as described. 10th. A wheeled vehicle, having a pair of electric motors sustained from the frame of the vehicle by springs, said motors being mechanically joined together by yielding tie rods, substantially as described.

No. 38,610. Grain Cleaning Machine.

(*Tarareuse à bras.*)

Harvey Matthew Wadleigh, Stevens Point, Wisconsin, assignee of Joab Clift Fisher, Beloit, Kansas, both of U. S. A., 4th April, 1892; 5 years.

Claim.—1st. In a grain-cleaning machine, the combination, with a stationary casing and a revolving shaft passing longitudinally therethrough, of an agitator-disk secured to said shaft, having spirally-arranged ribs on one side, and series of projecting agitator-wings on the other side, substantially as set forth. 2nd. In a grain-cleaning machine, the combination, with a stationary cylinder, of a head consisting of an annular shell with inwardly-projecting retaining-lugs, and a removable ribbed disk having circumferential projections secured to the projections on the annular shell, substantially as set forth. 3rd. In a grain-cleaning machine, the combination, with a stationary scouring-casing, of a revolving shaft passing longitudinally therethrough, and disks mounted on said shaft and connected together solely by series of flat strips spirally disposed, extending at an angle from the periphery of one disk to that of the other disk, and other flat strips forming a fan, substantially as set forth. 4th. In a grain-cleaning machine, the combination, with a stationary casing, and a revolving shaft passing longitudinally therethrough, of an agitator disk having an extended hub secured to said shaft, a series of agitating-wings projecting radially from said hub, and a series of other agitating-wings radially disposed around the periphery of said disk on the same side as the first-named series of wings and extending to about the outer circular line of the latter, but not in radial line therewith, substantially as set forth.

No. 38,611. Mop Wringer. (*Essoreuse de torchon.*)

Geo. C. Morrill and Edward L. Collins, both of Boston, Massachusetts, and Charles Gifford, Gardiner, Maine, assignees of Arthur McCausland, also of Gardiner, Maine, all of the U. S. A., 4th April, 1892; 5 years.

Claim.—1st. The combination, with a pail or receptacle, of a roller journaled in fixed bearings, a roller journaled in a spring actuated wringing bracket or frame and means for regulating the spring pressure upon said roller-bracket, substantially as set forth. 2nd. The combination, with a pail or receptacle, of a pair of rollers, a shaft, means for rocking the latter and holding it in position, and a bracket or frame carrying one of the rollers and mounted on the shaft, substantially as set forth. 3rd. The combination, with a pail or receptacle, of a pair of rollers, a shaft, means for rocking and securing said shaft, a bracket carrying one of the rollers loosely mounted on the shaft, and a spring yieldingly connecting the shaft and bracket, substantially as set forth. 4th. The combination, with a pail or receptacle, and a frame therein, of a pair of rollers, one journaled in fixed bearings in the frame, a shaft having a spring coiled thereon, a toothed segment on the shaft, a worm adapted to operate to rock the segment and shaft, and a swinging bracket loosely mounted on the shaft, connected yieldingly therewith, and having one of the rollers journaled in it, substantially as set forth. 5th. The combination, with a pail, of a frame carried thereon having an opening in one side, and a normally closed yielding gate for closing said opening, substantially as set forth. 6th. The combination, with a pail, of a frame carried thereon, having an opening in one side, of ears on the frame in proximity to said opening, a shaft carried by said ears, a spring encircling the shaft, and secured at one end thereto and at the other end to the frame, and a gate carried by said shaft, adapted to close said opening in the frame, substantially as set forth.

No. 38,612. Harness Tug. (*Mancelle.*)

Joseph W. Roberts, Oberlin, Kansas, U.S.A., 4th April, 1892; 5 years.

Claim.—In a hame tug, the combination of a trace clip comprising a rectangular socket having a longitudinal opening to receive a trace, and provided with perforated lugs arranged at one end and disposed at each side and at an intermediate point, and adapted to receive a pintle, the eye having its end twisted and arranged on the recesses formed by said lugs, and enlarged and perforated and hinged to said lugs, and a buckle provided with four loops 11, and having two ways arranged at right angles to each other, one of said ways being sunken or depressed and the other way being formed by elevated portions, whereby one strap is held out of frictional contact with the other and is prevented wearing the same, substantially as described.

No. 38,613. Nut Lock. (*Arrête-écrou.*)

Benjamin Franklin Gram, Cordelia, and William Bard, Columbia, both of Pennsylvania, U.S.A., 4th April, 1892; 5 years.

Claim.—1st. In a nut lock, the combination, with a bolt having a shoulder formed thereon, of a washer having a recessed lug, a spring actuated pawl located in said recess, and a ratchet-faced nut adapted to be engaged by the pawl, substantially as and for the purpose specified. 2nd. In a nut lock, the combination, with a bolt having

a shoulder formed thereon, of a washer, a recessed lug formed on the inner face of the washer and having an opening in its rear wall, a pawl located in the recess and having its rear end registering with the opening in the rear wall thereof, a ratchet-faced nut constructed to be engaged by the pawl, and a spring adapted to keep the pawl in engagement with the ratchet, substantially as specified. 3rd. In a nut lock, the combination, with a bolt enlarged on one side, said enlargement extending from the head of the bolt a portion of the distance between the head and the screw, and having a socket in the inner end thereof, of a washer having a recessed lug adapted to bear against the inner end of the enlargement of the bolt, and having an opening in its rear wall registering with the socket in said enlargement, a pawl located in said recess and extending through the washer and adapted to pass through the opening in the rear wall of said recess, a ratchet-faced nut constructed to be engaged by the pawl, and a spring coiled about the pawl and adapted to hold the same in engagement with the ratchet, all constructed and operating substantially as and for the purpose specified.

No. 38,614. Lamp Kettle. (*Bouillotte à thé.*)

William Henry Holden, Hamilton, Ontario, Canada, 4th April, 1892; 5 years.

Claim.—A lamp kettle consisting of a body D, an interior funnel F, having its exit in the top or at one side of the body D, a mica light H, a collar E, a base A, lugs C, C', vertical slides B, B', adjustably securing the base A to the lugs C of the body D, a spout J, cover I, and handle K, all arranged and constructed to fit over a lamp, substantially as and for the purpose specified.

No. 38,615. Governor for Steam Engines.

(*Gouverneur de machine à vapeur.*)

George Fussel, jr., Lockport, New York, U.S.A., 4th April, 1892; 5 years.

Claim.—1st. The combination, in a governor, of the balls 11, the arms 10, having ears 15, extending above the pivotal point of the said arms, and an adjustable spring 17, set between and acting on the ears 15, substantially as described. 2nd. The combination of the standard 1, having grooves in its side, with the slides 14, moving in said grooves, the ring 13, acting on said slides, and connected to the arms 10, carrying the balls 11, substantially as described.

No. 38,616. Valve and Valve Chest for Steam Engines. (*Soupape et boîte pour machines à vapeur.*)

George Fussel, jr., Lockport, New York, U.S.A., 4th April, 1892; 5 years.

Claim.—1st. A steam chest, having a central partition provided with triple ended passages therein, communicating with the cylinder, the inlet, and the exhaust chambers, adapted to coact with valves governing the passage of the steam from and into said chambers, substantially as described. 2nd. The combination of a steam chest B, having a central partition C, provided with triple ended passages therein, communicating with the cylinder and the inlet and exhaust chambers, with reciprocating valves, alternately covering and uncovering the opening connecting said triple ended passages with the inlet and exhaust chambers, substantially as described.

No. 38,617. Artificial Stone. (*Pierre artificielle*)

Cranston A. Stark, Winnipeg, Manitoba, Canada, 4th April, 1892; 5 years.

Claim.—An artificial stone paving tile or block, composed of Portland cement and sand, made plastic with water, and comprising two layers, one layer consisting of equal parts of cement and sand, and the other layer two parts or more of sand to one part cement, both layers united by pressure in a plastic state in a mold forming the shape of the tile, as set forth.

No. 38,618. Tea Chest. (*Caisse à thé.*)

Pascal Buford, Bryan, Texas, U.S.A., 4th April, 1892; 5 years.

Claim.—A receptacle provided with an opening in one side, a metallic chute open at each end, fitted in the opening, and projecting within the receptacle, and a cover having a deep flange that fits within the chute and forms a compartment to catch and receive a certain proportion of the contents of the receptacle, substantially as set forth.

No. 38,619. Reamer. (*Foret.*)

James Murre Chesnut, Williamsport, Pennsylvania, U.S.A., 4th April, 1892; 5 years.

Claim.—1st. The herein described reamer consisting of the combination with the main body, of the leader C, provided with the clear central hollow space and the passages leading directly from the cutting edges into said space, substantially as set forth. 2nd. The herein described reamer consisting of the combination with the main body, of the leader C, having the clear central hollow chamber 8, the cutting edges 10, and the passage 11 extending radially inwards to said chamber, the leader being connected by its edge or periphery with the body of the reamer, substantially as set forth.

3rd. The herein described reamer consisting of the part A, having the rounded portion 3, the part B extending forward from the part A and having the rounded shoulder 6, and the leader C having the clear central chamber 8, all of said parts being provided with cutting edges, as described, and being formed in one piece, substantially as set forth. 4th. The herein described reamer consisting of the combination with the main body, of the leader C, provided with a clear space of a conical or flared form, to facilitate the discharge of chips or shavings, and passages leading directly from the cutting edges into said space, substantially as set forth.

No. 38,620. Device for Removing Debris from Cisterns. (*Appareil pour enlever les débris des citernes.*)

George D. Wilson, St. Louis, Missouri, U.S.A., 4th April, 1892; 5 years.

Claim.—1st. A device for removing debris from cisterns having telescoping chambers, and chambers adapted to be submerged into the water of the cistern and come in contact with the sediment contained therein, and means for operating the said device from the outside of the cistern, substantially as set forth. 2nd. A device for removing debris from cisterns comprising a stationary chamber, the lower portion of which is adapted to be placed in contact with or upon the sediment contained in the cistern, and a movable chamber adapted to be operated by a suitable rope or cord on the outside of the cistern, substantially as set forth. 3rd. A device for removing debris from cisterns consisting of a stationary chamber, the bottom of which is provided with a valve, a movable chamber inserted within said stationary chamber, a water tight connection between said chamber, and means for operating said movable chamber from the outside of the cistern, substantially as set forth. 4th. A device for removing debris from cisterns having telescoping chambers, and a releasing device for said chambers adapted to be operated from the outside of the cistern, substantially as set forth. 5th. A device for removing debris from cisterns having telescoping chambers, and a device for allowing the air contained in said chambers to be released, substantially as set forth. 6th. A device for removing debris from cisterns, having telescoping chambers, and adapted to be raised and lowered upon a pole, substantially as set forth. 7th. A device for removing debris from cisterns, having a pole upon which the same is adapted to be raised and lowered, and means whereby said device is pressed down and up on the sediment contained in the cistern when the said pole is partially turned, substantially as set forth. 8th. A device for removing debris from cisterns, consisting of telescoping chambers, a valve carried by the stationary chamber, and adapted to be brought in contact with the sediment contained in the cistern, clip secured to the side of the said device, and adapted to embrace a suitable pole upon which the said device is raised and lowered, and a rope or cord attached to the movable chamber for withdrawing the same, substantially as set forth. 9th. A device for removing debris from cisterns, consisting of a stationary chamber, such as 1, a chamber 5, adapted to move within the said stationary chamber, an opening formed in the bottom of the said stationary chamber, a valve placed over the said opening, an operating rope, such as 25, secured to the movable chamber for operating the same, and a releasing device for allowing the said movable chamber to be released when the said device is properly placed upon the sediment contained in the cistern, substantially as set forth. 10th. A device for removing debris from cisterns, consisting of telescoping chambers, a valve, such as 14, placed in the lower end or bottom of the stationary chamber, a collar such as 6, encircling the movable chamber, a rubber or other packing 8, interposed between said collar and collar 7, suitable locking devices for securing said collars to said stationary chamber, staples secured to the top of the movable chamber, a spring arm, such as 27, secured to the collar 7, the upper end of which is adapted to come in engagement with one of the staples, a plate 29, encircling one of the guide rods, and also adapted to engage the upper end of the said spring arm, a triangular shaped plate, such as 30, adapted to be interposed between the said plate and the said staple, an operating rope, such as 25, secured to the top of the said movable chamber, and having a suitable branch, the end of which is adapted to be attached to the said triangular shaped plate for disengaging the movable chamber, substantially as set forth. 11th. A device for removing debris from cisterns, consisting of telescoping chambers, a valve, such as 4, placed in the bottom of the said screw threaded chambers, an opening formed in the top of the movable chamber, a cap, such as 36, adapted to cover the said opening, a lever, such as 39, adapted to come in contact with the top of the said cap, a rope, such as 42, secured to the top of the chamber 5, a ring, such as 43, adapted to be passed over said lever and rod, an operating rope such as 25, secured to the top of the said movable chamber, and provided with a branch 31, the end of which is adapted to be attached to the said ring 22, for releasing the cap and allowing the air to escape that is contained within the device, substantially as set forth. 12th. A device for removing debris from cisterns, consisting of telescoping chambers, one of which is provided with a suitable valve for allowing the sediment to pass into said chambers, clips secured to the said chambers, a pole such as 45, provided with rounded portions such as 49 and 50, for allowing the said pole to be turned within the said clips, projections such as 51 and 52, secured to the said pole, and adapted to be brought in contact

with the upper one of said clips for depressing the said chambers upon the sediment contained in the cistern, and an operating rope such as 26, secured to the top or the movable chamber 5, for raising and lowering the said device upon the said pole, substantially as set forth. 13th. A device for removing debris from cisterns having suitable clips, each of which are divided into two portions, one of which is stationary, and the other movable, whereby the said device may be removed from a suitable pole without removing said pole from the cistern, substantially as set forth. 14th. A device for removing debris from cisterns, having telescoping chambers, clips secured to the same, a pole such as 45, adapted to be embraced by the said clip, and operating a rope such as 25, secured to the movable chamber for raising and lowering the said device upon the said pole, substantially as set forth. 15th. A device for removing debris from cisterns, having a sectionalized portion, rounded portions such as 49 and 50, by means of which the said pole may be turned for compressing the device upon the sediment contained in the cistern, substantially as set forth.

No. 38,621. Bridge. (Pont.)

Richard Boyle, Parker, Ontario, Canada, 4th April, 1892; 5 years.

Claim.—1st. In bridge construction, a tie-beam composed of two timbers placed side by side and a little distance apart and connected with keys *a*, and with pins, spikes or bolts *a'*, and an interlocking fish-plate *A*¹, piercing two lengths longitudinally, substantially as set forth. 2nd. In bridge construction, a butt joint consisting of a fish-plate *A*¹, connecting the butt ends of two pieces, and having square shoulders projecting in the sides of the pieces, said plate placed between the said joined piece, and another placed alongside the same, and connected by pins, spikes or bolts, substantially as set forth. 3rd. In bridge construction, trusses framed of timber placed side by side a little distance apart, and connected by keys and by pins, spikes or bolts, substantially as set forth. 4th. In a bridge truss, the combination of the tie-beam *A*, plate *A*¹¹, braces *B*, truss beam *C*, and the main braces *C*¹, substantially as set forth. 5th. The combination of a truss *A*, *A*¹¹, *B*, *C*, *C*¹, the needle beams *D* suspended thereon, bolts *D*¹ sustaining the needle beams, sheet metal covering *d* on said needle beams, and the sheeting *F*, *F*¹, and *f*¹, on said girders, substantially as set forth.

No. 38,622. Automatic Registering Photographic Apparatus. (Registre automatique pour appareil photographique.)

Ellis Elmer Moore, Syracuse, New York, U.S.A., 4th April, 1892; 5 years.

Claim.—1st. The combination, with the camera and the frame carrying the negative film, the roller in said frame, and the removable extension of the axis of said roller, of differential feed and registering gears actuated by the rotation of said roller. 2nd. Differential feed and registering gears in engagement, in combination with an idler engaging therewith and mounted upon and rotated by the rotation of the removable outer section of the axis of the film roller in a camera.

No. 38,623. Corset. (Corset.)

Reddin W. Parramore, Asbury Park, New Jersey, U.S.A., 4th April, 1892; 5 years.

Claim.—1st. The corset attachment comprising an approximately elliptical casing having substantially horizontal pockets diverging slightly at their ends, triangular webs between said ends, and a series of brace steels enclosed within said pockets, all the steels curving flatwise throughout their lengths, the whole constructed and adapted for application as and for the purpose set forth. 2nd. The herein described corset attachment comprising an approximately elliptical casing having substantially horizontal pockets diverging slightly at their ends, and a series of brace steels enclosed within said pockets, all the steels curving flatwise throughout their lengths, the whole constructed and adapted for application as and for the purpose set forth.

No. 38,624. Water Trough. (Auge à eau.)

William Fraser, Township of McGillivray, Ontario, Canada, 4th April, 1892; 5 years.

Claim.—1st. The apparatus for supplying water to any number of buckets and maintaining the same at an equal height, for the use of horses and cattle, consisting of main pipe or conduit *A*, main tank or receptacle *B*, which conveys the water by siphon *C* to bucket *D*, the water thence passing by orifice *E* into conduit *A*, and rising by similar orifices into the whole of the tanks connected to the conduit, all arranged and operating substantially as shown and specified. 2nd. In combination, with the buckets *D*, *G*, *G*¹, *G*², the stop cocks *I*, covers *J* and siphon *K*, substantially as shown and specified.

No. 38,625. Method of Preparing Medicinal Oils.

(Méthode de préparer les huiles médicinales.)

Adalbert Gauvreau, Montreal, Quebec, Canada, 4th April, 1892; 5 years.

Claim.—In a compound, in the preparation of which enters a sufficient quantity of oil, or oil and its admixtures with other medicaments, the following ingredients: water, sugar, gelatine, spirits of wine, bitter almond oil, or other essential oils and pure glycerine, the whole compounded substantially in the proportions and for the purposes set forth.

No. 38,626. Method of Heating and Welding by the Electric Arc. (Méthode de chauffage et soudage électrique à arc.)

Henry Howard, Halesowen, England, 4th April, 1892; 5 years.

Claim.—1st. In apparatus for heating and welding by the electric arc where the work forms one pole, and a pencil the other pole, the combination of supports for the pencil and the work with mechanism for continuously altering the positions of the pencil and the work relatively to each other, both longitudinally and transversely. 2nd. In apparatus for heating and welding by the electric arc, where the work forms one pole and a pencil the other pole, the combination of a fixed support for the work, a carriage to support the pencil, and mechanism which moves the pencil relatively to the carriage and the carriage relatively to the work. 3rd. In apparatus for heating and welding by the electric arc, where the work forms one pole and a pencil the other pole, the combination of a fixed support for the work, a carriage movable along the line to be heated or welded, a second carriage to support the pencil, and mechanism which moves the pencil relatively to the second carriage and the second carriage relatively to the first. 4th. In apparatus for heating and welding by the electric arc, where the work forms one pole and a pencil the other pole, the combination of a fixed support for the work, a carriage to support the pencil, and also a hammer press or other tool, mechanism which moves the pencil relatively to the carriage, and the carriage relatively to the work, and mechanism for actuating the hammer press or other tool. 5th. In apparatus for heating and welding by the electric arc, where the work forms one pole and a pencil the other pole, the combination of a fixed support for the work, a carriage movable along the line to be heated or welded, a hammer press or other tool upon the carriage, mechanism for actuating the same, a second carriage to support the pencil, and mechanism which moves the pencil relatively to the second carriage and the second carriage relatively to the first. 6th. In apparatus for heating and welding by the electric arc, where the work forms one pole and a pencil the other pole, placing the connection of the electric conductor to the work, or the support on which it rests as nearly as may be in a line with the pencil. 7th. In apparatus for heating and welding by the electric arc, where the work forms one pole and a pencil the other pole, the combination of a fixed support for the work, a carriage to support the pencil and also a hammer press or other tool, a block of refractory material beneath the pencil and an anvil beneath the hammer press or tool, the block and anvil being connected to and moving with the carriage. 8th. In heating and welding by the electric arc, where the work forms one pole and a pencil the other pole, interposing between the pencil and the work a thin sheet of refractory conducting material. 9th. In apparatus for welding by the electric arc, the combination of a mandril or support for the work with two bars or jaws to press the two portions of work against the mandril near the point at which the weld is to be made.

No. 38,627. Car Coupler. (Attelage de chars.)

Joseph Henry Coleman, Tottenham, Ontario, Canada, 4th April, 1892; 5 years.

Claim.—A draw head *A*, having a socket *C*, made in it, in front of which is placed a movable block *B*, with a hole *b*, made through it, in combination with a link *E*, having the head *D*, formed on it, substantially as and for the purpose specified.

No. 38,628. Machine for Cutting Veneer and Boards.

(Machine à couper le bois de placage.)

Gustav Adolph Aucken, Chicago, Illinois, U.S.A., 4th April, 1892; 5 years.

Claim.—1st. In wood working machinery for cutting veneers and boards from a block of wood, the combination, with the knife frame carrying the cutting knife and the yielding presser bar, substantially as and for the purpose set forth. 2nd. In wood working machinery for cutting veneers and boards from a block of wood, the combination, with the knife frame carrying the cutting knife and the yielding presser bar, connected to and moving with said frame, said presser bar having a uniform movement throughout its length, the edges of the said knife and presser bar being continuously parallel, substantially as and for the purpose described. 3rd. In wood working machinery for cutting boards and veneers from a block of wood, the combination, with the knife frame and cutting knife, of the yielding presser bar attached to a slide having projecting rods guided in bearings of said frame, the opposite levers engaging with said rods, and the adjustable spring pressure acting upon the inner ends of said levers, substantially as and for the pur-

pose hereinbefore described. 4th. In wood working machinery for cutting boards and veneers from a block of wood, the combination, with the knife frame and the cutting knife, of a presser bar formed of a number of single parts independently from another, attached to the yielding or fixed support end of the elastic layer or device arranged between the said support and the presser bar, substantially as and for the purpose specified. 5th. In wood working machinery for cutting boards and veneers from a block of wood, the combination, with a knife frame carrying a cutting knife, of a yielding presser bar, formed of a number of single parts attached independently from another to a yielding or stationary support, and provided with a roller or rollers and an elastic layer or device arranged between the said support and presser bar, substantially as and for the purpose set forth.

No. 38,629. Composition for Washing Clothing, etc.
(*Composition pour blanchir le linge, etc.*)

Frederick Henry Nice, Saint John, New Brunswick, Canada, 4th April, 1892; 5 years.

Claim.—As a washing fluid, potash, salt of tartar, dry ammonia, borax and soap compounded in the manner, and in the proportions specified for the purposes set forth.

No. 38,630. Motor. (Moteur)

The Reliance Electric Manufacturing Company, Waterford, Ontario, assignees of Frank Bankson Rae, Detroit, Michigan, U. S. A., 4th April, 1892; 5 years.

Claim.—1st. In an electric car motor, the combination, with the front and rear axles, of an electric motor connected to the axles and constituting the frame of the truck, substantially as described. 2nd. In an electric car motor truck, the combination, with the front and rear axles, of an electric motor connected to the axles and forming the frame of the truck, the armature shaft extending longitudinally between the axles and directly connected thereto, substantially as described. 3rd. In an electric car motor, the combination, with the axles and gears mounted thereon, of an electric motor connected directly to the axles and forming the truck frame, and the armature shaft of the motor directly connected to the gears on the axles, substantially as described. 4th. In an electric car motor, the combination, with the axles and gears mounted thereon, of an electric motor, the field magnets of which are connected to the axles of each side of the core, and the armature shaft is supported between the field magnets and is directly connected to the gears, substantially as described. 5th. In an electric car motor, the combination, with the axles, and the bevel gears centrally mounted thereon, of an electric motor, the field magnets of which are connected to the axles on either side of the cores, and the armature of which is supported between the field magnets, and is provided with beveled pinions engaging the cores on the axles, substantially as described. 6th. In an electric car motor, the combination with the axles, of the yokes mounted thereon, supporting the field magnet cores, yoke pieces supporting the armature shaft, and the direct connections between the armature shaft and axles, substantially as described. 7th. In an electric car motor, the combination, with the axles, of the yokes, the field magnet cores supported therein, the yoke pieces connecting the yokes and supporting the armature shaft, the brushes supported upon one of the yoke pieces, and the direct connection between the armature shaft and axle, substantially as described. 8th. In an electric car motor, the combination, with the yokes, and yoke pieces, of the field magnets consisting of straight bars, and the pole pieces detachably connected to said bars, substantially as described. 9th. In an electric car motor, the combination, with the yoke, of the field magnet cores mounted in the yokes, the field magnet coils arranged at each side of the cores, and the yoke pieces connecting the field magnets and supporting the armature shaft, substantially as described. 10th. In an electric car motor, the combination, with the axles and gear wheels thereon, of an electric motor connected to the axles, a centrally arranged armature shaft and the thrust box interposed between the gear and the motor connections to the axle, substantially as described. 11th. In an electric car motor, the combination, with the car axle and gear mounted thereon, of an electric motor mounted on the axle, and an adjustable thrust bearing interposed between the gear and the motor bearing on the axle, substantially as described. 12th. In an electric car motor, an adjustable thrust bearing, comprising two rings having beveled adjacent edges, and a collar overlapping the edges, and having an inwardly extending wedge-shaped projection, substantially as described. 13th. In an electric motor, the combination, with the yoke pieces connecting the field magnets and supporting the armature shaft, of the brush holders mounted on one of said yoke pieces for adjusting the brush holders, the brush holders being insulated from the yoke piece, substantially as described. 14th. In an electric car motor, the combination, with the axles, of the yokes having curved arms geared to the axles, and clamps supporting the field magnet cores, the armature shaft, and the arrangement being such that the field magnet cores and armature shaft are in a plane of the axles, substantially as described.

No. 38,631. Carrier for Fruit and Eggs.

(*Boîte à fruits et à œufs.*)

Levi H. Page and Elizabeth E. Fink, both of Chicago, Illinois, U. S. A., 4th April, 1892; 5 years.

Claim.—1st. In carriers for fruit, eggs, etc., of the class herein described, the combination, with the outside longitudinal and transverse strips, having their edges adjacent to, but not interlocked with each other, said strips being formed with slots a^2 , a^3 , and tongues a , of the notched compartment forming strips adapted to interlock with said outside strips. 2nd. In carriers for eggs, fruit, etc., wherein slats or strips are employed to form series of separate compartments, substantially as herein set forth, the frame work composed of the outside, and compartment forming strips, said outside strips being interlocked or otherwise connected with the compartment-forming strips, and not connected or interlocked with each other, all arranged substantially in the manner and for the purpose herein described. 3rd. In carriers for fruit, eggs, etc., of the class herein described, the longitudinal and transverse outside strips, said longitudinal strips being unconnected with said transverse strips, in combination with longitudinal and transverse compartment forming strips, the ends of said longitudinal compartment forming strips being secured to said transverse outside strips, and the ends of said transverse compartment forming strips being secured to said longitudinal outside strips.

No. 38,632. Device for Securing the Heads of Axes, etc. (Appareil pour assujettir les haches aux manches.)

Michael Leduc and Thomas McKelvy, both of North Bay, Ontario, Canada, 4th April, 1892; 5 years.

Claim.—1st. A device for securing the heads of axes, hatchets and the like on their helves, consisting of a tapering screw having a square or angular head formed on its thicker end, substantially as set forth. 2nd. In a device for securing the heads of axes, hatchets and the like on their helves, the combination with the head A, and helve B, of the groove b , the tapering screw C, and means by which the said screw may be turned, substantially as set forth.

No. 38,633. Machine for Truing circular Bodies.

(*Machine pour redresser les corps circulaires.*)

Jacob Barr, Milwaukee, Wisconsin, U. S. A., 4th April, 1892; 5 years.

Claim.—1st. In a machine for producing bodies of circular cross-sections, two rollers or like supports on which the body to be reduced may be peripherally sustained and revolved, and an adjacent cutter, said elements constructed and combined for joint operation, substantially as described and shown. 2nd. In a machine for reducing bodies to a circular form in cross-section, two rollers or like supports to act on the periphery of the body to be reduced, and an intermediate rotary cutter, said elements constructed and arranged in relations, substantially such as described. 3rd. In a machine for reducing bodies to a circular form in cross-section, two supporting rollers and a rotary cutter, said members having their active surfaces located in a circle the diameter of which equals that of the required body; whereby a body sustained by and rotated upon the rolls will be automatically reduced to a circular form to the predetermined character by the cutter. 4th. In a machine for producing bodies of circular cross-section, the two sustaining rollers, the rotary cutter, and a pressure device to hold and guide the body upon the underlying rollers. 5th. In combination, with the supporting rollers, the elevated guiding and pressing roll, a laterally-acting pressure device C, and a rotary cutter, said members arranged in relations, substantially as described and shown. 6th. In combination with two supporting rollers, an intermediate rotary cutter and means for changing the relative positions of said parts; whereby the machine may be adapted to produce automatically a circular body of larger or smaller diameter as required. 7th. In a machine for truing car wheels, the rotary supports B, C, to act peripherally on the wheel, in combination with the overlying pressure wheel, and its support pivoted to turn out of the plane of the supports B, C, whereby the ready introduction and removal of the car wheel is permitted.

No. 38,634. Brake Beam. (Sommer de frein.)

William August Pungs, Detroit, Michigan, U. S. A., 4th April, 1892; 5 years.

Claim.—1st. A brake beam consisting of a metallic plate A, having at each end an attached re-enforcing plate B, a central strut E, and two straining rods D, seated between the plates and converging toward each other from the re-enforcing plates to the central strut, substantially as described. 2nd. A metallic brake beam consisting of the combination, with a metallic beam A, having flanges A¹, of two truss-rods and a strut to which the said truss-rods converge at the middle of the beam, said strut made adjustable longitudinally, substantially as and for the purpose described. 3rd. A metallic brake beam consisting of the plate or beam A, provided with flanges A¹, and grooves A², in combination with a re-enforcing plate B, and a strut at the middle of the beam, and in connection therewith with one or more straining-rods D, substantially as and for the purposes described. 4th. The combination with a metallic plate A, provided with flanges A¹, of the re-enforcing plate B, and one or

more straining rods D, seated in grooves between the plates A, and B, said beam at the extremities shaped to receive the ordinary brake head, substantially as and for the purposes described. 5th. The combination with a metallic plate or beam A, and plate B, of one or more truss-rods D, having their ends clamped between said plates A and B, and riveted beyond said plates, substantially as described.

No. 38,635. Bag Filler. (*Appareil à ensacher.*)

Thomas Craney, Bay City, Michigan, U. S. A., 4th April, 1892; 5 years.

Claim.—1st. In a bag filler, the combination, with a frame having a stationary apertured upper plate, a vertically adjustable bottom plate, having an aperture therein, vertically adjustable and longitudinally movable tubes between the plates and means for adjusting the tubes, substantially as described. 2nd. In a bag filler, the combination, with a frame having a stationary apertured upper plate, of a bottom plate suspended from the upper plate, means for adjusting the bottom plate vertically and an adjustable tube on the bottom plate, substantially as described. 3rd. In a bag filler, the combination, with a frame having a stationary upper plate, of rods secured to the upper plate, a lower plate through which the rods pass, nuts on the rod below the lower plate, vertically adjustable and longitudinally movable transfer tubes between the plates, and a lever for moving the tubes horizontally, substantially as described. 4th. In a bag filler, the combination, with a frame having a stationary upper plate, a lower plate, a transfer tube arranged between the plates provided with a lateral extension on its upper end, and a flange on its lower end, and means for moving the tube horizontally, substantially as described. 5th. In a bag filler, the combination, with a frame having a stationary upper plate, of a vertically adjustable lower plate centrally perforated, of adjustable transfer tubes slidingly secured between the plates, cut off extensions on the tubes and a lever for moving the tubes, substantially as described. 6th. In a bag filler, the combination of the frame, the tube composed of telescopic sections *a*, *b*, and spring *c*, and means for reciprocating the tube, substantially as described. 7th. In a bag filler, the combination of the frame, consisting of the plates adjustable in relation to each other, a transfer tube between and consisting of the two telescopic sections *a*, *b*, spring *c*, and flange *d*, substantially as described.

No. 38,636. Sap Spout. (*Siphon pour la sève.*)

John Winick Carrier, North Troy, Vermont, U.S.A., 5th April, 1892; 5 years.

Claim.—1st. In a sap spout, a body provided with a duct and blade for penetrating the bottom of the sap hole, said body at its junction with said blade being reduced to form a bearing in the mouth of said hole, substantially as and for the purpose set forth. 2nd. A sap spout, comprising a body provided with a sap duct, a blade formed integral with said body and in alignment therewith, and a hook on said body for supporting the sap bucket, said body being reduced at its inner end, substantially as and for the purpose set forth. 3rd. The sap spout A, comprising the body B, provided with the duct *b*, the blade D, formed integral with said body, the bucket hook *d*, and the branch ducts *p*, opening into said body duct at opposite sides of said blade, substantially as described. 4th. In a sap spout, the body B, provided with the duct *b*, pendant hook *d*, under cut shoulder *t*, and eyes or lugs *h*, in combination with the blade D, projecting in alignment from said body, substantially as described. 5th. The sap spout A, provided with the under cut shoulder *t*, and lug *h*, in combination with the cover H, and a pin 15, for securing said cover to said lugs, substantially as described.

No. 38,637. Vehicle Seat. (*Siège de voiture.*)

John P. Huber, St. Louis, Missouri, U.S.A., 5th April, 1892; 5 years.

Claim.—1st. A vehicle seat adapted to be folded upon itself, and a back or rest adapted to be movably attached to the same, substantially as described. 2nd. A vehicle seat adapted to be folded upon itself, and a foot rest removably secured to the same, substantially as described. 3rd. A vehicle seat mounted upon a folding support, a back or rest removably secured to the same, and a foot rest also removably secured to said seat and adapted to be folded, substantially as described. 4th. A vehicle seat comprising a back or rest, a brace 15, of suitable shape, supports hinged to the same, the opposite ends of which are adapted to be removably secured to said seat, and a folding step also attached to the said seat, substantially as described. 5th. A vehicle seat consisting of a back or rest, supports hinged to the same, the centre one of which is secured to the said seat by means of a suitable bolt, hooks formed on the ends of the end supports for said brace, and adapted to be inserted in suitable openings formed in the casting 24, secured to said seat, and a foot rest adapted to be secured to said casting by means of a removable bolt or shaft, by properly manipulating the same, substantially as described. 6th. A vehicle seat consisting of a back or rest, adapted to be removably attached to the same, a foot rest having arms 31, a casting 24, secured to the under surface of said seat, and provided with ears 25, a bolt such as 28, adapted to be passed through said ears and arms, and slots, such as 33, formed in the extension 32, of said arms, for allowing the same to be moved in a horizontal direction for folding,

substantially as described. 7th. A vehicle seat having a foot rest and a bolt, such as 28, provided with cutaway portions 39, and lugs 30, for locking said bolt and allowing said rest to be turned or folded, substantially as described. 8th. A vehicle seat having a casting 24, attached to the under surface of the seat, ears 25, formed with the same, holes formed in the said ears, arms, such as 31, provided with horizontal extensions 32, slots 33, formed in the said extensions, the terminations of which are enlarged, a shaft, such as 28, provided with outward portions 39, and lugs 30, adapted to be passed through said openings formed in the ears, and through the said slots 33, and a foot rest, such as 35, hinged to the lower ends of the said arms, and adapted to rest upon suitable supports 34, formed on the lower ends of said arms, substantially as described. 9th. A vehicle seat consisting of a back or rest, a casting 24, adapted to be secured to the under surface of the said seat, the ends of which extend beyond the same, openings, such as 26, formed in the said extensions, providing means for securing the said back to the ears 25, formed with the said casting and provided with openings 27, extensions such as 29, formed in two of the said ears, supports such as 31, having horizontal extensions 32, elongated openings such as 33, formed in the said extension, the terminations of which are enlarged, a shaft, such as 38, having cutaway portions 39, and lugs 30, and a foot rest, such as 35, movably secured to the lower end of said arm, and adapted to rest upon suitable supports formed with said arms, substantially as described. 10th. A vehicle seat comprising a folding support, a staple such as 2, secured to the seat of the vehicle, and a cleat and clamp also secured to said seat for removably attaching said support, substantially as described.

No. 38,638. Excelsior Machine.

(*Machine pour réduire le bois en fibres.*)

William S. Minor, Northville, New York, U. S. A., 5th April, 1892; 5 years.

Claim.—1st. In an excelsior-machine, the combination, with the carriage and its self lubricating guide-rods, of the adjustable eye-bolts in the eyes of which the rods are held, and the adjustable supports for the rods between the eye-bolts, as set forth. 2nd. In an excelsior-machine, the combination, with the carriage having concave edges, of the guide-rods having cavities in their upper ends, and pinholes at the bottom of said cavities, the said guide-rods having convex portions engaging the concavity of the carriage, and means for adjusting the rod-supports vertically and laterally, simultaneously, as set forth. 3rd. In an excelsior-machine, the combination, with the side pieces provided with vertical slots, of the eye-bolts passed through said slots, the jam-nuts on the bolts, the rods held in the eyes of the eye-bolts, and the reciprocatory carriage having concave edges engaging the convex surface of the rods, substantially as and for the purpose specified. 4th. In an excelsior-machine, the combination, with the side pieces provided with vertical slots, and re-enforcing plates having coincident slots, of the eye-bolts passed through said slots and provided with jam-nuts, the rods held in the said eyes, the set-screws, the reciprocatory carriage provided with edges to conform to the curvature of the rods, and the intermediate bolts having half-eyes, substantially as and for the purpose specified.

No. 38,639. Station Indicator for Railway Cars.

(*Indicateur de station pour chars.*)

Sabin Soly, Montreal, Quebec, Canada, 5th April, 1892; 5 years.

Claim.—1st. In a station indicator, the crank I, shaft *i*², wheel *i*³, connecting rod *i*¹, lever *i*, pieces *i*⁵, I, M, *l* and *m*, ratchets *l*¹ and *m*¹, springs *l*² and *m*², toothed wheel P, forked lever W, shaft Q, sheet P, hooks T and *a*, strings and cords Y and S, double bell crank V, handle *b*, and brake *d*, in combination with the polygonal wheels G and H, all substantially as described and for the purposes set forth. 2nd. In a station indicator, the crank I, shaft *i*², eccentric *i*³, lever *i*, wire *k*, bell crank *k*, lever *k*¹, hammer *k*², bell *j*¹, all substantially as described and for the purposes set forth. 3rd. In a station indicator, a card or slip holder Q, having the U-shaped sides *q*², and end pieces *q*³, with the holes *q*, bent over ends *z*¹, and staples *q*¹, substantially as described and for the purposes set forth. 4th. In a station indicator, a flexible sheet P, composed of the holders Q, joined together by means of flexible bands *z*, in combination with the guides Z, substantially as described and for the purposes set forth.

No. 38,640. Pitman Connection for Reciprocating Motion. (*Bielle de raccordement pour mouvement réciproque.*)

David S. Henderson, Brantford, Ontario, 5th April, 1892; 5 years.

Claim.—1st. The combination of cross head B, conical pointed bolts G, having jam nuts to hold said bolts in position, and pitman C, substantially as and for the purpose set forth. 2nd. The combination of the crank wheel D, crank pin F, made part way cone shape and part way straight, having key J imbedded in said straight part, hollow cone I placed loosely on crank pin F, jam nuts for tightening cone I against pitman C, and bushes H in pitman C, substantially as and for the purpose hereinbefore set forth.

No. 38,641. Fire Escape. (*Sauveteur d'incendie.*)

Henry Schwammcke, New York, State of New York, U.S.A., 5th April 1892; 5 years.

Claim.—1st. In a fire-escape, the combination, with two vertical tubular standards and a tubular slideway located above said standards, of a bar held to slide in each standard, chairs or balconies secured to said bars, one of which chairs or balconies is normally located at the upper end of one standard and the other at the lower end of the opposite standard, spring pressed brakes attached to the chairs or balconies, a cable connecting the rods to which the chairs or balconies are attached and passing through the slideway, and keepers attached to the upper portion of the standards, as and for the purpose specified. 2nd. In a fire-escape, the combination, with tubular standards provided with grooves in their front faces, a tubular base located at the lower end of each standard, a tubular slideway located above the standards, and a spring located within each base, of a bar held to slide in each standard, a cable connecting the bars and passing through the slideway, a chair or balcony attached to each bar, one of which chairs is normally located at the top of one standard and the other near the bottom of the opposite standard, a spring coiled around an extension of each of the sliding bars and adapted to enter the base of the standards, and disks attached to the springs and adapted to engage with the springs in the base of the standards, as and for the purpose set forth.

No. 38,642. Portable Wooden Booth.

(*Echoppe en bois portatif.*)

Charles Fred Hodsdon, New York, State of New York, U.S.A., 5th April, 1892; 5 years.

Claim.—1st. A portable wooden booth composed of an outer and smaller inner wall made up of hinged folding sections, a bottom or floor to receive and support the same, and separate tops or covers to the respective walls, whereby a complete dead air space is formed around and above the inner wall for the purposes, and substantially as set forth. 2nd. The combination, with the two sets of hinged folding sections forming the outer and inner walls of the bottom or floor having two parallel grooves to receive said walls, and the covers or tops *a o'* having grooved under surfaces to set upon the said walls, whereby a dead air space is formed all around, substantially as set forth. 3rd. The combination in a portable wooden booth of two complete enclosures one within the other, each having sides, a swinging door, and a separable top, and one separable bottom, having grooves to receive the lower edges of the sides of the respective enclosures, substantially as specified.

No. 38,643. Hot Air Furnace. (*Calorifère à air.*)

Dwight S. Richardson, Brooklyn, New York, U.S.A., 5th April, 1892; 5 years.

Claim.—1st. A hot air furnace, having in combination a casing provided with the usual supply and discharge pipes for air, a fire pot and combustion chamber, and a drum located on substantially the same level as the combustion chamber, and provided with horizontal flues having between them a partition through which the heat from one portion of the current of products of combustion may be conducted to a succeeding portion of such currents, substantially as set forth. 2nd. The described radiator, having the vertically placed accelerating diaphragm *b'*, the vertical air pipes *b''* and *b'''*, and the contiguous zigzag flue, in which the escaping products encircle the air pipes in succession, in combination with a hot air furnace, the combustion chamber of which is substantially in horizontal plane with the radiator. 3rd. The described radiator, having the vertically placed accelerating diaphragm *b'*, the vertical air pipes *b''* and *b'''*, and the contiguous zigzag flue, in which the escaping products, moving in a horizontal plane, encircle the air pipes in succession, in combination with the furnace *A*, having smoke discharging opening opposite the accelerating diaphragm, as set forth.

No. 38,644. Elevated Railway. (*Chemin de fer aérien.*)

Henry King Wicksteed, Cobourg, Ontario, Canada, 5th April, 1892; 5 years.

Claim.—1st. An elevated railway, comprising a girder held rigidly suspended at an elevation above the roadway, and carrying rails, hangers having a rolling support upon said rails, and a car adjustably suspended on said hangers, substantially as set forth. 2nd. An elevated railway, consisting of two longitudinal girders, each carrying a bearing rail at the upper and a guide rail at the lower flange, said girders connected at intervals by short cross girders rigidly suspended from above or supported from below at an elevation from the roadway or ground, a hanger frame suspended from said upper rail by double flanged wheels, and guided by friction wheels at its lower end, and a car attached to said hanger by diagonally disposed adjustable suspension rods, substantially as set forth. 3rd. In an elevated railway, the combination of the longitudinal girders *A*, cross girders *B*, connecting the former at intervals, posts rigidly supporting said cross girders and bearing rails *D*, and guide rails *D'*, on the upper and lower flanges respectively of the longitudinal girders, substantially as set forth. 4th. In an elevated railway, the combination of a car body *E*, diagonal suspension rods *F*, secured to the upper part of a car and having tumblers *f*, hanger arms *H*, having their upper and lower ends doubled over,

and supporting the suspension rods, the wheels *G*, journaled in the upper end of said arms and the friction wheels *G'*, journaled in the lower ends of the same, substantially as set forth. 5th. In an elevated railway, the combination of arms *H*, having their ends doubled over, bars and braces *H'*, connecting said arms, wheels *G*, journaled in the upper ends of said arms, and friction wheels *G'*, journaled in the lower ends, substantially as set forth.

No. 38,645. Protector for Cow Udders.

(*Protecteur pour pis de vaches.*)

Henry Howland Chase, Duluth, Minnesota, U. S. A., 5th April, 1892; 5 years.

Claim.—In an udder protector, in combination, the udder-supporting bag, having a V-shaped formation at its upper edge, and conforming below said edge, substantially to the cow's bag, being closed at its rear and front, and provided with a buckle at each of its front upper ends, and with a ring at its rear central upper end, the extensible surcingle *B*, adapted to be passed entirely around the body of the cow, immediately forward of her hind legs, two cow-bag take-up buckling straps *E*, attached to the surcingle and connecting with the fastening means at the front ends of the udder protecting bag, said surcingle also having an upper central backwardly extending attaching portion *D*, and the two rear supporting straps *C*, *C'*, connected to the ring *c'*, of the rear central end of the protector bag, and to the backwardly extending portion *D*, of the surcingle, the whole forming an udder protector which, while it is closed at both ends, is adjustable and can be readily manipulated for milking purposes, and as readily fastened up in position around the cow's bag, substantially as described.

No. 38,646. Draft Regulator. (*Régulateur du tirage.*)

Ira Frank Beers and Frederic Claire Beers, both of Elmira, New York, U. S. A., 5th April, 1892; 5 years.

Claim.—1st. In a draft regulator, the combination of a shaft, rotatably supported in a suitable frame, a pulley mounted thereon, a weighted cord wound on the pulley, an electro-magnet, an armature, a scape projecting from the shaft and engaging the armature, a battery, a thermostat, a make and brake device operated by the pulley, suitable electric connections between the battery, electro-magnet, thermostat make and brake device, and oppositely extending arms mounted upon said shaft, and having connection with the dampers to be operated, all substantially as set forth. 2nd. In a draft regulator, the combination of a shaft rotatably supported in a suitable frame, a pulley mounted thereon, a weighted cord wound upon said pulley, an electro-magnet, an armature, an adjustable scape projecting from the shaft and engaging the armature, a battery, a thermostat, spring fingers supported upon the frame adjacent to the shaft, a projecting screw or lug on the shaft, and adapted to engage with said fingers alternately, when the shaft rotates, suitable electrical connections between the battery, thermostat, spring fingers and electro-magnet, and oppositely extending adjustable arms mounted on opposite ends of the shaft, and connected with the dampers to be operated, substantially as set forth.

No. 38,647. Medicinal Plaster. (*Emplâtre médicinal.*)

Joseph Henry Osgood, Peabody, Massachusetts, U.S.A., 5th April, 1892; 5 years.

Claim.—1st. A medicinal plaster composed of a backing-piece surfaced with an adhesive material and having such surface, except that portion which is to cling to the person, covered with a fleece or layer of medicated cotton, wool, or equivalent fiber held to the backing by such adhesive material, substantially as shown and described. 2nd. A medicated plaster composed of a medicated backing-piece surfaced with an adhesive material and having such surface, except that portion which is to cling to the person, covered with a fleece or layer of medicated cotton, wool, or equivalent fiber held to the backing by such adhesive material, substantially as shown and described.

No. 38,648. Door Latch. (*Loquet de porte.*)

Cyrille Gagnon and Louis Lafebvre, both of Montreal, Quebec, Canada, 5th April, 1892; 5 years.

Claim.—The herein described combination with door knobs *M, M*, of thumb latches *A* having rectangular opening *D*, and double cam *E*, together with the catch *H*, fitting into the notch *I* in the coulisseau *G*, to lock the latch, substantially and for the purpose set forth and described.

No. 38,649. Wheel for the Propulsion of Vessels.

(*Roue pour la propulsion des vaisseaux.*)

Thomas Dunlap, Toledo, Ohio, U.S.A., 5th April, 1892; 5 years.

Claim.—1st. In a wheel for the propulsion of vessels, a body portion provided on its periphery with a plurality of radial striking faces having projections rearwardly extending and of like circumferential distance from the hub, and with tapering sides. 2nd. In a wheel for the propulsion of vessels, a cylindrical body provided on its periphery with a plurality of removable blades formed with striking faces, and projections of like circumference having sides decreasing from the broad area of its striking face to a point in rear

thereof. 3rd. In a wheel for the propulsion of vessels, a body portion comprising an air-tight chamber, a plurality of blades secured upon its periphery having radial striking faces, and conical projections of like circumference.

No. 38,650. Shoe Fastening. (*Attache pour chaussures.*)

Charles Alexander Harvey, New York, State of New York, U.S.A., 5th April, 1892; 5 years.

Claim.—1st. A fastening device for adjacent edges of flexible material, consisting of a row of hooks secured to one edge, a row of hooks secured to the other edge, and alternating with the hooks of the first named edge, and the movable tongue adapted to pass between the said rows of hooks, said tongue being capable of yielding transversely of said rows of hooks, but being incapable of yielding laterally in the plane of said hooks, substantially as described. 2nd. A fastening device, consisting of two plates provided with retaining devices, and the securing tongue adapted to engage said retaining devices, the said retaining devices of each plate engaging the tongue on the side opposite of said plate, substantially as described. 3rd. A fastening device, consisting of a plate provided with projecting arms terminating in hooks or projections, a second plate provided with hooks or projections, and slots or recesses in rear of said hooks or projections for the reception of the hooks or projections of the other plate, and the securing tongue, substantially as described. 4th. A fastening device for two adjacent edges of flexible material, consisting of a row of hooks secured to one edge, a plate secured to the other edge, provided along its outer edge with a row of hooks, and with a row of slots or recesses, a distance back from said edge, for the reception of the hooks of the outer edge of the material, and the movable tongue adapted to engage said rows of hooks, the portion of said plate between its hooks and recesses forming a guideway for said tongue, substantially as described. 5th. A fastening device for adjacent edges of flexible material, consisting of a row of hooks secured to one edge of the material, a row of hooks secured to the other edge and alternating with the hooks of the first edge, and a movable tongue adapted to pass between said hooks, and provided with a ferrule having its edges and upper face inclined, substantially as described. 6th. A fastening device, consisting of two plates provided with hooks or projections arranged in converging lines, and a tapering tongue for engaging said hooks or projections, the hooks or projections of each plate engaging said tongue on the side opposite the said plate, substantially as described. 6th. A fastening device, consisting of two plates, one provided with the projecting arms terminating in hooks or projections, and the other with hooks or projections, and slots in rear of said hooks or projections adapted to receive the hooks or projections of the other plate, the inclined tongue for adjusting the tension of the fastening device, and a latch for holding said tongue and securing said parts in their adjusted positions, substantially as described. 8th. A fastening device for adjacent edges of flexible material, consisting of a row of hooks secured to one edge, a row of hooks secured to the other edge, and alternating with the hooks of the opposing edge, the tongue for engaging said hooks and securing said edges together, provided with a stop adjacent to one end, and a loop secured to the said edges, adjacent to one end of the rows of hooks for engaging said stop and limiting the inward movement of the tongue, substantially as described.

No. 38,651. Diaphragm Die for Plastic Molding.

(*Matrice diaphragmatique pour moulages plastiques.*)

James Henry Mitchell, Philadelphia, Pennsylvania, U. S. A., 5th April, 1892; 5 years.

Claim.—1st. The combination, with a reciprocating cutting and molding die, and means for operating the same, of a movable elastic expelling diaphragm, located between the face of the die and the material to be cut, and molded, and a flat unbroken support for said material, substantially as shown and described. 2nd. The combination, with a cutting and molding die, of a movable elastic expelling diaphragm, passing over the face of the die, and a flat, unbroken, table or support beneath the face of the die, substantially as shown and described.

No. 38,652. Screen for Doors and Windows.

(*Store de portes et fenêtrés.*)

Charles James Shirreff, Brockville, Ontario, Canada, 6th April, 1892; 5 years.

Claim.—1st. The rectangular frame A, having a wire cloth covering B, and provided with recesses on the outside face of the upper bar, and partly covered by the wire cloth, to leave openings M, to allow escape of flies between the frame and cloth, as set forth. 2nd. The combination, with the rectangular frame A, having a groove L, in the top and bottom bars, of the end strips E, having arms F, and spiral springs H, inserted in said groove to push said strips outwardly, and a batten or molding K, covering said groove, and concealing the springs and arms as set forth.

No. 38,653. Method of Constructing Railway Cars.

(*Méthode de construire les chars de chemin de fer.*)

Frank Levi Joy, Chicago, Illinois, U. S. A., 6th April, 1892; 5 years.

Claim.—1st. In a freight-car of the kind described, the combination, with the hopper-bottom, having a central discharge opening of the inclined false bottom, adjustably located in the respective ends of the car, and adapted to correspond to and form a continuation of the sloping surface of the hopper, or turned downwardly to a horizontal position, substantially as set forth. 2nd. In a freight-car of the kind described, the combination, with the inclined false-bottom, located at each end of the car and having a hinged commencement, of the triangular braces, placed under the false-bottom parts and hinged to the respective ends of the car, substantially as described. 3rd. In a car structure of the character described, the combination, with the respective longitudinal outside sills, of the hopper bottom, composed of steel plates, the side edges of which overlap and are secured to said sills, substantially as described. 4th. In a car structure, the combination, with a hopper-bottom, composed of steel plates, of the main angle-brace, the intermediate longitudinal sills and the brace-rods, substantially as described.

No. 38,654. Method of Bushing Key-Board Mortises.

(*Méthode de garniture pour mortaises de clavier.*)

Augustus Newell, Chicago, Illinois, U.S.A., 6th April, 1892; 5 years.

Claim.—1st. The herein described method of bushing key-board mortises, which method consists in facing one side of felt with glue and allowing said glue to dry, then softening said glue with heat accompanied by moisture and applying said felt to the walls of the mortises with said glue against said walls and allowing said glue to harden and set, substantially as shown and described. 2nd. The herein described method of bushing key-board mortises, which method consists in facing one side of felt with glue and allowing said glue to dry, then softening said glue with steam and applying said felt to the walls of the mortises, with said glue against said walls and allowing said glue to harden and set, substantially as shown and described. 3rd. The herein described method of bushing key-board mortises, which method consists in facing one side of felt with glue and allowing said glue to dry, then softening said glue with heat accompanied by moisture and applying said felt to the walls of the mortises with said glue against said walls under pressure and heat not accompanied by moisture and allowing said glue to harden and set, substantially as shown and described. 4th. The herein described method of bushing key-board mortises, which method consists in facing one side of felt with glue and allowing said glue to dry, then softening said glue with steam and applying said felt to the walls of the mortises with said glue against said walls under pressure and heat not accompanied by moisture, and allowing said glue to harden and set, substantially as shown and described.

No. 38,655. Buggy Top. (*Soufflet de voiture.*)

Daniel Conboy, Toronto, Ontario, Canada, 6th April, 1892; 5 years.

Claim.—1st. A buggy-top having a bow with an extension piece projecting behind the pivot-point of the said bow, and on which projection the back bows of the top are pivoted, substantially as and for the purpose specified. 2nd. A buggy-top having a bow with an extension piece projecting behind the pivot-point of the said bow, and on which projection the back bows of the top are pivoted, in combination with a hook or catch fixed to the back bow and designed to engage with the prop block when the top is thrown back, substantially as and for the purpose specified.

No. 38,656. Distributor for Manure.

(*Distributeur de fumier.*)

John Milton Robinson, Knox Point, Louisiana, U.S.A., 6th April, 1892; 5 years.

Claim.—The hereinbefore shown and described fertilizer distributor attachment to be applied to an ordinary farm wagon, composed of side pieces to be attached to the wagon, the lower portions of the said side pieces being expanded and terminating in curved ends, a trough conformed and secured to the curved ends of the said side pieces and having discharge openings at each end, a cross bar B, secured at its ends to the side pieces and constructed to come beneath the wagon and support the inner edge of said trough, a feed shaft located in the trough and journaled at its ends in the said side pieces and having a right and left spiral thread to feed the fertilizer from the middle towards the ends of the trough, discharge spouts at the ends of the said trough, having adjustable chutes, a spur rim to be secured to the hub of the said wagon, a spur pinion on the feed shaft, and a spur chain to transmit motion from the said spur rim to the feed shaft, substantially as and for the purpose set forth.

No. 38,657. Anti-Friction Alloy.

(*Alliage contre le frottement.*)

Charles B. Miller, New York, State of New York, U.S.A., 6th April, 1892; 5 years.

Claim.—The composition of matter for anti-friction purposes, consisting of lead 320 parts, antimony 64 parts, tin 24 parts, aluminum 2 parts.

No. 38,658. Journal Box for Steam Engines.*(Cousinet à tourillon pour machines à vapeur.)*

William Fussel, Lockport, New York, U.S.A., 6th April, 1892; 5 years.

Claim.—1st. The combination, of a box D, having ribs on its back, of a holder for said box engaging with said ribs and constructed to move on a pivotal point in its support, substantially as described. 2nd. The combination, with a divided box D, each section having a groove on its outer surface, of the pillars C, fitted to said grooves and supported on central pivots, substantially as described. 3rd. The combination, with the frame of an engine, of a divided box D, each section having a grooved rib, and a pillar C, fitted to said groove, and provided with a pivotal lug c, fitting into holes in the frame of the engine, substantially as described.

No. 38,659. Stop for Engines and Machinery.*(Arrêt pour machines à vapeur, etc.)*

Josiah Nesbitt and John J. Coulter, both of Toronto, Ontario, Canada, 6th April, 1892; 5 years.

Claim.—1st. A vertical bar A, suitably connected to the driving mechanism to be stopped, and having a dog C, pivoted upon it and arranged to engage with the lever F, supported on its knife edged projection E, by the bracket D, in combination with the pivoted latch I, arranged to engage with and hold the lever F, operated by pneumatic pressure or an electric circuit, substantially as and for the purpose specified. 2nd. A lever F, arranged to engage with the pivoted dog C, and supported by its knife edged projection E, an adjusting screw N, projecting from the bracket M, in combination with the pivoted latch I, and pneumatic operated diaphragm J, substantially as and for the purpose specified. 3rd. The pneumatic pipe K, provided with an operating button L, and connected to the diaphragm J, in combination with the valve h, suitably connected to the pivoted lever j, which is actuated by the downward movement of the vertical bar A, substantially as and for the purpose specified. 4th. The pneumatic pipe K, connected to the diaphragm J, and to the diaphragm Z, the valves h and i, located in the said pneumatic pipe and connected together, in combination with the lever g, suitably connected to the said valves and operated by the downward movement of the bar A, substantially as and for the purpose specified. 5th. The toothed wheel P, actuated by a suitable weight or spring, and held stationary by the dog S, the tail W, which projects between the lugs V, formed on the bracket U, which is provided with projections b, the bell hammer d, and gong f, in combination with the weighted arm X, connected to the pivoted bracket U, and provided with a weight a, substantially as and for the purpose specified.

No. 38,660. Barrel and Cask and Apparatus for their Manufacture. *(Baril, tonneau et appareil pour leur fabrication.)*

Gustav Adolph Oncken, Chicago, Illinois, U.S.A., 6th April, 1892; 5 years.

Claim.—1st. The method of producing barrels or casks from a continuous board, or several layers of veneer cut from a rotating block or log of wood, by cutting out wedge-shaped pieces on both sides of the board, in such a manner that the interstices of one edge will come opposite the solid part of the other edge, then rolling up the board to the diameter of the finished cask, drawing in at the chimes, drying, hoop, crozing and chaulfering the cask, substantially as and for the purpose specified. 2nd. A machine for cutting out wedge-shaped pieces alternately on both edges of a board for producing barrels or casks, consisting of two alternately actuated cutting dies, in combination with one or more pairs of step by step agitated feeding rollers, a pair of bottom dies or matrices t^2 , and guide blocks u, all substantially as and for the purpose set forth. 3rd. In a machine for cutting out wedge-shaped pieces alternately on both edges of a continuous board, for producing barrels or casks by means of reciprocating cutting dies, a convex bottom die, and a support sloping from the elevated upper face of the said bottom die towards the feeding rollers, substantially as and for the purpose specified. 4th. In a machine for cutting out wedge-shaped pieces alternately on both edges of a continuous board, for producing barrels or casks, the combination of the feeding rollers r and s, wheels g, g^1 , pinion p on the shaft p^1 , friction wheel o, and a friction segment n^1 secured to the driving shaft, all substantially as and for the purpose set forth. 5th. In combination with a furnace, an exhauster w, and a support for carrying and conveying barrels or casks placed end to end to form a continuous tube for conducting the gases of combustion and hot air from the furnace to the exhauster, substantially as and for the purpose set forth.

No. 38,661. Process of and Apparatus for Forming and Welding Metals by Electricity. *(Procédé et appareil pour former et souder les métaux par l'électricité.)*

The Thomson International Electric Welding Company, Boston, assignees of Elihu Thomson, Swampscott, both in Massachusetts, U.S.A., 6th April, 1892; 5 years.

Claim.—1st. The herein described process of forming metal in any desired shape, consisting in placing the metal into an electric circuit between two clamps, holders or abutments, passing an electric

current through the same in volume sufficient to heat the metal to plasticity, communicating end pressure to the work in a line parallel to the line joining the clamps or holders, and then swaging the metal, while still heated and retained in position between the clamps, holders or abutments, into the desired form, by devices applied in a line transverse to the line joining the holders and conforming to the desired shape of metal. 2nd. The herein described improved process of welding and forming metal at the joint, consisting in abutting the pieces to be welded, passing an electric current from one to the other, subjecting the pieces to end pressure, so as to unite them and cause a tendency to lateral swelling or expansion at the joint, and then swaging the joint into form through the action of formers applied in a line transverse to the line of preliminary pressure and conforming to the ultimate shape of the metal desired at the joint. 3rd. The herein described process of forming metal into any desired shape, consisting in securing the metal between two clamps or abutments, heating the metal by an electric current passing from one clamp or abutment to the other through the metal between them, moving one of the clamps toward the other and then applying a swaging device having surfaces of the desired form in a direction transverse to the line of movement of the clamps. 4th. The combination, substantially as described, in an electric metal working apparatus, of two clamps or holders adapted to hold a piece of metal between them, means for imparting movement of one holder toward the other, so as to subject the work to end pressure while heated by the electric current passing through the work from one holder to the other, and a metal swaging or forming apparatus, the anvil and stool of which are arranged, respectively, at opposite sides of the line joining the clamps or holders and in position to engage the work in the clamps, as and for the purpose described. 5th. The combination, substantially as described, of an electric welding apparatus having means for moving one of its clamps or holders toward the other, a swaging apparatus, the anvil and die of which are arranged at opposite sides of the line joining the clamps of the welding apparatus and in position to engage the part of the work in position between the clamps of the welding apparatus, as and for the purpose described. 6th. The combination, substantially as described, in an electric metal working apparatus, of two clamps or holders connected with a source of heavy currents, and provided with means whereby end pressure may be communicated to the work while heated between them, and a drop-press, the anvil of which is arranged to one side of the line of joining the clamps, and in proximity to the work held in the clamps. 7th. The combination, substantially as described, in an electric metal working apparatus, of two clamps or holders provided with means for moving them toward one another while the work is heated electrically between them, and a drop-press, the anvil and drop of which are arranged at opposite sides of the line joining the clamps or holders, and in position to engage with the work while held between them.

No. 38,662. Electric Welding. *(Soudage électrique.)*

The Thomson International Electric Welding Company, Boston, assignees of Elihu Thomson, Swampscott, both in Massachusetts, U.S.A., 6th April, 1892; 5 years.

Claim.—1st. The herein described improvement in electric welding, which consists in applying lateral compressing or condensing force to the weld during the application of the endwise welding pressure or force, which tends to upset the metal, so as to form a lateral expansion at the joint. 2nd. The herein described improvement in electric welding, which consists in abutting the two pieces to be welded, applying an electric current for heating the metals at the joint or intended union, and during the heating and welding of the pieces applying an end pressure to force them together simultaneously with a sharpening or compressing lateral impact or pressure by compressing dies or hammers or other means, whereby any expansion at the joint is prevented and the joint is completed at the same time as the welding. 3rd. The improvement in electric welding of pieces of metal, which consists in heating the same by an electric current passing across the joint, applying end pressure to the joint to tend to upset the pieces, and opposing the tendency to upsetting by lateral pressure or impact applied to the sides at or near the joint, whereby the weld is completed and the shape of the pieces preserved.

No. 38,663. Electric Welding Transformer.*(Transformateur pour soudage électrique.)*

The Thomson Electric Welding Company, Boston, assignees of Hermann Lemp, of Lynn, both in Massachusetts, U.S.A., 6th April, 1892; 5 years.

Claim.—1st. The combination, in a transformer, of the two or more secondary bars or conductors and primaries therefor, an iron core common to said secondaries and primaries, and an iron bridge piece connecting the sides of the core, as and for the purpose described. 2nd. The combination, with a compound transformer comprising two or more secondaries and corresponding primaries therefor applied at different parts of a common iron core, and having magnetic bridges from one side to the other of the core, of means for regulating the current flow in the primaries independently of one another. 3rd. The combination, with the divided work-holder, of the independent sources of electricity supplying heating current thereto, and means for increasing the energy of one source while simultaneously decreasing

the energy of the other source. 4th. The combination, in an electric metal-working apparatus, of two or more sources of energy supplying different parts of the work in parallel, and means for regulating the energy of the several sources independently of one another. 5th. The combination, with the two primaries having secondaries connected to different portions of the same work in parallel, of two reactive coils in the circuit, respectively, of said coils, and wound on the same core, and a regulating closed circuit of copper applied to said coils and core, as and for the purpose described. 6th. The combination, with two or more sets of primary and secondary conductors wound on the same core which is provided with magnetic bridges from one side to the other thereof, of a source of alternating current supply and reactive devices connected to the circuits of said primaries, whereby the current flowing in a primary coil may have its strength increased or diminished at pleasure. 7th. The combination, with the two reactive coils in different circuits, of a common iron core upon different portions of which said coils are wound, an armature, and one or more closed conducting bands or circuits adjustable with relation to the coils, so as to increase the self-induction of one and simultaneously decrease the self-induction of the other. 8th. In an electric metal-working apparatus, the combination, with the work of different sources of energy supplying the different parts of portions thereof in parallel, and means for varying the energy of said sources so as to control the relative heating of the several parts of the work. 9th. In an electric metal-working apparatus, a work-holder made in two or more parts insulated from one another and connected respectively with separate regulable sources of electric energy. 10th. In an electric metal-working apparatus, the combination, with a divided clamp or work-holder, of secondary bars or conductors in contact respectively with the divisions of the holder. 11th. The combination, in an electric metal-working apparatus, of a clamp-slide or base divided into sections insulated from one another on a longitudinal line, and two secondary bars with which the sides of the clamp-slide engage respectively. 12th. The combination, with the separate parallel secondary bars or conductors having a bevel at their inner sides, of a V-shaped clamp-slide bearing on said secondaries at their beveled portion, as and for the purpose described.

No. 38,664. Conveyor. (Transport.)

Ira Herman Gaiter, Alberton, and William L. Hammond, Hoods Mills, both of Maryland, U.S.A., 6th April, 1892; 5 years.

Claim.—The combination, with the polygonal sprocket wheels, of the endless conveyor, comprising the hinged or articulated plate sections, having therein series of apertures or perforations near their ends engaged by the short teeth of said wheels, said plate sections being armed with cleats or slats covering said apertures or perforations, substantially as set forth.

No. 38,665. Drive Chain. (Chaîne sans fin.)

Samuel H. Vinson and Mamie L. Vinson, both of Dayton, Ohio, U.S.A., 6th April, 1892; 5 years.

Claim.—A drive chain link formed from a blank of sheet metal, having a central rib, an opening on each side of the central rib, and ends of less width than the body of the blank, said link comprising a cylindrical end formed from the central rib of the blank bent upon itself, a body portion having a central opening, and a hook formed by the ends of the blank curved in the same direction, substantially as described.

No. 38,666. Railway Frog. (Rail de croisement.)

Charles O. Boyd, assignee of Nicholas Ratchford, both of Plain City, Ohio, U.S.A., 6th April, 1892; 5 years.

Claim.—1st. The combination, with the main and side track rails, a movable frog rail, pivotally supported as described, adjacent to and above the main track rail, the sectional hinged and pivoted channeled operating rail adjacent to the inner side of the outer side track rail, and having its shorter arm pivoted to the latter, a lever 17, pivotally connected with the frog rail 5, and the longer arm of the bell crank 10, and means for returning the operating rail to its usual elevated position, substantially as and for the purpose specified. 2nd. The combination, with the intersecting main and side track rails, the pivoted frog rail supported as described, adjacent to and above the main track rail, a pivoted and jointed channeled operating rail 7, adjacent to the inner side of the outer side track rail 2, of a shaft 21, having a crank shaped inner end, the end of the latter journaled to the under side of the operating rail, the body of said shaft supported in a suitable boxing, as described, a weight upon the outer portion of said shaft, and a pivoted lever connection between the operating rail and the pivoted frog rail, by means of which the latter is forced laterally when said operating rail is depressed, substantially as described. 3rd. The combination, with the intersecting main and side track rails, the pivoted frog rail, supported as above described, adjacent to and above the main track rail, pivoted and jointed channeled operating rail 7, adjacent to the inner side of the outer side track rail 2, bell crank 10, fulcrumed adjacent to the operating rail, its upper and shorter arm pivotally connected with the latter, a lever 17, having its ends pivotally connected respectively with the longer arm of the bell crank 10, and the frog rail 5, of a shaft 21, having a crank shaped inner end, the

inner end of the latter journaled to the under side of the operating rail, the body of said shaft supported in suitable boxings, as described, a weight upon the outer portion of said shaft, substantially as and for the purpose specified.

No. 38,667. Straw Separator for Threshing Machines.

(*Séparateur de paille pour machines à battre.*)

Joseph Edward Cook, Northville, and Elijah Vradenburg, Trenton, both of Michigan, U.S.A., 6th April, 1892; 5 years.

Claim.—1st. In a straw separator, the combination of the screen E, the fan, the straw separating screen F, and the receiver G, arranged as and for the purposes described. 2nd. In a straw separator, the combination of the screen E, the fan, the receiver G, the straw separating screen F, located beneath the screen E, extending from about the middle forwardly to the receiver G, and the baseboard extending rearwardly to the conveyor, substantially as described.

No. 38,668. Bath Tub. (Baignoire.)

George Booth, Toronto, Ontario, Canada, 7th April, 1892; 5 years.

Claim.—1st. As an improved article of manufacture, a bath tub composed of a smooth sheet metal casing having a lining of copper, aluminum, or other light flexible metal, hammered, rolled or pressed into close contact with its outer casing, substantially as and for the purpose specified. 2nd. As an improved article of manufacture, a bath tub composed of a smooth sheet metal casing having a lining of copper, aluminum, or other light flexible metal, hammered, rolled or pressed into close contact with its outer casing, in combination with a capping extending over and secured to the upper edges of the bath tub; substantially as and for the purpose specified. 3rd. As an improved article of manufacture, a bath tub composed of a smooth sheet metal casing, having a head, central and foot sections, each section having a lining of copper, aluminum or other light flexible metal, the central section having an outwardly turned flange at each end, and the head and foot sections corresponding flanges to allow the sections being securely fastened together; substantially as and for the purpose specified. 4th. As an improved article of manufacture, a bath tub, composed of a smooth sheet metal casing, having a head, central and foot sections, each section having a lining of copper, aluminum or other light flexible metal, the central section having an outwardly turned flange at each end and the head and foot sections corresponding flanges, and having perforations in the flanges to allow of their being securely fastened together; substantially as and for the purpose specified. 5th. As an improved article of manufacture, a bath tub composed of a smooth sheet metal casing, curved in cross-sections so that its upper edges incline inwardly, a lining of copper, aluminum or other light flexible metal, being hammered, rolled or pressed into close contact with its outer casing; substantially as and for the purpose specified. 6th. As an improved article of manufacture, a bath tub composed of three flanged smooth sheet metal sections, lined with copper, aluminum or other light flexible metal, hammered, rolled or pressed into close contact with its outer casing, and secured thereto by forcing the lining through holes made in the flanges of the outer casing; substantially as and for the purpose specified. 7th. As an improved article of manufacture, a bath tub composed of three flanged smooth sheet metal sections, lined with copper, aluminum or other light flexible metal, hammered, rolled or pressed into close contact with its outer casing, in combination with a capping, extending over and secured to the flanges formed on the upper edges of the bath tub; substantially as and for the purpose specified. 8th. As an improved article of manufacture, a bath tub composed of three flanged smooth sheet metal sections, lined with copper, aluminum or other light flexible metal, hammered, rolled or pressed into close contact with its outer casing, and secured thereto by forcing the lining through holes made in the flanges of the outer casing, in combination with a capping extending over and secured to the flanges formed on the upper edges of a bath tub; substantially as and for the purpose specified. 9th. The combination with a bath tub made in three sections, joined by flanges, of feet having legs extending over and around the said flanges and secured to the bath tub immediately over and hiding the said flanges; substantially as and for the purpose specified.

No. 38,669. Electric Cable. (Câble électrique.)

The Eugene F. Phillips Electrical Works, Montreal, Quebec, Canada, assignee of William Henry Sawyer, Providence, Rhode Island, U.S.A., 7th April, 1892; 5 years.

Claim.—1st. In an electric cable, a series of insulated conductors, interbraided loosely with respect to each other into tubular form, each conductor being thereby held apart from its adjacent conductor, and practically surrounded by the air occupying the pores and interstices of said fibrous filling, whereby a high insulation resistance and a low inductive capacity is maintained for the said conductors, and means for centrally supporting the conductors of said series and for maintaining them in position, substantially as described. 2nd. The combination in an electric cable, substantially as hereinbefore described, of a central solid foundation core, and a tubular multi-conductor braid formed thereon, and supported thereby, the said

tubular braid being composed of two pairs of insulated conductors braided or woven together in a uniform helical direction, the plane of each of the said pairs being at a right angle to and bisecting that of the other. 3rd. In an electric cable, the combination of a solid central foundation core and an openwork tube of independent insulated conductors braided or woven thereover resting thereon, and supported thereby, the said openwork braid being composed of two groups of conductors, each group comprising two pairs of braided insulated conductors of uniform helical direction, the plane of each pair being at a right angle to and bisecting that of the other, and the helical direction of the conductors of each group being reversed with respect to those of the other, substantially as described. 4th. The combination in an electric cable, of a stiff and solid central foundation core consisting of twisted or braided insulated conductors, and four insulated conductors braided thereover into the form of an openwork tube compressing the said foundation core, and maintained in position thereby, the four said conductors being arranged in two pairs of uniform helical direction, the plane of each pair being vertical to the centre of the plane of the other, substantially as described. 5th. The combination in an electric multi-conductor cable, of a stiff and solid central foundation core formed of two or more pairs of insulated conductors twisted or braided together, and two groups of insulated conductors braided thereover into the form of an openwork tube compressing the said foundation core and held in place thereby, each of the said groups comprising four conductors arranged in pairs, having a uniform helical direction, the plane of each pair being vertical to the centre of the plane of the other, the helical direction of the conductors of one of the said groups being opposed to that of the other, substantially as described. 6th. In an electric cable, a central foundation core composed of two or more insulated conductors braided or woven together into a firm and solid strand, a series or layer of insulated conductors in two groups, respectively, of opposite helical direction braided tightly over said core into a tubular openwork, its two groups each comprising two pairs of conductors adapted, as described herein, to form portions of inductively neutral metallic circuits, and one or more successive similar series of conductors, braided each over the immediately preceding interior series, into successive concentric tubes, each compressing its inner neighbour, the conductors of each succeeding series being braided with a longer pitch or at an increased angle to those of each underlying series, substantially as described. 7th. An electric cable comprising a tubular openwork series of insulated conductors, braided over and upon a solid central foundation core formed of a number of pairs of conductors twisted or braided as indicated, the said series being composed of two groups, each comprising two pairs, the helical direction of the conductors of one group being opposed to that of the other, and the two pairs of each group being each arranged so that at any point of cross section, the plane of each pair is at a right angle to the centre of the plane of the other, other successive similar series, braided over and resting upon the immediately preceding similar series, the conductor of each being braided with a longer pitch than the immediately underlying series, and an external protective sheath, such as a lead pipe, enclosing the whole, substantially as and for the purpose described. 8th. An electric cable comprising a protecting envelope or sheath, such as a tube of lead, or lead alloy, and a series of compound cores or sub-cables enclosed symmetrically therein, each of the said sub-cables consisting of a solid and semi-rigid central core, and one or more concentric series braided over and upon said central core into the form of an openwork tube, each of the said series comprising two groups of two pairs of conductors each, the pairs of each group being each arranged in a plane vertical to the centre of the other, and the four conductors of each group being all braided in a direction similar to those of the same group, but opposed to that of the other group, substantially as specified herein.

No. 38,670. Machine for Shaping Plastic and Similar Materials. (*Machine pour façonner des matières plastiques et autres semblables.*)

The Pneumatic Press Company, assignees of Wolcott A. Hull, all of New York, State of New York, U. S. A., 7th April, 1892; 5 years.

Claim.—1st. The combination of a carrier, a cutter or former operating with sufficient pressure to cut or form an article presented by the carrier, a gas duct communicating with said cutter or former, and means whereby after the cutting or forming of such article, a gas blast will be caused to pass through said duct to affect the detachment of the article from the cutter or former, substantially as specified. 2nd. The combination with a support for material, of a cutter or former movable to bear upon said support, a duct through which a gas blast is furnished to the same, and means whereby after the cutting or forming of such article, a gas blast will be caused to pass through said duct to affect the detachment of formed material from the cutter or former, substantially as specified. 3rd. The combination of a carrier, a cutter or former operating with sufficient pressure to cut or form an article presented by the carrier, a gas duct communicating with said cutter or former, a pump communicating with the said duct, and means for operating the pump to produce a gas blast at the cutter or former, after the cutting or forming operation, to affect the detachment of the cut or shaped article from the cutter or former, substantially as specified.

No. 38,671. Letter File. (*Serre-papier.*)

Carl Ferdinand Lomb, Rochester, New York, U. S. A., 8th April, 1892; 5 years.

Claim.—1st. In a letter-file, the combination of a base-plate, the U-shaped member D, hinged thereto, to fold bodily downward, and the arched wires E, detachably engaged at one of their ends with the base-plate, and having their opposite ends removably seated and arranged to turn within the arms of the member D, whereby the ends of the arched wires may be disengaged from the base-plate, the U-shaped member turned bodily downward, and the said arched wires subsequently turned oversidewise. 2nd. In a letter-file, the base-plate provided with sockets B, in combination with the U-shaped member D, hinged to said plate to turn downward bodily, and the arch wires E, adapted, at one end to enter the arms of the member D, and at the opposite end to removably engage the sockets B. 3rd. In a letter-file, the combination, with the base-plate of the U-shaped member D, hinged thereto to fold downward, the arched wires E, removably engaged with the base-plate at one of their ends, and arranged at their opposite ends to turn on the arms of the member D, as axes, and the bar F, connecting said arched wires, substantially as described.

No. 38,672. Mechanism for Propelling and Steering Boats. (*Mécanisme pour propulser et gouverner les vaisseaux.*)

John Wesley Williams, Portsmouth, Virginia, U. S. A., 8th April, 1892; 5 years.

Claim.—1st. A propelling mechanism for boats, comprising the tubular post having angle-arm at its lower end, the short propeller-shaft mounted in said angle-arm, a propeller on one end thereof, the shaft extending through said post having a gear on its lower end meshing with said propeller-shaft gear, a gear on its opposite end, and gearing carried by the upper end of the post to continuously rotate said shaft in the same direction. 2nd. In the propelling or steering mechanism, the combination of vertical post provided with means to hinge the same to the stern of a boat, the horizontal propeller-shaft supported from the lower end of said post, a drive-shaft extending through the post, gearing connecting said drive-shaft and propeller-shaft, the opposite beveled gears in the frame at the upper end of said post engaging opposite sides to said shaft-gearing, said beveled gears provided with the opposite ratchet-wheels, and the lever having opposite pawls to engage said opposite ratchet-wheels and thereby rotate said beveled gears in opposite directions and continuously rotate the drive-shaft in the same direction. 3rd. The combination with the boat, of the propelling and steering mechanism hinged to the stern thereof, and comprising a vertical drive-shaft and support therefor hinged to the boat, the propeller and its shaft carried by said support, and pawl and ratchet mechanism carried by the upper end of said support to continuously rotate said drive-shaft in the same direction, and a lever extending from the stern of the boat to operate said pawl and ratchet mechanism and to control the lateral swing of the propelling and steering mechanism. 4th. A propelling and steering device consisting of the vertical tubular post provided with exterior means for mounting such post to swing laterally at the stern of a boat, the horizontal propeller-shaft mounted at and carried by the lower end of such post and provided with the propeller, the vertical shaft extending through and mounted in such post, gearing connecting such vertical shaft and the propeller-shaft, gearing carried by the upper end of such post to rotate such shaft, and means carried by such post to swing the same and actuate the gearing, substantially as described. 5th. In combination, the vertical tubular post, means for hinging the same to a boat, the short horizontal propeller-shaft carried by the lower end of said post and provided with propeller, the vertical shaft extending through and carried by such post and connected by gearing to rotate the propeller-shaft, the swinging lever extending laterally from and carried by the upper end of such post, and gearing connecting said lever and vertical shaft and arranged to rotate said shaft by the vertical swing of such lever, the angle of the propeller being directed by the lateral swing of such lever, substantially as described. 6th. In combination, a boat, the vertical tubular post having lateral journals removably mounted at the stern of the boat, so that said post can swing horizontally, the propeller and its shaft carried by lower end of post, the shaft extending through post and geared to rotate propeller, and the lever carried by upper end of post to swing the same horizontally, and geared to rotate said shaft.

No. 38,673. Ferrule. (*Ferrure.*)

Frank Grant and Ludwig Velton, both of Westfield, Massachusetts, U. S. A., 8th April, 1892; 5 years.

Claim.—1st. The method of making ferrules and the like from enameled sheet metal, which consists in bending the blanks to proper shape with their edges adjoining, protecting the enameled face at the joint by a cooling or heat conducting material, and soldering or brazing the joint while so protected. 2nd. The soldered or brazed ferrule or box body having a smooth printed and enameled surface, substantially as described.

No. 38,674. Salt Grainer. (*Appareil pour égrener le sel.*)

Thomas Crancey, Bay City, Michigan, U. S. A., 8th April, 1892; 5 years.

Claim.—1st. In a salt grainer, the combination of a central heating chamber, a settling chamber below, an evaporating chamber above, and means for creating a vacuum therein, substantially as described. 2nd. In a salt grainer, the combination of a central tubular steam heating and circulating chamber, a tapering settling chamber below, a downwardly extending tubular leg at the bottom of said chamber, an elevator connecting into the foot thereof, an evaporating chamber above the heating chamber, a vapor pipe at the apex of said chamber, and vacuum producing apparatus connected with said vapor pipe, substantially as described. 3rd. In a salt grainer, the combination, with the heating and circulating chamber, another settling chamber below the same, of a drain pipe extending from the bottom of the steam chamber through the settling chamber and comprising a bent flexible metallic connecting pipe, substantially as described. 4th. The combination, with the casing, having a man hole therein, of a man hole cover, a clamping lever hinged to the casing, a hinge connection between the cover and the lever, and means for clamping the lever and cover in position, substantially as described. 5th. The combination of the settling leg, an angular tube extending from the base thereof and a conveyor therein, of a detachable foot for said tube at the lower end of the tube, and bearings for the shaft thereof formed between the cap and casing, substantially as described. 6th. The combination, with the settling leg, the angular tube extending from the base thereof, the conveyor therein, a sliding frame at the upper end of the tube in line therewith, carrying the journals for the upper sprocket wheel for the conveyor, and a screw for adjusting said frame, to control the tension of the conveyor chain, substantially as described.

No. 38,675. Car Wheel. (*Roue de chars.*)

John Rees Davies, Woodlawn, Illinois, U. S. A., 8th April, 1892; 5 years.

Claim.—1st. In combination, with the tire and center of a car wheel, a locking key engaging the tire and center to prevent independent movement thereof, substantially as described. 2nd. In combination, with the tire and center of a car wheel, a locking key engaging the tire and center, and a ring or disk set over the key and bolted to the wheel, substantially as described. 3rd. The combination, with the tire and center of a car wheel having contiguous recesses, of a locking key introduced and held in said recesses, substantially as described. 4th. The combination, with the tire and center of a car wheel having contiguous recesses, of a locking key introduced in said recesses, a ring or disk extending over the key and bolts holding the ring or disk and key to the wheel, substantially as described. 5th. A car wheel, comprising, in combination, a tire A, having a flange C¹, center B, said tire and flange C¹ and center being provided with contiguous recesses G, a locking key inserted in and filling the recesses G, and bolt E, holding the locking key in position, substantially as described. 6th. A car wheel, comprising, in combination, center B, having recesses at the periphery, tire A, having flange C¹, recessed at points contiguous to the recesses in the center B, locking keys set in said recesses, and disk D², having recessed peripheral flange H, the parts being constructed and arranged to operate, substantially as described.

No. 38,676. Machine for Perforating Dates and Amounts in Documents or Checks.

(*Machine pour perforer les dates et montants sur les documents ou chèques.*)

Albert R. Abbott, Boston, Massachusetts, U. S. A., 8th April, 1892; 5 years.

Claim.—1st. In a machine of the character described, the combination, with a key board, a series of spring actuated keys having movement in said board, sockets connected with said keys, and male dies located in said sockets, of a die board or plate located beneath the keys, female dies located in said plate or board, and a pressure device movable along the line of keys, and adapted for engagement with said keys, as and for the purpose specified. 2nd. In a machine of the character described, the combination, with a key board, spring controlled keys having movement therein and provided with sockets, and dies located in said sockets, of a die board arranged beneath the keys and provided with a series of dies registering with the dies in the keys, a movable table, a feed device carried by the table, and a lever having a pivotal connection with the table, the said lever extending over the keys and adapted to operate thereon, as and for the purpose specified. 3rd. In a machine of the character described, the combination, with a key board, a series of spring controlled keys, having movement in the board and having sockets connected therewith, and dies located in said sockets for the purpose specified, of a die board or plate arranged below the keys and carrying dies located in vertical alignment with the dies of the keys, a movable table arranged to travel beneath the die board, feed rollers, one of which is journaled in the table, the other having connection with a spring plate by which it is moved to and from the table

roller, a spring controlled lever carrying a plunger pivotally connected with the table and adapted for engagement with the keys, a ratchet wheel carried by the table roller, and a dog attached to the lever and operating the said ratchet wheel, substantially as and for the purpose set forth. 4th. In a machine of the character described, the combination, with a key board, a series of spring controlled keys carried thereby, having sockets at their lower extremities, male dies removably located in said sockets, a die board located beneath the keys, and female dies removably placed in said board in vertical alignment with the key dies, of a table having a sliding movement beneath the die board, a bracket projected upward from the table and having a recess in its upper edge, a spring controlled plunger having movement in the recess of the bracket, and a head located outside of said recesses and adapted for engagement with the keys, a lever pivoted upon the bracket and connected with the head of the plunger, a spring plate fastened at one end only and attached to the under side of the table, a feed wheel or roller carried by the spring plate and extending upward within the recess of the table, a second feed wheel or roller carried by a shaft attached to the bracket above the table and meshing with the lower feed roller or wheel, a ratchet wheel attached to the upper feed wheel or roller, and a dog depending from the lever and engaging with the ratchet wheel, substantially as shown and described.

No. 38,677. Method of and Apparatus for Treating or Scouring and Washing Wool and other Fibrous Substances. (*Méthode et appareil pour laver ou écurer la laine et autres substances fibreuses.*)

Isaac Smith and Joseph Smith, both of The Kensington Works, Halifax, England, 8th April, 1892; 5 years.

Claim.—1st. In machines for washing, mordanting, dyeing and extracting fibres, the employment of endless travelling perforated lattice sheets, carrying fibre under a shower or spray of liquor, in manner substantially as described and illustrated. 2nd. In machines for washing, mordanting, dyeing and extracting fibres, the employment of endless travelling perforated lattice sheets, carrying fibre under a shower or spray of washing liquor, in combination with squeezing rollers, such as *b*. 3rd. In machines for washing, mordanting, dyeing and extracting fibres, the combination, with the perforated endless travelling sheet, of squeezing rollers, a lower or uncovered vessel or tank *e*, an upper vessel *g* having a perforated bottom, all arranged substantially as described. 4th. In machines for washing, mordanting, dyeing and extracting fibres, the employment of an uncovered vessel, such as *o*, having a bridge at one end, in combination with the upper vessel *g*, provided with a perforated bottom for donching the fibre underneath it, together with squeezing rollers *h*, all arranged as described. 5th. In a machine, such as that herein shown and described, the combination therewith of means for raising the liquor from the lower vessel to the upper vessel, so that the said liquor may be used and re-used. 6th. The construction of a machine for scouring, dyeing and extracting fibres, such as that herein shown and described, with or without an upper donching vessel, where such machine is supplied and fed with a continuous stream of liquor entering an uncovered vessel at one end and passing out at the other, whereby fibre floats with the said stream, but at a slower speed than the stream, the said fibre being retarded in its onward passage by dipping rollers or other mechanical equivalents, all substantially as described and shown in Fig. 3.

No. 38,678. Cash Register. (*Registre de monnaie.*)

Charles Julius Pasmore, Rockwood, Ontario, Canada, 8th April, 1892; 5 years.

Claim.—1st. A cash till provided with two sheets or webs of paper separated by a carbon paper, in combination with mechanism arranged in connection with a cash drawer in such a manner that the said drawer cannot be opened without moving the said webs or sheets of paper, substantially as and for the purpose specified. 2nd. In a cash till, a paper C, carried on a roller D, and fed by the roller F, a paper I, carried on a roller H, and fed by the roller J, a carbon paper G, supported on suitable rollers and placed between the papers C and J, in combination with the revoluble spindle L, connected to and arranged to operate the rollers for the purpose of moving the papers, substantially as and for the purpose specified. 3rd. In a cash till, a paper C, carried on a roller D, and fed by the roller F, a paper I, carried on a roller H, and fed by the roller J, a carbon paper G, supported on suitable rollers and placed between the papers C and J, in combination with the revoluble spindle L, connected to and arranged to operate the rollers for the purpose of moving the papers, a cash drawer B, and bolt O, operated by the pin Q, and cam groove *a*, substantially as and for the purpose specified. 4th. A cam R, fixed to the spindle L, and having a groove *a* made in its face, in combination with a bolt O, provided with pins Q, to fit into the cam groove *a*, a cash drawer B, and a spring P, substantially as and for the purpose specified. 5th. A cam R, fixed to the spindle L, and shaped with a "drop" *d*, in combination with the lever W, cord V, lever U, tongue T, and spring X, substantially as and for the purpose specified.

No. 38,679. Method of Applying Carbon Filaments to Electric Lamps. (*Application des filaments de carbon aux lampes électriques.*)

Augustus Celamus Carey, Lake Pleasant, Massachusetts, U.S.A., 8th April, 1892; 5 years.

Claim.—1st. Applying carbon filaments to the leading-in wires of electric lamps by means of couplings in which the ends of the filaments are secured, and the ends of the leading-in wires are crimped, bent or pinched, substantially as shown and described. 2nd. Couplings for securing the carbon filaments of electric lamps to the leading-in wires, consisting of metallic tubes provided with constrictions, substantially as shown and described. 3rd. Applying carbon filaments to the leading-in wires of electric lamps by means of couplings on the filaments, and couplings on the leading-in wires and interposed depending conductors, substantially as shown and described.

No. 38,680. Car Wheel. (*Roue de chars.*)

John Rees Davies, Woodlawn Park, Illinois, U. S. A., 8th April, 1892; 5 years.

Claim.—1st. In combination with the centre and tire of a car wheel, a dowel connection between said parts and means for retaining the dowel in place, substantially as described. 2nd. In combination with the centre having peripheral dowel recesses, and a tire having dowel recesses, of dowels introduced into said recesses, and keys for holding the dowels in place, substantially as described. 3rd. In combination with a centre, having peripheral dowel recesses and transverse key apertures behind the same, and with a tire having corresponding dowel recesses, of dowels F, introduced into the dowel recesses and keys G, introduced into the key apertures and held in place, substantially as described. 4th. The method of withdrawing the dowels which hold the tire and centre of a car wheel from relative displacement, which consists in providing a hole in the tire opposite each dowel recess and expelling the dowel from its recess by pressure exerted through said hole, substantially as described. 5th. The combination, with a tire B, having shoulders s, and dowel recesses C, and with a centre having dowel recesses D, and transverse key apertures E, and having a shoulder s', of a dowel F, in the dowel recesses, and a key G in the key aperture, secured in place substantially as described.

No. 38,681. Attachment for Valves for Percussive Rock Drills, Direct Acting Pumps and Engines. (*Attache pour soupapes, foret de mine à percussion, machine et pompe à action directe.*)

Albert Williams Daw and Zacharias Williams Daw, both of Laurvig, Norway, 8th April, 1892; 5 years.

Claim.—1st. The combination of a main cylinder C, with a piston P reciprocating therein, a valve chest with cylinders C¹, C², formed therein, and in which work pistons P¹, P², for actuating the valve V, controlling the supply and exhaust passages J and K, and the exhaust passage E, of the main cylinder C, passages A, H, connecting each of the valve piston cylinders C¹, C², respectively, either with the same end or with the opposite end of main cylinder C, such passages being controlled by the reciprocation of piston P, in cylinder C, passages Q¹, Q, formed in the valve piston cylinders C¹, C², and permanently open to exhaust passages B¹, B, formed in the valve pistons P¹, P², and leading from the rear thereof to a point in their periphery intermediate of their length, such passages acting in conjunction with the passages A, H, and the passages Q¹, Q, all substantially as and for the purposes specified. 2nd. The combination of a main cylinder C, with a piston P, reciprocating therein, a valve chest having cylinders C¹, C², formed therein and in which work pistons P¹, P², for actuating the valve V, controlling the supply and exhaust passages J and K, and the exhaust passage E of the main cylinder C, passages D, A, H, I, controlled by the valve pistons P¹, P², and connecting each of the valve piston cylinders C¹, C² respectively with the same end of and with the opposite end of main cylinder C, the passages A, H being controlled by the reciprocation of the main piston P in the main cylinder, and the passages D, I serving for both the supply and exhaust of the valve piston cylinders C¹, C², passages Q¹, Q formed in the valve piston cylinders C¹, C², and permanently open to exhaust, passages B¹, B, formed in the valve pistons P¹, P², and leading from the rear thereof to a point in their periphery intermediate of their length, such passages B¹, B acting in conjunction with the passages A, H and the passages Q¹, Q, all substantially as and for the purposes specified. 3rd. The combination of a main cylinder C with a piston P reciprocating therein, cylinders C¹, C² formed in the valve chest and in which work pistons P¹, P², cylinders Y, Z also formed in the valve chest and opening into same, and in which work pistons M and N carrying between them the valve V for controlling the supply and exhaust passages J and K and the exhaust passage E of the main cylinder C, such pistons M and N being connected respectively to the pistons P¹ and P² by a part of less diameter than the latter; passages A, H connecting each of the valve piston cylinders C¹, C² respectively either with the same end of or with the opposite end of main cylinder C, such passages being controlled by the reciprocation of the main piston P in the main cylinder, passages B¹, B formed in the valve pistons P¹, P², and leading from the rear thereof to a point in their periphery intermediate of their length, such pas-

sages acting in conjunction with the passages A, H, passages Q¹, Q formed in the valve piston cylinders C¹, C², and permanently open to exhaust, these passages being controlled by pistons P¹, P² and situated so as to communicate with the groove or part of reduced diameter connecting the pistons P¹, P² with pistons M, N respectively, when the latter are within their cylinders Y, Z, all substantially as and for the purposes specified. 4th. The combination of a main cylinder C, with a piston P reciprocating therein, cylinders C¹, C² formed in the valve chest and in which work pistons P¹, P², cylinders Y, Z also formed in the valve chest and opening into same, and in which work pistons M and N carrying between them the valve V for controlling the supply and exhaust passages J and K and the exhaust passage E of the main cylinder C, such pistons M and N being connected respectively to the pistons P¹ and P² by a part of less diameter than the latter, passages D, A, H, I, controlled by the valve pistons P¹, P², and connecting each of the valve piston cylinders C¹, C² respectively with the same end of and with the opposite end of the main cylinder C, the passages A, H being controlled by the reciprocation of the main piston P in such main cylinder, and the passages D, T serving for both the supply and exhaust of the valve piston cylinders C¹, C², passages B¹, B, formed in the valve pistons P¹, P², and leading from the rear thereof to a point in their periphery intermediate of their length, such passages acting in conjunction with the passages A, H, passages Q¹, Q, formed in the valve piston cylinders C¹, C², and permanently open to exhaust, these passages being controlled by pistons P¹, P², and situated so as to communicate with the groove or part of reduced diameter, connecting the pistons P¹, P² with pistons M, N respectively, when the latter are within their cylinders Y, Z, all substantially as and for the purposes specified. 5th. The combination of a main cylinder C with a piston P reciprocating therein, cylinders C¹, C² formed in the valve chest and in which work pistons P¹, P² cylinders Y, Z also formed in the valve chest and opening into same, and in which work pistons M and N carrying between them the valve V for controlling the supply and exhaust passages J and K and the exhaust passage E of the main cylinder C, such pistons M and N, being connected respectively to the pistons P¹ and P² by a part of less diameter than the latter passages A, H, connecting each of the valve piston cylinders C¹, C², respectively, either with the same end of or with the opposite end of main cylinder C, such passages being controlled by the reciprocation of the main piston P, in the main cylinder, passages Q¹, Q, formed in the valve piston cylinders C¹, C², and permanently open to exhaust, and situated so as to communicate with the groove or part of reduced diameter connecting the pistons P¹, P², with pistons M, N, respectively, when the latter are within their cylinders Y, Z, but to be shut off therefrom by the pistons P¹, P², when such pistons M, N, are not within their cylinders, and passages B¹, B, formed in the valve pistons P¹, P², and leading from the rear thereof to a point in their periphery intermediate of their length, such passages acting in conjunction with the passages A, H, and also with the passages Q¹, Q, all substantially as and for the purposes specified. 6th. The combination, of a main cylinder C, with a piston P, reciprocating therein, cylinders C¹, C², formed in the valve chest, and in which work pistons P¹, P², cylinders Y, Z, also formed in the valve chest and opening into same, and in which work pistons M and N, carrying between them the valve V, for controlling the supply and exhaust passages J and K, and the exhaust passage E, of the main cylinder C, such pistons M and N, being connected respectively to the pistons P¹ and P², by a part of less diameter than the latter, passages D, A, H, I, controlled by the valve pistons P¹, P², and connecting each of the valve piston cylinders C¹, C², respectively, with the same end of and with the opposite end of the main cylinder C, the passages A, H, being controlled by the reciprocation of the main piston P, in such main cylinder, and the passages D, T, serving for both the supply and exhaust of the valve piston cylinders C¹, C², passages Q¹, Q, formed in the valve piston cylinders C¹, C², and permanently open to exhaust, and situated so as to communicate with the groove or part of reduced diameter connecting the pistons P¹, P², with pistons M, N, respectively, when the latter are within their cylinders Y, Z, but so as to be shut off therefrom by the pistons P¹, P², when such pistons M, N, are not within their cylinders, and passages B¹, B, formed in the valve pistons P¹, P², and leading from the rear thereof to a point in their periphery intermediate of their length, such passages acting in conjunction with the passages A, H, and also with the passages Q¹, Q, all substantially as and for the purposes specified.

No. 38,682. Household Utensil. (*Utensile de cuisine.*)

Henry Heaton Barry and William James, both of Philadelphia, Pennsylvania, U.S.A., 8th April, 1892; 5 years.

Claim.—1st. The combination, of a vessel having its interior divided into two or more compartments by vertical partitions, of a single cover provided with depending flanges fitting closely against the upper edges of the partitions, as and for the purpose described. 2nd. The combination, of a vessel having its interior divided into two or more compartments, and a cover provided with depending flanges b¹, b¹¹, b¹¹¹, fitting closely within the vessel and embracing the upper edges of its partitions, a valved opening formed in the cover over each of said compartments, substantially as described.

No. 38,683. Air Deodorizing and Disinfecting Device.*(Appareil à désinfecter l'air.)*

Albert C. Haven, West Bay City, Michigan, U.S.A., 9th April, 1892; 5 years.

Claim.—1st. In a deodorizing and disinfecting device, the combination with the tank for containing the liquid, a wick suspended above and reaching into the tank, of the deflecting plates having their upper ends in proximity to the wick and with their lower ends reaching outwardly beyond the edges of the tank for the admission of air between the plates and tank, substantially as set forth. 2nd. In a deodorizing and disinfecting apparatus, the combination, with the casing and a cover provided with side openings, of a tank within the casing and provided with air passages between the casing and tank, the deflecting plates with their lower edges reaching over the said air passages and with their upper ends leaning toward each other, and a wick supported between the adjacent upper ends of the deflecting plates and with its lower end reaching into the tank, substantially as set forth. 3rd. A disinfecting and deodorizing device, consisting of a tank for containing the liquid, the wicks supported above and depending into the tank, the deflecting plates above and with their lower edges reaching outwardly beyond the edges of the tank, forming air passages between the plates and the tank, and a cover reaching over the upper ends of the deflecting plates, and provided with side openings for the purpose set forth, substantially as described. 4th. The combination, in a disinfecting and deodorizing apparatus, of a vessel for containing the liquid, the wick chamber above the vessel having an open top and with its bottom of a greater area transversely than the vessel and projecting over the sides thereof, and provided with openings forming air passages between the sides of the vessel and the sides of the wick chamber, and a series of wicks within the chamber and depending into the vessel, substantially as set forth. 5th. The combination of the vessel for containing the liquid air purifying medium, and provided around its upper edge with an outwardly projecting flange having openings forming air passages, and having on its edge an upwardly projecting rib, a wick chamber casing, with its lower edge resting on said flange outside of the said openings, and provided with an open upper end, the wicks supported upon the upper end of the said casing and depending into the vessel, and removable for securing the said casing upon the flange, substantially as set forth.

No. 38,684. Violin. (Violon.)

James Anderson Close, Woodstock, Ontario, Canada, 9th April, 1892; 5 years.

Claim.—1st. In a violin, a string sheaf pivoted on the tail piece or plate connected thereto, in combination with means by which the string is held upon the said sheaf, substantially as and for the purpose specified. 2nd. In a violin, a string sheaf pivoted on the tail piece or plate connected thereto, in combination with a pivoted wheel provided with an elastic rim, substantially as and for the purpose specified.

No. 38,685. Spoon Bait. (Cuiller-amorce.)

Gardiner Mills Skinner, Clayton, New York, U.S.A., 9th April, 1892; 5 years.

Claim.—1st. The combination, with the draw wire and the spoon provided with an eye, of a connection between them, consisting of an eye fitting loosely over the draw wire, and an intermediate eye connected to the latter eye and fitting through the eye on the spoon, as set forth. 2nd. The combination, with the draw wire and the spoon provided with an eye, of a connection between them, comprising an eye fitting loosely over the draw wire and having its inner end curved upward, as shown, and an intermediate eye connected to the latter eye and fitting through the eye on the spoon, as set forth.

No. 38,686. Frying Pan. (Poêle à frire.)

Emma L. T. Robertson, Port Hope, Ontario, Canada, 9th April, 1892; 5 years.

Claim.—1st. The combination, with a frying pan, having an air duct formed therein, of a cover adapted to partially enclose the surrounding wall of the pan, said cover provided with an inwardly extending flange resting upon the top edge of the surrounding wall, substantially as described. 2nd. The combination, with a frying pan, having an air duct formed therein, and its surrounding wall inclined upwardly, of a cover provided with an inwardly extending flange at an angle thereto, adapted to be seated upon the surrounding wall of the pan, substantially as set forth. 3rd. The combination, with a frying pan, having its surrounding wall inclined upwardly and provided with a semi-circular recess, bordered by perpendicular edges, of a partly circular cover adapted to surround the greatest portion of the pan, having a cone shaped upper portion, and its lower portion terminating in a perpendicular band, said band provided with a flange extending at an angle therefrom, substantially as set forth.

No. 38,687. File for Letters and Bills. (Serre-papier.)

William O. Gottwals, Ottawa, Ontario, Canada, 9th April, 1892; 5 years.

Claim.—1st. In a bill file, the combination, with the paper holding pins and arches, of milled and tenoned points made integrally with the pins at their rearwardly and downwardly bevelled free ends,

and adapted to rest against the corresponding grooves cut or formed integrally into the forwardly and upwardly bevelled ends of the arches, substantially as set forth. 2nd. In a bill file, the combination, with the paper holding pins mounted upon the bed piece and arranged to move towards and away from the arches by means of the bearing formed by the lugs of the bed piece, and the spring resting up against the horizontal part of the rod, the ends of which are bent up to form the pins, said horizontal part serving the purpose of a rock shaft, having a projection to engage with the transverse notches in the spring to hold the pins at rest against the arches, or at a fixed point away from them, substantially as set forth. 3rd. In a bill file, the combination, with the paper holding pins rigidly secured to the bed piece, of arches arranged to move towards or away from the pins by means of the bearings formed by the bed piece, the lugs thereon, and the spring resting up against the horizontal part of the rod whose ends are turned squarely up to form the arches, said horizontal part serving the purpose of a rock shaft, and having a projection to engage with the transverse notches of the spring, to hold the arches at rest against the pins D, or at a fixed point away from them, substantially as set forth. 4th. In a bill file, the compressor arranged to hold the papers down when filed, by means of the levers N, N, acted upon through the eccentric M, which causes the levers to press against the paper holding pins, substantially as set forth.

No. 38,688. Closet, etc. (Latrines, etc.)

Anne Gurley Chadbourne, Roxbury, Massachusetts, U.S.A., 9th April, 1892; 5 years.

Claim.—1st. In water and other like closets or articles, the combination, with the seat thereof having its main opening extended to form a cut-away portion or opening extending through the front part of the seat, of the bowl constructed to also form a front passage and to stop or close the forward part of the front cut-away portion or opening in the seat when the seat is closed, substantially as and for the purposes herein set forth. 2nd. The combination of the seat C, having its opening E extended to form a forward extension or opening b^1 , extending through the forward part thereof, and terminating in a forward crossing extension b^2 , and the bowl B also constructed to form a front extension or passage b , and having a raised lip or strip-like projection c forming the front portion of its upper margin, adapted to be closely received within the crossing extension b^2 of the cut-away portion or opening b^1 of the seat, and to form a closing end to the said opening b^1 , essentially as shown and described.

No. 38,689. Drench Horn.*(Cornet pour administrer les médicaments aux animaux.)*

Frederick Fisher and John Donald Taylor, both of Carleton Place, Ontario, Canada, 9th April, 1892; 5 years.

Claim.—1st. A drench horn consisting of a reservoir having a vent tube, a tube connected with the bottom of the said reservoir, the said tube being bent horizontally and having a branch outlet in the centre of the said horizontal tube, and means for securing and holding the said horizontal tube in the mouth of an animal, a stop cock in the said tube, substantially as set forth. 2nd. In a drench horn, the combination, with a vessel adapted to hold medicine, of a tube having an outlet and a stop cock, the said tube being adapted to be secured in the animal's mouth as a bit, and means for holding the said vessel in a vertical position, substantially as set forth. 3rd. In a drench horn, the combination, with a reservoir tapering towards its bottom, and having a vent tube in its top, of the tube C having a stop cock e , and connected to the horizontal tube D, the outlet E, the rubber tube F and frame G, substantially as and for the purpose set forth. 4th. In a drench horn, the combination, with a horizontal rubber covered tube having an outlet with rubber tube in its centre, of the rectangular frame G secured to the said tube having a loop in the centre of its upper arm, and means for supplying liquid to the said tube, substantially as set forth.

No. 38,690. Nut Lock. (Arrête-écrou.)

John Christopher Nichol, Montreal, Quebec, Canada, 9th April, 1892; 5 years.

Claim.—1st. A nut lock formed of a plate of resilient metal, perforated to fit over the bolt, and having a base adapted to bear upon the flange of the rail, and outwardly bent spring ears projecting into the line of rotation of the nut. 2nd. A nut lock formed of a plate of resilient metal, perforated to fit over the bolt, and having a base adapted to bear upon the flange of the rail, and right and left hand series of spring ears bent in reverse order in and out of the line of rotation of the nut for the purpose set forth. 3rd. A nut lock formed of a plate of metal, perforated to fit over the bolt, and having a bearing base, and spring saw teeth projections formed in the outer edge of the metal encircling the perforation. 4th. A nut lock formed of a plate of metal, perforated to fit over the bolt, and spring saw-teeth projections formed in the outer edge of the plate, and without the bearing or base plate.

No. 38,691. Velocipede. (Vélocipède.)

Daniel I. Lybe, Sydney, Iowa, U.S.A., 9th April, 1892; 5 years.

Claim.—1st. The herein described improved velocipede, comprising the carrying-wheels and their axles, the frame mounted on said axles, the sprocket-wheel secured on the rear axle, the vertical shaft capable of being moved horizontally, the driving shaft connected with said vertical shaft, having gear-wheels, and the movable shaft also having gear-wheels capable of imparting different motions to the machine, and having a sprocket-wheel, and a sprocket-chain encompassing said wheel and said former sprocket-wheel, substantially as set forth. 2nd. In a velocipede, the combination, with the carrying wheels, and their axles, of the supporting frame and springs secured thereto, and connected at their rear ends to the rear axle, and the fifth wheel having its lower plate rigidly secured to the front axle, and its movable plate connected to said springs, substantially as set forth. 3rd. In a velocipede, the combination, with the carrying wheels and their axles, of the supporting frame, the springs secured thereto, to the fifth-wheel having its lower plate rigidly secured to the forward axle, the vertical shaft, the pivoted rack-bar secured to said shaft, and the chains or straps connected thereto, and to said fifth-wheel, substantially as set forth. 4th. In a velocipede, the combination, with the carrying-wheels and their axles, the rear one of which has a central sprocket wheel of the supporting frame, the vertical shaft capable of horizontal movement and provided with an upper double handle bar and a lower foot bar, the main operating shaft having ratchet wheels, the spring held pawls engaging therewith, the arms or plates carrying said pawls, the rods or pitmen connected to said arms or plates, and to said vertical shaft, and the shaft engaged by said operating shaft, and having a sprocket chain leading to said sprocket wheel the rear axle, substantially as set forth. 5th. In a velocipede, the combination, with the carrying wheels and their axles, the rear one of which has a central sprocket wheel, of a supporting frame, the vertical shaft capable of horizontal movement and provided with operating bars, the main operating shaft having ratchet wheels and large and small gear wheels, the arms or plates carrying spring held pawls engaging said ratchet wheels, the rods or pitmen connected to said arms or plates, and to said vertical shaft, the rear movable shaft having a sprocket wheel and large and small pinions designed to engage said former gear wheels, the sprocket chain encompassing said sprocket wheel and the sprocket wheel on the rear axle, and the rod secured to said movable shaft for moving the same, substantially as set forth. 6th. In a velocipede, the combination, with the operating mechanism, of a shaft having a coil spring secured thereto, a wheel fast on said shaft, having grooves or notches, a plate or bracket encompassing said spring and having a series of holes or apertures in one end, and a loosely secured gear wheel having a gear wheel having a lug or stud designed to be projected into any one of said holes or apertures, and to engage said grooved or notched wheel, said gear wheel engaging said operating mechanism, as set forth. 7th. In a velocipede, the combination, with the operating mechanism, of the shaft, the coil spring secured thereto at one end, the plate or bracket to which the other end of said coil spring is secured, the ratchet wheel secured to one end of said plate or bracket, the pawl or arm engaging therewith, the wheel fast on said shaft, having grooves or notches, the loosely secured gear wheel designed to engage with said plate or bracket, and to also engage with the operating mechanism, and with said grooved or notched wheel, the rock shaft, the arms projecting therefrom, and the operating bar secured to said rock shaft, substantially as and for the purpose set forth.

No. 38,692. Rubber Stamp. (Étampe en caoutchouc.)

Taylor Scott Buck, New York, State of New York, U.S.A., 9th April, 1892; 5 years.

Claim.—1st. The improved foundation or base for rubber stamps, consisting of a series of compartments or cells of any suitable configuration adapted to receive the pressure exerted when using the stamp, upon their walls endwise, thereby affording great flexibility with sufficient strength of resistance. 2nd. The improved foundation or base for rubber stamps, consisting of a series of compartments or cells of any suitable configuration, provided on one side with a backing, by which backing the foundation is secured to the characters, the open side of the cells being secured to the stamp handle, or to the strip of rubber or other material mounted upon said handle, substantially as shown and described. 3rd. The improvements in rubber stamps, substantially as and for the purposes hereinbefore set forth, described and illustrated.

No. 38,693. Magazine Holder for Cartridges.

(Porte-magasin pour cartouches.)

Albert H. Dean, Bridgeport, Connecticut, U.S.A., 9th April, 1892; 5 years.

Claim.—1st. A magazine holder for shot gun and rifle cartridges, the same comprising an elongated pouch having at the lower end a spring device which normally retains the cartridges within the pouch, said device yielding automatically to permit the withdrawal of the lowermost cartridge and by its resiliency retaining the succeeding cartridge, substantially as set forth. 2nd. In a magazine holder for cartridges, an elongated pouch for the reception of the latter, said

pouch having secured in its lower end a spring device adapted in normal position to grasp the head of a cartridge after the latter is projected beyond the bottom of the pouch, said spring being automatically yielding and resilient, whereby said cartridges may be successively extracted one at a time by simply pulling them from the pouch, substantially as set forth. 3rd. In a magazine holder for cartridges, an elongated pouch having secured within the lower end a tube, said tube tapering inward at the bottom and slotted to afford a yielding and resilient spring for retaining the cartridges, substantially as set forth. 4th. A magazine holder for cartridges, comprising an elongated pouch having within the lower end a tapered tube, slotted to afford a yielding and resilient spring for retaining the cartridges, said tube having at its upper end a flange, and a wire bound around said pouch and tube beneath said flange, substantially as shown and set forth.

No. 38,694. Rail for Street Railways.

(Rail pour chemin de fer de rues.)

William T. Jennings, Toronto, Ontario, Canada, 9th April, 1892; 5 years.

Claim.—1st. The combination, with a rail, of a plate detachably connected to the rail and shaped to form a channel between it and the head of the rail, substantially as and for the purpose specified. 2nd. A rail sunk so that its face shall be substantially flush with the surface of the road bed, in combination with a plate detachably connected to the stem of the rail and extending outwardly and upwardly to a point substantially flush with the surface of the pavement sufficiently far from the head of the rail to leave a channel for the flange of the car wheel, substantially as and for the purpose specified. 3rd. A rail sunk so that its face shall be substantially flush with the surface of the road bed, in combination with a plate detachably connected to the stem of the rail and extending outwardly and upwardly to a point substantially flush with the surface of the pavement sufficiently far from the head of the rail to leave a channel for the flange of the car wheel, the bottom of the said channel being filled with asphalt or other suitable water proof material, substantially as and for the purpose specified.

No. 38,695. Apparatus for Separating Oil and Water from Gas. (Appareil pour séparer l'huile et l'eau du gaz.)

Charles L. Stock, Fostoria, Ohio, U.S.A., 9th April, 1892; 5 years.

Claim.—The combination of the receiver having an inlet and provided with a gas discharge opening in its top, and a water discharge opening in its bottom, the float arranged in the receiver, the pair of standards erected on the bottom of the receiver, the pivoted presser-bar carrying a valve adapted to close the water discharge opening and having its free end playing between the said standards, a lever pivoted between the said standards, links connecting the said lever to the presser-bar, and links connecting the said lever with the float.

No. 38,696. Extension Ladder. (Échelle à rallonge.)

John Lewis Kew, Brantford, Ontario, Canada, 9th April, 1892; 5 years.

Claim.—1st. The combination of the strips A, A', the blocks D, and the band iron strip E, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of the catch C, and the flat wrought hooks a, a, substantially as and for the purpose hereinbefore set forth.

No. 38,697. Surgical Appliance.

(Appareil de chirurgie.)

Frederic L. Barnum, Carlisle, Pennsylvania, U.S.A., 9th April, 1892; 5 years.

Claim.—1st. The combination of a gynecological stirrup, of a bar A provided with a clamp adjacent to one end and with bearings for a stirrup having bearing faces M, N, substantially as set forth. 2nd. The combination, with the bar A, of an adjustable stirrup O, provided with bearing faces arranged to bear against and grip bearings upon the arm A, by the tilting of the stirrup, substantially as set forth. 3rd. The combination of a gynecological stirrup, of a bar A, having a fixed jaw I, and a swinging jaw C, and means for forcing the jaw C against its bearings, and an adjustable stirrup, substantially as set forth. 4th. The combination of the bar A, clamping device, and a stirrup provided with bearings adapted to engage bearings upon the bar on the tilting of the stirrup, substantially as described. 5th. The combination of the bar, fixed jaw I and a jaw C, and bearings upon the jaw A adapted to support the jaw C in different positions, and means for swinging the jaw C to bind it against its bearing, substantially as set forth. 6th. The combination of the bar A stirrup movable thereon, fixed jaw I, and jaw C, and pin f, adapted to a series of openings, and the arm A, and adjusting screw h, substantially as described.

No. 38,698. Cart. (Tombeveau.)

Mark Addison Libbey, South Berwick, Maine, U.S.A., 9th April, 1892; 5 years.

Claim.—1st. In a dumping wagon, a hollow cylindrical body having its ends mounted rotatably in a suitable frame, said body having an opening in its side, and a suitable cover attached to close said opening, substantially as described. 2nd. A dumping cart having a hollow rotatable cylindrical body, and provided with a sliding cover, substantially as described. 3rd. A dumping cart, consisting, essentially, of a hollow cylindrical body having a sliding cover attached thereto, and having trunnions upon its ends which project into the wheel hubs of the cart, a suitable drawing frame pivotally attached to said trunnions, and a shaft mounted in said frame and having connection with said body, whereby the body may be revolved, substantially as described. 4th. A dumping cart consisting, essentially, of a hollow cylindrical body having a sliding cover attached thereto, and having trunnions upon its ends which project into the wheel hubs of the cart, a suitable drawing frame pivotally attached to said trunnions, a shaft mounted in said frame and having a sprocket wheel and chain connection with said body, whereby the body may be revolved, and a brake connection with said shaft, whereby the position of the shaft and of the body may be fixed, substantially as described. 5th. The combination, with a rotatable body A, having the sliding cover B, and having the trunnions A², and pulley F on the end thereof, said trunnions projecting into the wheel hubs, as described, of the frame E, pivoted to said trunnions, the shaft J, mounted in said frame and connected with the pulley F by the sprocket wheel H and chain H¹, and a brake mechanism for fixing the shaft J and body A in position, substantially as described. 6th. The combination, with a rotatable body A, having the sliding cover B, and having the trunnions A² and pulley F on the end thereof, said trunnions projecting into the wheel hubs, as described, of the frame E, pivoted to said trunnions, the shaft J, mounted in said frame and connected with the pulley F by the sprocket wheel H and chain H¹, the vertical shaft L, having means as gear wheels L² and M, for connecting it with the shaft J, and a brake mechanism consisting of the wheel j and arm O, having teeth l for fixing the shaft J and body A in position, substantially as described.

No. 38,699. Potato Digger. (Scarificateur à patates.)

William Alexander Martin, Milltown, Prince Edward Island, Canada, 9th April, 1892; 5 years.

Claim.—1st. The combination of coulters E, shear D, and revolving mould boards C, C, substantially as shown for the purposes specified. 2nd. The revolving mould boards C, C, substantially as shown and for the purposes hereinbefore set forth.

No. 38,700. Machine for Cutting Beet Roots.

(Appareil pour couper les betteraves.)

Franz Stephan, Werchimschka, Russia, 9th April, 1892; 5 years.

Claim.—1st. A root cutting apparatus comprising a rotating cutting-drum, root hoppers h¹, root holders h, surrounding said cutting drum and pressers h² adapted to press and feed the roots against the knives of the cutting-drum, substantially as described. 2nd. A root cutting apparatus comprising a rotating cutting-drum, root hoppers, root holders, and root pressers or feeders, as set forth, and an operating cylinder to work the root presser, the piston of which operates said root presser by means of a rocking bell crank lever in such a manner that after the feeding stroke the root presser is drawn away from the cutting-drum to permit of a fresh supply of roots, the forward or feeding stroke of the root presser being produced by weighted levers or their equivalent, substantially as described. 3rd. The apparatus for automatically regulating the motive fluid supply constructed and operating substantially as described, consisting of the cock or its equivalent, i, lever i¹, rod i², lever i³, lever k², and spring k³. 4th. The combination of parts substantially as set forth, with reference to the drawings consisting of the cutting-drum, root hoppers, root holders, root pushers or feeders, and fluid motor apparatus for working such pushers or feeders, all constructed and operating as described.

No. 38,701. Spoon. (Cuiller.)

Isaac Newton Plotts, Philadelphia, Pennsylvania, U.S.A., 11th April, 1892; 5 years.

Claim.—1st. A spoon having a bowl, the longer axis of which is at an angle with the line of the length of the handle, substantially as and for the purpose set forth. 2nd. A spoon having a bowl, the longer axis of which is at an angle with the line of the length of the handle, and the handle so secured to the bowl that a line drawn across the bowl in the direction of the length of the handle from the inner end thereof, would so divide the bowl as to balance the same, said parts being combined, substantially as described.

No. 38,702. Wall Paper Pasting Machine.

(Machine pour coller le papier-tenture.)

Peter McQuency, Akron, Ohio, U.S.A., 11th April, 1892; 5 years.

Claim.—1st. The combination of the frame A, having located therein the paste trough B, the paste roller C, journaled to the frame A, the propelling roller F, the cog wheels b and b², the friction roller E, and the wall paper roller D, substantially as and for the purpose specified. 2nd. The combination of the paste roller C, the propelling roller F, the friction roller E, and the wall paper roller D, having located thereon the retaining collar d, and the spring d¹, substantially as and for the purpose specified. 3rd. The combination of the frame A, having located therein the paste trough B, the paste roller C, the scraper I provided with the extensions J¹, the bolts J, provided with the heads J², the thumb screws K and the springs K¹, substantially as and for the purpose specified. 4th. The combination of the knife H attached to the arms h, the shaft h¹, the handle h², and the cutter bar H¹, substantially as and for the purpose set forth.

No. 38,703. Gate. (Barrière.)

Philander Wood, Belvidere, Illinois, U.S.A., 11th April, 1892; 5 years.

Claim.—A gate and its hanging post, in combination with two hanging bars having a pivotal connection with the hanging post and a connection with each other, said connection consisting of a ratchet located on one bar and a link connecting the ratchet with the other bar, substantially as set forth.

No. 38,704. Apparatus for Evaporating Naphtha.

(Appareil pour l'évaporation du naphth.)

John Wilson Evans, Cleveland, Ohio, U.S.A., 11th April, 1892; 5 years.

Claim.—1st. The combination, with an evaporator, of one or more horizontal steam-heated troughs located internally along the upper section of the evaporator and adapted to catch and retain condensed vapor and re-evaporize the same, substantially as set forth. 2nd. The combination, with an evaporator, of horizontal troughs located in the evaporator, substantially as indicated, and adapted to catch and retain condensed vapor and re-evaporize the same, such troughs having double walls inclosing steam chambers, and pipes connected with these chambers for supplying steam thereto, substantially as set forth. 3rd. The combination, with an evaporator, having a heating coil and perforated steam pipes arranged substantially as indicated, of agitators comprising axial pipes having attached hollow radial arms with appliances for introducing steam to such agitators, the latter being intergeared to turn in opposite directions, substantially as set forth.

No. 38,705. Controlling Switch for Electric Railways. (Aiguille-contrôleuse de chemin de fer électrique.)

The Reliance Electric Manufacturing Company, Waterford, Ontario, Canada, assignees of Frank Bankson Rae, Detroit, Michigan, U.S.A., 11th April, 1892; 5 years.

Claim.—1st. The combination, with the battery cells arranged in groups, and the motor connected with those cells, of an interposed controlling switch provided with contacts and brushes, substantially as described, and resistance coils connected with the contacts, whereby the groups of battery cells may be arranged in various relations, and the resistance device interposed between the groups to prevent short circuiting, substantially in the manner hereinbefore set forth. 2nd. The combination, with the battery cells arranged in groups, and the motor connected to the cells, of an interposed controlling switch having contact plates and brushes, arranged substantially as described, resistance coils also arranged on the switch and connected with the contact plates, whereby the groups of cells may be variously connected without danger of short circuiting, substantially in the manner described. 3rd. The combination, with the battery cells arranged in groups, and the motor connected to the cells, of an interposed controlling switch having contact plates and brushes, arranged substantially as described, resistance devices also mounted on said switch and connected to the plates, a current reversing device also mounted on the switch, whereby the groups of cells may be connected up in various relations, and directed through the motor in the desired direction and short circuiting prevented, substantially in the manner described. 4th. The combination, with the battery cells arranged in groups, and the motor connected to the cells, of an interposed controlled switch, consisting of a cylinder of insulated material, brushes arranged on opposite sides of the cylinder, complementary plates of conducting material mounted on the cylinder, and resistance cells also mounted on the switch and connected to conducting plates, substantially as described. 5th. The combination, with the battery cells arranged in groups, and the motor connected therewith, of an interposed controlling switch, consisting of a cylinder covered with insulating material, complementary contact plates mounted thereon, brushes connected with the terminals of the circuits arranged on opposite sides of the switch, resistance coils mounted on the cylinder, connected to contact plates and circuit reversing plates also mounted on the cylinder, substantially as described. 6th. The combination, with the battery

cells arranged in groups, and the motor connected therewith, of an interposed controlling switch consisting of a cylinder having mounted thereon complementary contact plates, the said plates consisting essentially of four large plates, having one straight side and the other side stepped, the large contact plates arranged adjacent to said steps and connected to the small complementary plates similarly arranged, and resistance coils connected to the small plates, and brushes connected to the terminals of the circuits as arranged on opposite sides of the switch, substantially as described.

No. 38,706. Sash Balance. (*Centre-poids de croisée.*)

James Joseph O'Connor and John Joseph McDermott, both of Oakville, Ontario, Canada, 11th April, 1892; 5 years.

Claim.—A flexible band wound around or partially around a stub fixed to the sash or sliding door, the ends of the flexible band being fixed to the frame in which the sash or door slides, substantially as and for the purpose specified.

No. 38,707. Compartment Bag. (*Sac à compartiment.*)

William Albert Lorez and William H. Honiss, both of Hartford, Connecticut, U.S.A., 11th April, 1892; 5 years.

Claim.—1st. A collapsed compartment bag, each compartment having its wall or walls plicated; these plications enabling the bag to remain collapsed while empty, and to be expanded when articles are inserted therein, substantially as described. 2nd. A collapsed compartment bag, consisting of two outer walls united at one end of each, having between them a series of compartments, and one of these outer walls being shorter than the other wall, substantially as described. 3rd. A collapsed compartment bag, consisting of two main walls united at one end of each, and of two plicated side walls respectively uniting another edge of each of the main walls, and of one or more plicated partitions attached to the insides of the main side walls and partitions enabling the bag to be expanded, and the compartments thus opened, by simply pulling or pushing the main walls apart, all substantially as described. 4th. A collapsed compartment bag, consisting of two main walls united at one edge of each, and of two plicated side walls, respectively uniting another edge of each of the main walls, and of one or more plicated partitions attached to the insides of the main walls, and dividing the bag into compartments, the plications in the side walls and partitions enabling the bag to be expanded and the compartments thus opened by simply pulling or pushing the main walls apart, and one or more of the compartments having its side walls folded outward from the longitudinal center of such compartment or compartments, substantially as described.

No. 38,708. Machine for Drilling to a Pattern.

(*Machine à percer sur patron.*)

Paul Prybil, New York, state of New York, U.S.A., 11th April, 1892; 5 years.

Claim.—1st. In a machine for boring or drilling, the combination, with the drill or cutter and means for operating it, of a pattern corresponding to the work to be done, and a guide pin bearing a predetermined relation to the cutter and adapted to engage the different points of the pattern and thereby determine the position of the cutter relative to the work, substantially as set forth. 2nd. The combination, with a drill or cutter, means for operating it, and a suitable support for it, of a guide pin having a predetermined position relative to the cutter, and a pattern and work support, the said work support being free to move in different directions to bring any point in the pattern beneath the guide pin, substantially as set forth. 3rd. The combination, with the drill or cutter, means for operating it, and a guide pin having a position predetermined with respect to the cutter, of a pattern and work supporting table mounted upon rollers and free to move in one direction upon a track, and a sub-table upon which said track is supported, the said sub-table being free to move upon a track in a direction at right angles to the movement of the first named table, substantially as set forth. 4th. The combination, with a suitable support, a vertically sliding plate secured thereto, and a laterally tilting plate pivoted to the vertically sliding plate, of a drill or cutter and its holder mounted in suitable bracket attached to said tilting plate, a laterally adjustable arm or bracket secured to the support, a vertically movable guide pin mounted in said arm or bracket, a pattern and work support and means for adjusting the pattern and work support to bring the pattern into the desired position relative to the guide pin, substantially as set forth. 5th. The combination, with a suitable support, a limited longitudinal movement, of a supporting arm secured to said drill support, a vertically yielding guide pin mounted in said arm, a lever for operating said pin, and an operating lever common to the drill spindle and pin operating lever for simultaneously operating the drill and pin, substantially as set forth. 6th. The combination, with the drill or cutter, its spindle, and the support in which the spindle is mounted, of a supporting arm fixed in lateral

adjustment with respect to the spindle support, a guide pin secured in yielding adjustment to the arm and provided with a conical end, a pattern provided with holes adapted to receive the conical end of the guide pin, and a support for the pattern free to move in different directions with respect to the guide pin to bring any one of the holes of the pattern into alignment with the guide pin, substantially as set forth.

No. 38,709. Method of Preserving Fruit.

(*Mode de conservation des fruits.*)

Charles F. Morris and Thomas Chenevert, both of Blencoe, Iowa, U.S.A., 11th April, 1892; 5 years.

Claim.—1st. The herein described preserving or fumigating compound for fruit, vegetables and the like, consisting of sulphur, one and $\frac{1}{4}$ pounds; white sugar, $\frac{1}{4}$ pound; charcoal, $\frac{1}{4}$ pound; wood ashes, one teaspoonful; and fine salt, $\frac{1}{2}$ teaspoonful, as set forth. 2nd. The herein described preserving or fumigating compound for meat and fish, consisting of sulphur, one and $\frac{1}{4}$ pounds; white sugar, $\frac{1}{4}$ pound; charcoal, $\frac{1}{4}$ pound; wood ashes, one teaspoonful; fine salt, $\frac{1}{2}$ teaspoonful; and saltpetre, $\frac{1}{4}$ ounce, as set forth.

No. 38,710. Treatment of Silicated Nickel Ores and Pyritic Ores of Nickel and Copper.

(*Traitement des minerais de silicate de nickel, pyrites de nickel et cuivre.*)

Henri Louis Herrenschmidt, Petit Quevilly, near Rouen, France, 11th April, 1892; 5 years.

Claim.—1st. The herein described method of separating the iron which fouls the sulphates of nickel and copper liquors by means of copper precipitated in the form of oxide or carbonate, as specified. 2nd. The herein described method of separating the nickel from the copper in sulphate or chloride liquors of these two metals by means of precipitated oxide or carbonate of nickel, as specified. 3a. The herein described process of treating silicated nickel ores and nickel pyrites, whether or not they contain copper or cobalt, substantially as follows:—(a.) Roasting the crushed mats, subjecting same to a methodical lixiviation to obtain a sulphate liquor, chloridizing the sulphates in the liquor by the addition of a chloride of calcium (preferably), adding to the liquor precipitated hydrated oxide of copper, carbonate of copper, a carbonate of lime; boiling the liquor and filtering and washing same. (b.) In separating the nickel from the copper in the sulphate of chloride liquors of these two metals, precipitating the chloride of nickel and copper liquor in the form of oxides or carbonates, by means of milk of lime or an alkaline carbonate, followed by decanting, adding to such precipitated oxides or carbonates a fresh quantity of the chloride of nickel and copper liquor and allowing the same to settle, followed by decanting, adding fresh portions of the initial chloride of nickel and copper liquor in succession and by evaporation and calcination or by precipitation with lime producing either pure oxide of nickel and hydrochloric acid or oxide of nickel and calcium chloride. (c.) In separating the nickel from the cobalt, precipitating the nickel and cobalt in the form of oxides by means of lime, subjecting the mixed precipitate, while immersed in water in a suitable vessel, to the combined action of a current of chlorine gas and air in order to convert such oxides into peroxides, adding a fresh quantity of the original cobalt and nickel liquors; introducing steam to thoroughly agitate the solution, decanting such solution and, if required, adding a fresh quantity or quantities of the original liquor until there remains in the precipitate only pure peroxide of cobalt, the several nickelliferous solutions being added together and the metal precipitated in the form of oxide of nickel by means of lime. 3rd. The herein-described method of separating the nickel from the cobalt by means of peroxide of nickel, as specified.

No. 38,711. Machine for Making Boxes.

(*Machine à faire les boîtes.*)

George W. Strong and Gideon A. Williams, both of Sardinia, New York, U.S.A., 11th April, 1892; 5 years.

Claim.—1st. In a box nailing machine, the combination of the rotatable drum adapted to carry the box, the nail receptacle 8, having the slotted bottom, the slotted slide 12, the pivoted feed arm longitudinally slotted in its upper edge, a means for feeding the nails one by one from the lower end of the slide 12, the sleeve 7, the conical slotted receiver 24, secured to the lower end of the sleeve, the hammer rod with its return spring, the pivoted hammer bar 18, and the pivoted hand lever having the roller 20, and the finger 21, and connected by a rod 17, with the feed arm, substantially as set forth. 2nd. The combination, of the rotatable drum adapted to carry the box, the nail receptacle 8, having the slotted bottom, the slotted slide 12, the pivoted feed arm having the longitudinal slot in its upper edge, the feed fingers 15, secured to the free end of a spring arm 14, the sleeve 7, the conical slotted receiver 24, secured to the lower end of the sleeve, the hammer rod with its return spring, the pivoted hammer bar 18, having secured to its side the bar 23, formed with the wedge-shaped lower end, and the pivoted hand lever having the roller 20, and the finger 21, and connected by a rod 17, with the feed arm, substantially as set forth. 3rd. The combination, in a box nailing machine, of the rotatable drum adapted to carry the box, the series of nail receptacles having slotted bottoms, the slotted sides 12^a, the pivoted feed arms 10^a, having the longitudinal slots in their upper edges and connected together by the rod

25, the feed fingers 15^b, secured to the spring arms 14^a, the upright frame 20, having the series of receivers 24^a, the sliding cross head 30, and the series of hammer rods secured thereto, the return springs 33, the pivoted hammer bar 31, connected by a rod 27, with a foot treadle 28, the cross bar 32, secured on the hammer bar, and having the depending bars 23^a, formed with the lower beveled ends, and the rod 26, pivotally connecting the feed arms with the rod 27, substantially as set forth. 4th. The combination, of the drum 2, mounted on a revolving shaft and having the end hand wheel, the gate 36, hinged at one end, the disk 38, centrally pivoted to the inner side of the hinged gate, the spring catch 37, arranged as shown, the ratchet wheel 45, the sliding rod 41, and the pivoted lever 42, adapted to engage the lower end of the rod 44, when raised, substantially as set forth. 5th. The combination, of the supporting frame, the rotatable drum carrying the box, the centrally pivoted table carrying at its inner end the series of hammers and the feed and operating mechanism, the centrally pivoted treadle board 3, pivotally connected at its outer end to the outer end of the pivoted table, and the lever 42, pivotally connected to the inner end of the treadle board, substantially as set forth. 6th. In a box nailing machine, the combination of the rotatable drum carrying the box, the pivoted table carrying at its inner end the adjustable sleeve 7, and upright frame 29, and the series of hammers and feed operating mechanism, and the guide roller 48, extending above the top of the drum 2, substantially as set forth.

No. 38,712. Wheel. (Roue.)

William Sheridan, Perrysburg, Ohio, U.S.A., 11th April, 1892; 5 years.

Claim.—1st. In a metal wheel having return spokes, a hub consisting of a tubular bearing portion having reduced ends, collars adapted to fit on the said reduced ends, the said collars being provided with an outwardly turned flange forming an annular channel, radial channels communicating with the said annular channel, the said channels being adapted to receive the spokes, the said collars are provided with a tubular extension threaded externally, and internally threaded sand boxes adapted to be screwed on the said tubular extension, substantially as set forth. 2nd. In a metal wheel having return spokes, a hub consisting of a tubular bearing portion having reduced ends adapted to receive collars for the reception of the spokes, the said collars, one being provided with a right-handed and the other with a left-handed thread, the internally threaded sand boxes adapted to be screwed on the said collars, the said reduced ends of the tubular bearing portion projecting slightly beyond the said sand boxes, substantially as set forth. 3rd. In a metal wheel having return spokes, a hub consisting of a tubular bearing portion having collars near either end, the said collars having channels for the reception of the spokes, sand boxes adapted to be screwed on to the threaded ends of the said tubular bearing portion, the said sand boxes holding the spokes in the channels of the said collar, substantially as set forth.

No. 38,713. Road Sweeper.

(Appareil pour balayer les rues.)

Mary Sofia Kjelstrom, New York, State of New York, U.S.A., 11th April, 1892; 5 years.

Claim.—1st. In a road sweeper, the combination, with a frame, of two brushes that are converged forwardly and supported on the frame free to rotate, and mechanism that will rotate the brushes outwardly on their lower surfaces, substantially as described. 2nd. In a road sweeper, the combination of two cylindrical brushes, rotatably held below on a frame, having their forward ends adjacent and their rear ends diverged, a transverse axle, two track wheels thereon at the rear of the brushes, and gearing connected with the track wheels and brush supports which will rotate the lower sides of the brushes outwardly, substantially as described. 3rd. In a road sweeper, the combination of a main triangular frame, two cylindrical brushes, two centre shafts therefor having projecting journal ends, a forward bracket frame engaging adjacent journal ends of the brush shafts, two spring cushioned boxes on the frame rearward that rotatably support the rear ends of the brush shafts, a transverse axle journaled in the spring cushioned boxes, two track wheels thereon, bevel gears on the track wheels, and pinions on the brush shafts meshed with the bevel gears, substantially as described. 4th. In a road sweeper, the combination with a frame and brushes mounted below the frame, of springs interposed between the frame and the boxes of the rear ends of the brush shafts, and means for compressing the springs to lower the frame, substantially as and for the purpose set forth. 5th. In a road sweeper, the combination, with a frame and brushes mounted below the frame, of springs interposed between the frame and the boxes of the rear ends of the brush shafts, shafts mounted in the boxes, chains having one end secured to the shafts and the other end connected with the frame and means for operating said shafts, substantially as described. 6th. In a road sweeper, the combination, with a frame and brushes mounted below the same, of cups on the boxes of the brush shaft, cases secured to the frame and sliding in the cups, springs in the cups and cases, shafts mounted in the boxes, chains secured to cases and to the shafts, jointed keeper bars on the ends of the shafts and pawl, and ratchet mechanism for said shafts, substantially as herein shown and described.

No. 38,714. Manufacture of Barbed Wire.

(Fabrication du fil de fer barbelé.)

John Drennan Curtis, Worcester, Massachusetts, U.S.A., 11th April, 1892; 5 years.

Claim.—1st. The improvement in the manufacture of barbed wire, which consists in coiling a barb wire of non-circular cross section around one of the strands, and then twisting the barb wire in a direction transverse to its axis, substantially as and for the purpose hereinbefore set forth. 2nd. In the manufacture of barbed wire, the method of forming and applying the barbs, which consists in coiling a continuous barb wire of non-circular cross section around one of the strands, then twisting said barb wire in a direction transverse to its axis, and then cutting it off, substantially as and for the purpose hereinbefore set forth. 3rd. In machinery for making barbed wire, the combination with fence strand supplying or feeding mechanism, and barb wire supplying or feeding, and coiling mechanisms, of twisting mechanism arranged and operating to twist the barb wire in a direction transverse to its axis after it has been coiled upon its fence strand, substantially as and for the purpose hereinbefore set forth. 4th. In machinery for making barbed wire, the combination, with the fence strand supplying or feeding mechanism, barb wire supplying or feeding, and coiling mechanism, and mechanism for cutting off the barb wire, of twisting mechanism whereby the barb wire is twisted in a direction transverse to its axis after it is coiled upon its fence strand and before it is cut off, substantially as and for the purpose set forth. 5th. The combination, with a strand of wire fencing, of a wire barb of non-circular cross section throughout its length, and coiled at its central portion around the strand, and having its points twisted, substantially as set forth. 6th. The combination, with a strand of wire fencing, of a two-pointed wire barb, made from a non-circular wire and coiled at its central portion once around the strand, with its projecting points having a quarter turn or twist in a direction at right angles to the axis of the barb, substantially as set forth. 7th. The combination, with a strand of wire fencing, of a wire barb made from round wire, and coiled at its central portion around the strand, and having its points twisted, substantially as set forth. 8th. The combination, with a strand of wire fencing, of a two-pointed wire barb made from half round wire, and coiled at its central portion once around the strand, with its projecting points having a quarter turn or twist in a direction at right angles to the axis of the barb, substantially as set forth.

No. 38,715. Car Coupler. (Attelage de chars.)

John T. Jones, Toronto, Ontario, Canada, 11th April, 1892; 5 years.

Claim.—1st. A car coupler consisting of a draw head, a slot formed in its upper side, a coupling pin pivoted in the draw head, one end of which rests upon the inner side of the bottom of the draw head, and the other end extending through the said slot and curved to rest upon the metal surrounding said slot, a U-shaped link, the ends of which are bent to form eyes, a spindle passing through said eyes and journaled in the sides of the draw head, the ends of said spindle fitted to receive a lever extending across the end of the car to the sides, and adapted to raise the link to enter the adjacent draw head of the next car, slots formed in the under side of the draw head to receive the side bars of the coupling link when the coupling link is in its vertical position, substantially as described. 2nd. A car coupler consisting of a draw head having a slot formed in its upper side to the rear of the rib at the front of said draw head, a curved coupling pin mounted on a spindle journaled in suitable bearings formed in the sides of the draw head, one or both ends of said spindle fitted to receive a lever extending across the end of the car to the sides, said pin adapted to be turned rearwards and upwards by said lever, a U-shaped link, the ends of which are bent into eyes, the inner sides of which have one or more flattened surfaces, a spindle passing through said eyes having flattened surfaces to engage with the flattened surfaces of the eyes, one or both ends of said spindle fitted to receive a lever extending across the end of the car to the side, and adapted to raise the coupling link to enter the adjacent draw head of the next car, two longitudinal slots formed in the under side of said draw head, which receive the side bars of the coupling link when in its vertical position, substantially as described. 3rd. A car coupler consisting of a draw head having a slot formed in its upper side, and to the rear of the rib at its front end, two slots formed in its under side extending longitudinally inward from the front of said rib, a U-shaped coupling link, the ends of which are bent into eyes having their inner surfaces flattened, a spindle passing through the said eyes and journaled in suitable bearings formed in the sides of the draw head, said spindle having flattened surfaces to engage with the flattened surfaces of the said eyes, a lug extending outwardly from one or both ends of said spindle, fitted to receive the key lever rigidly connected to said lug by means of a pin passing through said key lever and lug, said key lever extending across the end of the car to the side and cranked at its free end, said coupling link adapted to be raised into a horizontal position by the movement of said lever, and the side bars of the link enter the slots in the under side of the draw head when hanging in its vertical or normal position, a coupling pin located within the draw head and having a polygonal opening therethrough, through which passes a correspondingly shaped spindle, the ends of said spindle journaled in bearings formed in the sides of the draw head, a lug projecting

outwardly from one or both ends of said spindle, and fitted to receive a key lever rigidly connected to the said lugs by means of pins passing through the said key lever and through the said lug, said lever extending across the end of the car to the side and having its free end cranked, said lever adapted to turn the coupling pin rearwards and upwards when uncoupling the cars, said coupling pin extending upwardly through the slot in the upper side of the draw head and curved to rest on the surrounding metal, substantially as described.

No. 38,716. Washing Machine. (Machine à blanchir.)

William L. Dearth, Frankport, Indiana, U.S.A., 11th April, 1892; 5 years.

Claim.—1st. In a washing machine, the combination, with a stationary rubbing frame, located in the suds box thereof, and opposite compartments formed at the ends of the frame and having their inner walls perforated, of levers pivoted above the suds box and depending thereinto, and a rubbing frame pivoted to the levers, substantially as specified. 2nd. In a washing machine, the combination, with the suds box, provided at opposite ends with compartments, the inner walls of which are perforated, and above its bottom with an open frame, of a longitudinal bar removably mounted upon the suds box, a pair of levers passing through openings in the bar in which they are adjustably mounted, a rubbing head pivoted in the lower ends of the levers, and a bar for the operating levers pivotedly connecting the same near their upper ends, substantially as specified. 3rd. In a washing machine, the combination, with the suds box and a pair of levers pivoted in the top of the same and depending into the box and carrying a pivoted rubbing head, of a lever operating bar slotted to receive said levers and pivoted thereto, and provided with a transverse central slot, and a spring-blade passing through said slot and secured at its lower end to the top of the washer, substantially as specified. 4th. The combination, with the suds box, the opposite pairs of bars 10, and the perforated plates 9, connecting each pair of bars at their front edges, said bars being provided at their front lower ends with inclined or undercut faces, of the rectangular frame 11, supported upon the bottom of the box, the ends of the longitudinal bars being bevelled and taking under the undercut ends of the bars 10, substantially as specified. 5th. The suds box, having the recess 14, at one end and the keeper 15, at the other, the bar 16, having one end entering the keeper 15, and its other end fitting the recess, said bar carrying the rubber and its actuating means, and the hinged lids 38 to close the top of the suds box on each side of the bar 16, substantially as specified.

No. 38,717. Churn. (Baratte.)

Robert Simson, Chesley, Ontario, Canada, 11th April, 1892; 5 years.

Claim.—The combination, of the elliptical body A, having breakers C, C, the rotary dashers E, E, each having a set of arms in alignment, the gear wheels H, H, K, enclosed by a casing J, secured to the cover, and the lugs M, and hooks N, as and for the purpose set forth.

No. 38,718. Hot Air Furnace.

(Calorifère à air.)

Enoch Bruce Butterworth, Ottawa, Ontario, Canada, 11th April, 1892; 5 years.

Claim.—1st. In a warm air furnace, the combination of a fire pot A, having angular corrugations, some of which have their edges extended to form flanges a, an oblong base B, containing grate ash doors and draft damper, a cylindrical combustion chamber C, having a shell consisting of angular corrugations provided with fire door and down flue, a conical top or dome D, a deflector E suspended from said dome, a down flue F attached to the combustion chamber having branch F', with damper, a radiator G attached to the down flue and partly surrounding the fire pot, branch pipe H attached to said radiator and provided with check damper h, and the pipe H' rising from the branch H and connected with the branch F', and the enclosing casing I, substantially as set forth. 2nd. In a warm air furnace, the combination of the fire pot A, combustion chamber C and conical dome E, all corrugated with angular or semi-diamond corrugations running perpendicularly, and some of them having their apex extended to form a wing or flange, substantially as set forth. 3rd. In a warm air furnace, the combination of the fire pot A, base B supporting said fire pot and provided with damper B', combustion chamber C, dome D forming the top of the combustion chamber, down flue F, radiator G having partitions g and g', and branch H, provided with damper h, casing I, expansion rod J, lever J', bracket J'' and chain J''', substantially as set forth. 4th. In a warm air furnace, the combination of a down flue F, having a branch F', with damper f', a radiator G attached to said down flue and provided with partitions g and g', and tubular openings G', the branch H attached to said radiator and the chimney H', substantially as set forth. 5th. In a warm air furnace, the combination of a base B containing grate and draft door, a fire pot having angular corrugations with flanges a, a combustion chamber C provided with fire door, a dome D surmounting said chamber, and a deflector E suspended from said dome, substantially as set forth.

No. 38,719. Method of Transportation.

(Méthode de transport.)

Wallace Corodan Andrews, New York, State of New York, U.S.A., 11th April, 1892; 5 years.

Claim.—The method of transporting matter, as described, which consists in reducing the same to a condition of fine division, that is, to a powder or pulp, or taking it in its natural state, if suitably small and light, introducing it into liquid, conveying the mixture through conduits, and separating the matter from the liquid, substantially as described.

No. 38,720. Compound Ingot and Wire Made Therefrom. (Fil de fer fait de l'ingot composé.)

The Burden Seamless Wire Company, assignees of Levi L. Burden, all of Providence, Rhode Island, U.S.A., 12th April, 1892; 5 years.

Claim.—1st. The improvement in the manufacture of seamless compound ingots and wire, the same consisting in fusing a film of solder over the surface of one side of a flat piece of fine metal, or plated stock, then by suitable rolls and dies transforming the blank to a seamless tube having the solder on the inside, then inserting a suitably prepared core of base metal into the said tube, then subjecting the whole to a suitable temperature to re-fuse the solder lining of the shell, thereby uniting the shell and core, and then reducing the ingot to wire. 2nd. The improved process for making seamless plated stock, the same consisting in forming a plate, one side of which is covered with solder, into a seamless tube, inserting a core into the tube and uniting the two together by melting the solder.

No. 38,721. Circular Knitting Machine.

(Machine à tricôt circulaire.)

Michael Joseph Dimmeo and John Henry Hagerty, both of Lowell, Massachusetts, U.S.A., 12th April, 1892; 5 years.

Claim.—1st. The loop-wheel having leaves provided with nibs, said leaves having their edges above said nibs sharpened to form knives, as and for the purpose specified. 2nd. The combination of the needle-cylinder and needles and the loop-wheel provided with leaves having cutting edges, as and for the purpose specified. 3rd. The combination of the needle-cylinder having needles, the loop-wheel, and the feed rolls adapted to feed yarns placed between said rolls, as and for the purpose specified. 4th. The combination of the needle-cylinder having needles, the loop-wheel, and the feed-rolls adapted to be rotated by a yarn drawn between the same and to feed other yarns placed between said rolls, as and for the purpose specified. 5th. The combination of the needle-cylinder having needles, the loop-wheel, and the fluted feed rolls adapted to engage each other and to be rotated by a yarn drawn between said rolls and to feed other yarns placed between said rolls, as and for the purpose specified. 6th. The combination of the needle-cylinder having needles, the loop-wheel, and the feed-rolls arranged one above the other, the upper of said rolls having upwardly yielding bearings, said rolls being adapted to be rotated by a yarn drawn between said rolls, as and for the purpose specified. 7th. The combination of the needle-cylinder having needles, the loop-wheel, the feed-rolls adapted to be rotated by a yarn drawn between the same and to feed other yarns placed between said rolls, and the yarn table arranged between said rolls, needles and loop-wheel, as and for the purpose specified. 8th. The combination of the needle-cylinder provided with needles, the loop-wheel, feed-rolls, a table and yarn guides, pivoted thereon and adapted to clamp, between their ends and said table, yarns, as and for the purpose specified. 9th. The combination of the needle-cylinder provided with needles, the loop-wheel, feed-rolls, a table, yarn guides pivoted thereon and adapted to clamp between their ends and said table, yarns, and having downwardly projecting rear ends, the pattern tape, the pattern drum provided with a ratchet, a pawl rod carrying a pawl, a spring forcing said pawl rod towards said cylinder, and a cam secured on said cylinder and adapted to push said pawl rod and turn said pattern drum at every revolution of said cylinder, as and for the purpose specified. 10th. The combination of the needle-cylinder provided with needles, the loop-wheel, feed-rolls, a table, yarn-guides, supported thereon and adapted to clamp, between their inner ends and said table, yarns, and having adjustable followers provided with downwardly projecting rear ends, a pattern tape having slots to receive said downwardly projecting rear ends, the pattern drum and the carrier roll, said pattern drum having a ratchet, a pawl rod carrying a pawl, a spring to force said pawl rod towards said cylinder, and a cam secured on said cylinder and adapted to push said pawl rod and turn said pattern drum at every revolution of said cylinder, as and for the purpose specified. 11th. The combination of the needle-cylinder provided with needles, the loop-wheel, feed-rolls, a table, yarn-guides pivoted on said table and adapted to clamp between their inner ends and said table, yarns, and having adjustable followers provided with downwardly projecting rear ends, bevelled as described, a pattern tape having slots to receive said rear ends, the pattern drum and the carrier roll, a ratchet secured on said pattern drum concentrically therewith, a pawl rod carrying a pawl which engages said ratchet, and a cam secured on said cylinder and adapted to push

said pawl rod and to turn said pattern drum at every revolution of said cylinder, said cam having two cam-surfaces and an intermediate rest between said cam-surfaces to allow a new yarn to enter before the old yarn is severed, as and for the purpose specified. 12th. The combination of the needle-cylinder provided with needles, the loop-wheel, a table, a yarn-guide pivoted thereon and adapted to clamp the yarn between their ends and said table, the pattern drum actuating said yarn-guides and provided with a ratchet, a pawl rod carrying a pawl to engage with said ratchet, a cam secured on said needle-cylinder and adapted to push said pawl rod and turn said pattern drum at every revolution of said cylinder, and means, substantially as described, for holding said pawl rod out of the path of said cam, as and for the purpose specified. 13th. The combination of the needle-cylinder provided with needles, the loop-wheel, a table, yarn-guides pivoted thereon and adapted to clamp the yarn between their ends and said table, the pattern drum actuating said yarn-guides and provided with a ratchet, a pawl rod carrying a pawl to engage with said ratchet, a cam secured on said needle-cylinder and adapted to push said pawl rod and turn said pattern drum at every revolution of said cylinder, a frame, supporting said pawl rod, said pawl rod and frame being provided with holes, and a pin adapted to enter said holes to enable said pawl rod to be drawn out of the path of said cam and there held by inserting said pin in the hole in said frame and in a hole in said pawl rod, as and for the purpose specified.

No. 38,722. Electric Motor for Cars.

(*Moteur électrique pour chars.*)

The Reliance Electric Manufacturing Company, Waterford, Ontario, Canada, assignees of Frank Bankson Rae, Detroit, Michigan, U. S. A., 12th April, 1892; 5 years.

Claim.—1st. In an electric car motor, the combination of the frame, supported on wheeled axles, a drive gear journaled in rigid bearings in the frame, and a loose connection between one axle and said gear, permitting an eccentric oscillation of the axle in relation to the gear, substantially as described. 2nd. In an electric car motor, the combination of the frame, supported on wheeled axles, of an extension on the frame, a gear wheel journaled therein, apertured to embrace the axle and within which it is free to oscillate, a motor, a drive pinion meshing with said gear wheel, and a loose connection between the axle and gear wheel, substantially as described. 3rd. In an electric car motor, the frame, the arm O, having a bearing at its end, the sleeve N, journaled therein, the gear wheel M, secured to said sleeve, the pin d, the axle passing loosely through the sleeve, the block secured to the axle, having the slot e, in which said pin engages, substantially as described. 4th. In an electric car motor, an oscillating axle, the motor and drive pinion, the drive gear having a loose connection with the axle, and spring backed supporting bearings for the frame, substantially as described.

No. 38,723. Composition Material.

(*Composition de matières pour construction.*)

Charles F. Baker and John H. Randall, assignees of George S. Mayhew, all of Minneapolis, Minnesota, U. S. A., 12th April, 1892; 5 years.

Claim.—1st. A composition material, composed of a body of wooden strips or slats, arranged edge to edge and rigidly cemented together, and thick sheets of straw or other pulp board rigidly cemented on opposite sides of said body, whereby a single strong, rigid and inflexible composition board is formed, substantially as described. 2nd. A composition material, composed of a body of parallel slats or strips, sheets of thick straw or other pulp board, arranged on the sides of said body and an adhesive compound interposed between said slats and between the same and said sheets of paper and forming when dry a hard substance, rigidly connecting said parts, the whole forming a rigid, inflexible homogeneous material, substantially as described. 3rd. A rigid and inflexible composition material, composed of a body of parallel wooden slats, thick sheets of paper board arranged on the sides of said body and an adhesive compound interposed between and connecting said slats together and with said paper boards, substantially as described. 4th. A rigid and inflexible composition material, composed of a layer or body of parallel wooden slats or strips, sheets of thick paper board arranged upon the sides of said strips, and said strips and paper being rigidly cemented together by an adhesive compound which when dry is of a hard inflexible character, substantially as described. 5th. A rigid and inflexible composition material, composed of a layer or body of parallel wooden slats, sheets of thick paper or other pulp board on the side of said body, and an adhesive compound having an earthy or mineral ingredient and interposed and dried between said slats and between the slats and said pulp board, substantially as described. 6th. A rigid and inflexible composition composed of a body or layer of narrow parallel wooden slats or strips, two equally strong sheets of heavy paper board arranged on the sides of said body, and an adhesive compound interposed between and adapted to rigidly cement said slats and the slats and said sheets together, said compound having an earthy or mineral ingredient adapted to give the same a hard stony character when dried, substantially as described. 7th. A composition material composed of a layer or course of wood strips, thick paper facings therefor and an adhesive compound interposed between the same and

between said strips, said compound possessing in itself fire proof properties, substantially as described. 8th. A composition material composed of a layer or course of wood strips, thick paper facings therefor and an adhesive compound interposed between the same and between said strips, said compound possessing in itself fire proof properties, substantially as described. 9th. A composition material composed of a layer or course of wooden slats or strips, thick paper facings therefor and an adhesive compound interposed between the same and between said strips, said compound possessing in itself fire and water proof properties, substantially as described. 10th. A composition material composed of a layer or body of wooden slats or strips, sheets of thick paper board arranged on the sides of said body and an adhesive compound interposed between said sheets and entirely surrounding each of said strips, said paper board having in itself fire proof properties, substantially as described. 11th. A composition material composed of a layer or body of wooden slats or strips, sheets of thick paper board arranged on the sides of said body and an adhesive compound interposed between said sheets and entirely surrounding each of said strips, said paper board having in itself water proof properties, substantially as described. 12th. A rigid and inflexible composition material composed of a layer or body of wooden slats or strips, sheets of thick paper board arranged on the sides of said body and an adhesive compound interposed between said sheets and entirely surrounding each of said strips, said paper board having in itself fire and water proof properties, substantially as described. 13th. A rigid inflexible composition material composed of a body of wooden slats, thick sheets of paper board embracing the same and an adhesive compound possessing an earthy or mineral ingredient and interposed between said parts, the whole being subjected to heavy pressure while the said compound is still soft, whereby the material is solidified and rendered durable and inflexible, substantially as described. 14th. The process of manufacturing rigid inflexible material which consists in arranging between thick sheets of paper board parallel slats or strips, interposing between those parts an adhesive compound adapted to assume a hard inflexible character when dried, and subjecting the whole to heavy pressure, whereby the same is made solid and inflexible, and the setting of the compound hastened, substantially as described. 15th. The process of manufacturing a rigid and inflexible composition material, which consists in arranging a layer or body of parallel narrow wooden slats or strips, between sheets of thick paper board and during the operation interposing between said strips and the same and said sheets, an adhesive compound having an earthy or mineral ingredient, then forcing said parts together and thus disseminating the compound and the solvent thereof between and into said parts and finally drying the product, substantially as and for the purposes specified. 16th. A composition material comprising sheets of paper board, wooden strips or slats between the sheets of paper board and wire cloth between the paper and the slats on one or both sides, the said parts being held together and formed into an integral body by cement, substantially as described. 17th. The combination with the thick sheets of paper, of the wood slats arranged between the same and secured together and thereto by an adhesive compound having an earthy ingredient, the whole being formed into a cove during manufacture, substantially as described. 18th. The process of manufacturing a rigid inflexible composition material with a true and even surface on its face, which consists in arranging between thick sheets of paper board, parallel slats or strips of wood, interposed between these parts an adhesive compound adapted to assume a hard, inflexible character when dried, and subjecting the whole to heavy pressure when placed facing a truly surfaced impression bed, and with a thick body of elastic material between the back of the composition board and the platen of the press.

No. 38,724. Fire Lighter. (*Allumoir.*)

Pierre Morency, Hormidas Morier and Honoré Lafleur, all of Montreal, Quebec, Canada, 12th April, 1892; 5 years.

Claim.—A stove lighter, having the metallic box A, provided with the nozzles B, piece C, lever F, having the forked projection I, and handles G and H, lever K, connecting rod L, spring Q, crank M, and T-shaped piece O, all substantially as described and for the purposes set forth.

No. 38,725. Wiping Rod for Rifles, etc.

(*Baquette pour nettoyer les carabines, etc.*)

Henry Clay Patterson, Marshall, and Charles G. Patterson, Kansas City, both of Missouri, U.S.A., 12th April, 1892; 10 years.

Claim.—1st. The combination, of a wiping rod for rifles, etc., having the washers 6 and 7, secured at a suitable distance apart upon its outer end, and the handle 4, formed with the central longitudinal bore, and fitting loosely upon the outer end of the rod between the said washers, substantially as set forth. 2nd. The herein described new and improved wiping rod for rifles, etc., consisting of the rod 1, formed at its inner end with the shouldered knob 2, and the spiral thread 3, and having the washers 6 and 7, secured at a suitable distance apart upon its outer end, and the handle 4, formed with the central longitudinal bore, and fitting loosely upon the outer end of the rod and between the said washers, substantially as set forth.

No. 38,726. Oil Can. (Bilon.)

Harriet A. Hart, assignee of Charles W. Hart, both of Troy, New York, U.S.A., 12th April, 1892; 5 years.

Claim.—1st. In an oil can, the combination, with an apertured cap top, of a vertically movable cap or plug adapted to close such aperture, a strap extending across the vertical path of the plug or cap, means for locking the strap to the can, whereby vertical movement of the plug or cap is limited or prevented, and means for withdrawing the contents of the can without unlocking the strap, substantially as described. 2nd. The combination, with a reservoir provided with an outlet in its lower portion, of a valve having its stem rotary on a horizontal axis for controlling the outlet, a nozzle communicating with the outlet, and secured to the valve stem in a position to oscillate in a vertical plane, the nozzle being so adjusted relatively to the valve that the valve is open only when the mouth of the nozzle is below the level of the reservoir outlet, substantially as described. 3rd. In an oil can, the combination, with a reservoir having a side wall pocket, projecting interiorly of the reservoir and opening outwardly, an outlet leading from the reservoir, and a valve for controlling such outlet, of an oscillatory nozzle communicating with the reservoir outlet, and arranged to swing into and out of the pocket, whereby the nozzle and its connection may be brought within the contour of the reservoir when not in use, substantially as described. 4th. In an oil can, the combination, with a reservoir having an outwardly opening pocket integral with the side wall of the reservoir, and projecting within the reservoir, an outlet leading from the reservoir and a valve for controlling the outlet; of an oscillatory nozzle communicating with the outlet and arranged to swing into and out of the pocket, substantially as described. 5th. In an oil can, the combination, with the body part, having an indentation or pocket formed by pressing a portion of the body wall inwardly, of a concave cap bottom secured to the bottom edge of the bent-in portion, substantially as described. 6th. A bail attaching mechanism for cans, consisting of a portion of the vertical wall of the can projecting above the can top, and provided with an attaching ear for the bail, substantially as described.

No. 38,727. Ladder. (Echelle.)

Morris C. Wilson and Byron C. Vincent, both of Athens, Pennsylvania, U.S.A., 12th April, 1892; 5 years.

Claim.—In an extension ladder, the combination, with the lower member having eyes in its side bars near their upper ends, an upper member sliding over said lower member, and a winlass for raising the upper member, the side bars of the latter having notches in their front edges, of a U-shaped catch, whose body stands across the face of the upper member and whose arms extend to the rear and pivotally engage said eyes, one of them being extended beyond its pivot and having a small eye, and an operating rope leading from this eye to the ground, as and for the purpose hereinbefore set forth.

No. 38,728. Dump Waggon. (Tombereau.)

James T. Dougine, James Francis Lee, and Charles S. Morton, all of Chicago, Illinois, U.S.A., 12th April, 1892; 5 years.

Claim.—1st. A dumping waggon having pairs of bottom sections D, D¹ hinged together, and oscillating bars H, substantially as specified. 2nd. A dumping waggon having pairs of bottom sections D, D¹ hinged together, a bolt or shaft F common to each pair, and oscillating bars H, substantially as specified. 3rd. A dumping waggon having hinged bottom sections D, D¹ hinged in pairs to bolts or shafts F, and oscillating bars H having curved webs or faces, substantially as specified. 4th. A dumping waggon having pairs of bottom sections D, D¹ hinged together, oscillating bars H and dumping levers K¹, and collecting mechanism for operating said bars H, substantially as specified. 5th. A dumping waggon having pairs of bottom sections D, D¹ hinged together, a hinge bolt or shaft F for each pair, cams or projections f, oscillating bars H, and a lever for rocking said shafts, substantially as specified. 6th. A dumping waggon having pairs of bottom sections D, D¹ hinged together, a hinged bolt or shaft F for each pair, cams or projections f, oscillating bars H, lever G¹ and bar G for rocking said shafts, and lever K¹ and bar K for oscillating bars H, substantially as specified. 7th. The combination of sections D, D¹, hinge shafts F, operating arms f secured to shafts F, and oscillating bars H, the latter rocking under alternate sections and dumping the remaining sections, substantially as specified. 8th. The combination of sections D, D¹, with oscillating hinge shafts F, arms or cams f secured to said shafts, and oscillating bars H adapted to rock under alternate sections and dump the remaining sections, substantially as specified. 9th. The combination of a series of sections D, D¹, with oscillating hinge shafts F, having arms or cams f made in loop form and secured to the shafts, substantially as specified.

No. 38,729. Target. (Cible.)

Edwin Walter Ely, Toronto, Ontario, Canada, 12th April, 1892; 5 years.

Claim.—1st. A target, the face plate of which is comprised of a series of independently inwardly movable bevel-edged sections, extending from the bull's eye, which forms one of the sections, to the outer edge, each of the sections having a burry face, arranged as and for the purpose specified. 2nd. A target, the face plate of which is comprised of a series of independently inwardly movable bevel-

edged sections, extending from the bull's eye which, forms one of the sections, to the outer edge, each section of which is connected by ball and socket joints to the pins, which form the connection to complete the circuit, so that when any portion of the section is struck by the markman's ball it recedes and completes the circuit by a separate wire to an indicating plate or drop on the target, which is operated by the completion of the circuit, as and for the purpose specified. 3rd. A target A, the face plate of which is comprised of a series of independently inwardly movable bevel-edged sections a, which are supported by pins b, connected to the sections by the ball and socket joints b¹, and are held on and away from the centre plate H, and flush with each other by a spiral spring I, in connection with the spring jaws J, corresponding in number to the pins b, and through which the circuit is completed, as and for the purpose specified. 4th. The combination of the target A, the face plate of which is comprised of a series of independently inwardly movable bevel-edged sections a, which are connected to the pins b, by ball and socket joints at the end of each pin, and the spiral springs I, located behind the shoulders b², all of the pins being supported in the plate H, as and for the purpose specified. 5th. The target A, the face plate of which is comprised of a series of independently inwardly movable sections a, which are connected to the pins b, by ball and socket joints at the end of each pin and the spiral springs I, designed to hold the said sections flush with each other, in combination with the spring jaws J, each of which is located directly behind its corresponding pin, and the wire or wires M, and ground wire N, arranged as and for the purpose specified. 6th. The target A, the face plate of which is comprised of a series of independently inwardly movable sections a, which are connected to the pins b, by ball and socket joints at the end of each pin and the spiral springs I, designed to hold the said sections flush with each other, in combination with the spring jaws J, each of which is located directly behind its corresponding pin, the metal plates K, mercury cup G, the wire g, connecting the metal plate with the mercury in the cup G, and the binding screw h, extending through the bottom of the cup into the mercury, the wire M, connecting the said binding screw h, and the ground wire N, to complete the circuit to the marking target, as and for the purpose specified. 7th. The target A, the face plate of which is comprised of a series of independently inwardly movable sections a, the pins b, connected to the sections a, and the springs I, supporting the sections flush with each other, as specified, the spring jaws J, secured in the metal plate K, and arranged as specified, the mercury cups secured to the rear of the metal plates, the mercury being connected to the metal plate H, in combination with the marking target B, divided into a series of sections a¹, corresponding to the sections a, forming the face of the target, and the indicating plates or drops L, each of which are operated by the complete circuit formed over the separate wire M, and ground wire N, as and for the purpose specified.

No. 38,730. Water Heater. (Calorifere à eau.)

Arthur Lloyd, assignee of George Lloyd, both of St. Catharines, Ontario, Canada, 12th April, 1892; 5 years.

Claim.—1st. A vessel provided with means for sub-dividing a body of water into a number of small streams, and with a heating device to act upon and heat the said streams before they can escape from the said vessel, substantially as and for the purpose specified. 2nd. A vessel provided with a heating device located at its base and protected by a conically shaped hood, in combination with a water chamber located at the top of the vessel, and provided with a series of twisted dripping plates arranged to act as conductors, by which the water from the chamber shall trickle on to the hood, substantially as and for the purpose specified. 3rd. A vessel provided with a heating device located at its base and protected by a conically shaped hood, in combination with a water chamber located at the top of the vessel, and provided with a series of twisted dripping plates connected to a skirt having a serrated bottom edge arranged to act as conductors, from which the water from the chamber shall trickle on to the hood, substantially as and for the purpose specified. 4th. A vessel provided with a heating device located at its base and protected by a conically shaped hood, a water pipe coiled around the base and extending to a sieve located at the top of the vessel and leading into the water chamber, in combination with a series of twisted plates, and of an inner chamber suspended from the bottom of the water chamber and arranged to sub-divide the water in the water chamber, and permit it to drip on to the hood, substantially as and for the purpose specified.

No. 38,731. Malt Floor. (Aire de germoir.)

Johann Jungbluth, Cologne, Prussia, 12th April, 1892; 5 years.

Claim.—1st. The herein described improvements in or connected with the malting of barley, consisting in providing in the malting floor a series of apertures a through which the fluid used in the process passes, and connecting with horizontal channels b into which the fluid to be used is delivered, and an outlet conduit communicating with said channels b, from which the discharge of liquid is controlled, substantially as described. 2nd. In a malting floor having channels therein for the passage of fluid, a collecting conduit common to a plurality of said channels and having a valve thereon by which the level of liquid in the channels can be controlled at will, substantially

as described. 3rd. The construction and arrangement of a malt kiln floor herein described, comprising an under portion B, provided with horizontal channels *b*, an upper portion A composed of slabs provided with vertical ducts *d*, and nozzles *a*, a fluid supply pipe *g*, a collecting conduit *h*, and a regulating cock *k*, substantially as described.

No. 38,732. Electric Cable. (*Câble électrique.*)

The Eugene F. Phillips Electrical Works, Montreal, Quebec, Canada, assignees of William Henry Sawyer, Providence, Rhode Island, U.S.A., 12th April, 1892; 15 years.

Claim.—1st. An electric cable core, comprising a group of insulated conductors interbraided with fibrous cords into a tubular form, each conductor being thereby held apart from its adjacent conductor, and practically surrounded by the air occupying the pores and interstices of said fibrous filling, whereby a high insulation resistance and a low inductive capacity is maintained for the said conductors. 2nd. An electric cable core, composed of four insulated conductors adapted to be arranged in pairs to form parts of electric circuits, braided or woven together with fibrous filling cords into a tubular form, each conductor of each circuit section being disposed parallel to and between the two conductors of the other circuit, and all of the said conductors being braided with a helical twist in the same direction, and held at a uniform distance from each other by the interposed fibrous filling, so that at a cross section taken at any point, the plane of the two conductors of one circuit will be perpendicular to that of the other, whereby inductive neutrality and low inductive capacity is secured. 3rd. The combination, substantially as hereinbefore described, in an electric cable, of a central tubular core formed by braiding or weaving four pairs of insulated conductors with a series of fibrous threads, cords, twines or equivalent fibrous material, whereby a considerable air space is left in and between the said fibrous cords, two of the said pairs being so disposed in the braid as to form in the tubular core a right handed helix, and the remaining two being braided in the opposite direction so as to constitute a left-handed helix. 4th. An electric cable, comprising a central tubular core formed by braiding two or more pairs of insulated conductors, together with a series of fibrous cords, twines or threads, combined with one or more unbraided but twisted pairs of insulated conductors extended longitudinally through the said tubular core to serve as supplementary metallic circuit conductors, substantially as specified. 5th. The hereinbefore method of manufacturing electric cables, which consists in laying the insulated conductors in groups of four (that is to say, two pairs), and in braiding them together with a fibrous and porous filling in such a manner that the planes of the two circuits are at a right angle to each other, or the four conductors at opposite quadrantal points of a circular cross section taken at any point of such cable. 6th. As an improvement in the art of manufacturing electric cables, the herein described method, which consists in disposing the insulated conductors in groups of four pairs, and in interbraiding them loosely with fibrous cords or fillers, giving to two of the said pairs a right-handed helical twist, and to the remaining two a left-handed helical twist, substantially as set forth. 7th. In an electric cable, a series of conductors interbraided or woven with fibrous twine, twisted paper or like material, into tubular form, to constitute a foundation or core, and one or more successive similar series of braided conductors and fibrous cords braided thereover, the conductors of each succeeding series being braided with a longer pitch or at an increased angle to those of each underlying series, substantially as described. 8th. In an electric cable, the combination of four pairs of conductors, interbraided or woven with a series of fibrous cords into tubular form to constitute a base or core, the conductors of two of the pairs being braided in a direction opposite to those of the remaining two, and one or more successive similar series of conductors and fibrous filling cords braided thereover, and superposed on each other, each series having a like number of pairs of conductors, each having the conductors of one-half its pairs braided in a direction opposite to that of the other half, and each succeeding series having its conductors braided at a longer pitch than those of the preceding or underlying series, substantially as described. 9th. In an electric cable a central core having two or more pairs of insulated conductors braided together with a series of fibrous filling cords into a tubular form whereby each pair are maintained in parallelism with each other but at a suitable distance apart, so that both are equidistant from any other conductor, and so that the electrostatic or inductive capacity measured between the two conductors of a pair shall in virtue of the air space between them be at a minimum. 10th. An electric cable, having a compound conducting core or nucleus composed of a series of conductors, adapted to be arranged in pairs, braided with fibrous cords or twines into tubular form, and one or more successive series of conductors likewise braided with fibrous cords into tubular form, each successive series being braided over the other, and each pair of braided conductors having its two members approximately equidistant from the other cable conductors substantially as described. 11th. An electric cable, consisting of a central tubular core, having two or more pairs of insulated conductors interbraided as described, with a series of fibrous cords, one or more like series of pairs of insulated conductors braided or woven thereover, together with similar fibrous material in successive concentric tubes, the pitch of the conductors of each successive series in outward progression being greater than that of those of the preceding

series, and a leaden sheath or pipe, or other suitable protective covering, substantially as specified. 12th. An electric cable, formed of a series of insulated conductors interbraided with fibrous material into a continuous flat strip or ribbon, which is wound or twisted into a helical tube, having a central channel core or air space, and a succession of similarly constructed tubes, or of braided tubes formed as described herein, wound upon or braided over the central tubular core to build up a cable of the desired size, the conductors of each successive tube in outward progression being arranged in a helical direction opposite to that taken by those of the preceding series, and a leaden or other protective sheath, substantially as specified herein. 13th. An electric cable, formed of a series of separate groups of conductors, each group being made by braiding or weaving into a tubular form a series of pairs of insulated conductors, electrically separated, but mechanically united by fibrous threads or cords forming a part of said braided tube, the said groups being symmetrically disposed and drawn into an external protecting envelope of lead or lead alloy, substantially as described. 14th. A cable core formed of two or more pairs of insulated conductors so interwoven or interbraided with filaments or cords of fibrous material as to form interstices or spaces between the said conductors which together with the substance of said fibrous material, are adapted to receive and retain an insulating medium of dry air or gas, substantially as described.

No. 38,733. Sash Cord Machine.

(*Machine pour la fabrication des cordes de croisé.*)

The Dovecourt Twine Mills Company, assignee of Walter Herbert Avis, all of Toronto, Ontario, Canada, 12th April, 1892; 5 years.

Claim.—1st. The combination, with the lower and upper frame plates rigidly connected together, the said upper frame plate having raceways formed therein, of the central gear wheel, means for driving the same, a series of gear wheels disposed around said central gear wheel and meshing therewith, receivers carried by all said gear wheels, as described, the carriers engaged by said receivers, and thereby caused to traverse around the axis of said central gear wheel and around the axis of the surrounding gear wheels, and the switch springs secured at the junctions of the raceways in said upper frame plate, to guide said carriers, substantially as shown and for the purpose set forth. 2nd. The combination, with the lower and upper frame plates rigidly connected together, the said upper frame plate having circular raceways formed therein, of the central gear wheels, means for driving the same, a series of gear wheels disposed around said central gear wheel and meshing therewith, receivers carried by all said gear wheels, as described, carriers engaged by said receivers and thereby caused to traverse around the axis of said central gear wheel, and around the axis of the surrounding gear wheels, and each of said carriers having a bobbin support, a tension, a take-up, a thread carrying arm, and a bobbin retaining arm, substantially as shown and as set forth. 3rd. The combination, with the lower and upper frame plates rigidly connected together, the said upper frame plate having circular raceways therein, of the central gear wheel, means for driving the same, a series of gear wheels disposed around said central gear wheel and meshing therewith, receivers carried by all said gear wheels, as described, carriers engaged by said receivers and thereby caused to traverse around the axis of said central gear wheel, and around the axis of the surrounding gear wheels, and the switch springs secured at the junctions of the raceways in said upper frame plate to guide said carriers therein, substantially as shown and as set forth. 4th. The feeding device, composed of the pulley, the radial clamping arms co-operating therewith, and the spring pressed cam engaging with said arms, substantially as shown and described. 5th. The feeding mechanism, comprising the pulley, the radial clamping arms co-operating therewith, the spring pressed cam engaging with said arms, and the rollers receiving the cord from the said pulley, substantially as described. 6th. The combination, with the lower and upper frame plates, the said upper frame plate having circular raceways therein, of the central gear wheel, means for driving the same, a series of gear wheels disposed around said central gear wheel and meshing therewith, receivers carried by all said gear wheels, as described, carriers engaged by said receivers and thereby caused to traverse around the axis of said central gear wheel and around the axis of the surrounding gear wheels, and the feeding mechanism comprising the pulley, the radial clamping arms co-operating therewith, and the spring pressed cam engaging with said arms, substantially as shown and described. 7th. The combination, with the lower and upper frame plates rigidly connected together, the said upper frame plate having circular raceways therein, of the central gear wheel, means for driving the same, a series of gear wheels disposed around said central gear wheel and meshing therewith, receivers carried by all said gear wheels, as described, carriers engaged by said receivers and thereby caused to traverse around the axis of said central gear wheel and around the axis of the surrounding gear wheels, and the feeding mechanism comprising the pulley, the radial clamping arms co-operating therewith, and the spring pressed cam engaging with said arms, and the rollers receiving the cord from said pulley, substantially as described and set forth. 8th. The combination, with the lower and upper frame plates rigidly connected together, the said upper frame plate having circular raceways formed therein, of the central gear wheel, means for driving the same, a series of gear wheels disposed around said central gear

wheel and meshing therewith, receivers carried by all said gear wheels, as described, the carriers engaged by said receivers and thereby caused to traverse around the axis of the surrounding gear wheels, the switch springs secured at the junctions of the raceways in said upper frame plate for guiding said carriers, and the feeding mechanism comprising the pulley, the radial clamping arms co-operating therewith, the spring pressed cam engaging with said arms, and the rollers receiving the cord from said pulley, substantially as shown and described. 9th. The combination, with the lower and upper frame plates rigidly connected together, the said upper frame plate having circular raceways formed therein, of the central gear wheel, means for driving the same, a series of gear wheels disposed around said central gear wheel and meshing therewith, receivers carried by all said gear wheels, as described, carriers engaged by said receivers and thereby caused to traverse around the axis of the surrounding gear wheels, said carriers having each a bobbin support, a tension, a take-up, a thread carrying arm, and a bobbin retaining arm, and the feeding mechanism comprising the pulley, the radial clamping arms co-operating therewith, the spring pressed cam engaging with said arms, and the rollers receiving the cord from the said pulley, substantially as shown and described. 10th. The feeding mechanism comprising the pulley, the radial clamping arms co-operating therewith, the spring pressed cam engaging with said arms, the rollers receiving the cord from said pulley, the toothed wheel supporting the pulley and clamping arms, and the worm wheel engaging said toothed wheel and carried on a vertical shaft driven to operate said feed mechanism, and the rollers receiving the cord from the said pulley, substantially as shown and described. 11th. The feeding mechanism comprising the pulley, the radial clamping arms co-operating therewith, the spring pressed cam engaging with said arms, the rollers receiving the cord from said pulley, the toothed wheel supporting the pulley and clamping arms, the worm engaging said toothed wheel, the vertical shaft carrying said worm, and a cone pulley thereon, driven to operate said pulley and clamping arms, the rollers receiving the cord from said pulley, the belt operating said cone pulley and carried over the idler pulleys, and the cone pulley driving said cone pulley on the said vertical shaft and carried on the main driving shaft, substantially as shown and described. 12th. The carrier composed of a flanged body adapted to operate in raceways, a shank whereby it is operated in said raceways, means for holding a bobbin, a tension device to grip the thread, a hinged arm to retain said bobbin, an outwardly extending thread carrying arm, and a take-up, substantially as shown and described.

No. 38,734. Sickle Grinder.

(*Récolteur des lames des fauchuses.*)

George J. Cline, Goshen, Indiana, U.S.A., 12th April, 1892; 5 years.

Claim.—The grinding machine having journaled upon a shaft or journal supported between the upper ends of a standard, a bearing block whose free end bears a journal or shaft carrying a handled wheel, in combination with a bracket or hanger carrying the grinder, whose shaft carries a pinion geared to said wheel, and the spring connected to said bracket and to the base of the machine, substantially as set forth.

No. 38,735. Dredge for Golden Alluvium.

(*Dredgeur pour l'exécution de l'alluvium contenant de l'or.*)

Ernest Felix Lacour, Genoa, Italy, 12th April, 1892; 5 years.

Claim.—1st. In my apparatus for the treatment of auriferous alluviums the combination of a classifying jigger with a water-box, a sand-box and a sluice or radiating canal. 2nd. The jigger bearing a series of railroad tracks, in combination with a grating allowing only gravels of less than one centimetre to pass, having wire gauze underneath, as has been described. 3rd. The sand-box, in combination with the agitators formed of a series of points secured to a square horizontal shaft, and the distributor consisting of a horizontal shaft bearing rubber bands held in place by pivots. 4th. The receiving canal with variable inclination formed of wooden cross pieces, in combination with a series of rakes, reaching approximately to within a distance of three centimetres of the bottom, said rakes having a transversal movement and adapted to totally sweep the canal or sluice, as described. 5th. To retain the pebbles, the use of buckets with mercury put on the canal which receives the refuse from the wire gauze, the wire gauze being shorter than the other gratings of the jigger, the whole substantially as described and shown.

No. 38,736. Stock Tether. (*Attache pour bestiaux.*)

Michael Rooney, Quincy, Illinois, U.S.A., 12th April, 1892; 5 years.

Claim.—1st. A stock tether, consisting of a cable provided with weights and posts over which such cable passes, to keep the cable always up out of the way of the animal, substantially as and for the purposes hereinbefore set forth. 2nd. In a stock tether, the cable and weights, in combination with posts for said cable, and an elevated support to keep the rope above and away from the animal's head, horns, etc., substantially as and for the purpose hereinbefore set forth. 3rd. A stock tether, consisting of a cable provided with

weights and posts over which such cable passes, to keep the cable always up out of the way of the animal, and levers pivotally secured to said posts for raising them, substantially as and for the purposes hereinbefore set forth.

No. 38,737. Automatic Draft Regulator.

(*Régulateur automatique du tirage.*)

The Howard Thermostat Company, assignee of Charles De Zang Howard, all of Syracuse, New York, U.S.A., 13th April, 1892; 5 years.

Claim.—1st. The combination, with a heating furnace and its ash-pit and smoke-pipe, of a thermostatic bar constructed of materials possessing different expansible properties and having one end secured to a supporting frame, a lever pivotally mounted in said frame, an adjusting screw inserted through the free end of the thermostatic bar and bearing against one arm of said lever, a draft-box divided into compartments and having a radially slotted front, a radially slotted disk pivoted upon the front of said box, a chain connected to said disk and to the inner arm of said lever, and separate pipes leading from the respective compartments to said ash-pit and smoke-pipe. 2nd. A draft-box divided into compartments, a radially slotted disk upon the front of said box, pipes leading from the compartments to the heating apparatus, a counter-balance upon said disk, and the thermostatic bar and connections between it and said disk actuated by said bars, to rotate the disk to open one compartment and close the other simultaneously, in combination, as set forth.

No. 38,738. Die Stock and Die.

(*Filière brisée et filière.*)

James S. Fletcher, Chicago, Illinois, U.S.A., 13th April, 1892; 5 years.

Claim.—1st. The combination of a die stock provided with a hub having a tapered bore and a die adapted to wedge within said bore of the hub, substantially as described. 2nd. The combination, with a die stock provided with a hub having a tapered screw threaded bore, of an externally threaded die adapted for adjustment within said threaded bore of the hub, substantially as described. 3rd. The combination of a die stock provided with a hub having a conical screw threaded bore, and an exteriorly threaded conical and adjustable die adapted to fit within the threaded bore of said hub, substantially as described. 4th. The combination of a die stock provided with a hub having a tapered bore, of an externally tapered split die adapted to be set to different gages by its adjustment within said bore of the hub, substantially as described. 5th. The combination of a conical die split by a longitudinally arranged slot, a wedge adapted to determine the extent to which said slot can be closed, and a die stock having a hub provided with a tapered bore adapted to receive said die, substantially as described. 6th. The combination of a hub having a tapered bore, an externally tapered die provided with a centrally arranged bolt hole, and a tapered guide provided with a central hole adapted to freely pass the bolt, and slots to pass the chips cut by said die, substantially as described.

No. 38,739. Alarm Knob.

(*Bouton-avertisseur pour portes.*)

Edward Curtiss Garlick, Cleveland, Ohio, U.S.A., 13th April, 1892; 5 years.

Claim.—1st. An alarm knob consisting of a hollow shell adapted to act as a gong or bell, and having the striking mechanism secured to the spindle of the knob within the shell, and operated by a sliding pin actuated by an inclined face on the rose plate, substantially as described. 2nd. An alarm knob consisting of a hollow shell adapted to act as a gong or bell, and having within the shell the striking mechanism secured to the spindle, and in its shank the operating pin engaging an inclined face on the rose plate, and a stop pin adapted to set and lock the striking mechanism out of engagement, substantially as described. 3rd. In an alarm knob, the combination of a hollow shell adapted to act as a bell, the striking mechanism attached to the spindle within the shell, and having the loosely pivoted striking hammer, the sliding pin with beveled end inserted in the knob shank, and the rose plate with inclined face for actuating the pin, substantially as described. 4th. The combination, with the hollow knob adapted to act as a bell, of the alarm mechanism consisting of a base plate secured to the base plate and having the striking hammer loosely pivoted to its free end, the pawl pivoted to the base plate and engaging the striking arm, the sliding pin adapted to bear upon and push forward the pawl, the inclined face on the rose plate to actuate the pin, and a stop pin adapted to force the pawl out of engagement with the striking arm and to be locked in that position, substantially as described. 5th. In an alarm knob, the combination, with the hollow knob adapted to act as a bell, and having attached to its spindle the base plate *a*, with striking arm and pawl pivoted thereto, of the gravitating hammer pivoted to the striking arm, substantially as described. 6th. In an alarm knob, the combination of the knob shell having a central internal stem, with central bearing adapted to receive the shoulder of the spindle,

and transverse groove adapted to fit the squared faces of the spindle, with the spindle having a shoulder fitting the central bearing of the stem, and a squared portion fitting the transverse groove thereof to prevent the turning of the knob on the spindle, substantially as described.

No. 38,740. Nutritive Stimulating Compound.

(*Composé nutritif stimulant.*)

Booril Limited, assignee of John Lawson Johnston, 30 Farrington Street, London, England, 13th April, 1892; 5 years.

Claim.—A nutritive stimulating compound consisting of prepared meat with gelatinous material, in combination with cocoa or chocolate, substantially in the proportions set forth.

No. 38,741. Cinder Sifter. (*Tamis à cendres.*)

James Albert Stovel, Toronto, Ontario, Canada, 14th April, 1892; 5 years.

Claim. 1st. An improved cinder-sifter, consisting of an open mesh or perforated cylinders having a longitudinal opening made in its side and pivoted within a casing, substantially as and for the purpose specified. 2nd. An improved cinder-sifter, consisting of an open mesh or perforated cylinder, having a longitudinal opening made in its side, and pivoted within a casing, in combination with a pivoted chute between two drawers located at the bottom of the casing and the cylinder, substantially as and for the purpose specified. 3rd. An improved cinder-sifter, consisting of an open mesh or perforated cylinder H, provided with a door J, hinged on the strip K, and resting upon the strip L, located at the longitudinal opening I, in combination with the chute F, pivoted between the drawers C, D, and arranged to rest upon either of the plates F, substantially as and for the purpose specified.

No. 38,742. Printer's Side and Foot Stick.

(*Compositeur d'imprimerie.*)

Elbert Robert Johnston, Seaforth, Ontario, Canada, 14th April, 1892; 5 years.

Claim.—1st. A printer's side or foot stick, made in two pieces, the meeting edges of which consist of a series of wedge like projections having square shoulders, the faces of the projections on one piece being provided with grooves, and the faces of the projections on the other piece with tongues, substantially as and for the purpose set forth. 2nd. The combination in a side or foot stick with the two pieces A and B, having a series of wedge like projections on their meeting edge, of the tongue F, engaging the grooves D, and the chamfers c and c, substantially as and for the purpose set forth.

No. 38,743. Centrifugal Blower and Injector.

(*Souffleur centrifuge et injecteur.*)

The Ruble American Blower and Injector Company, assignee of Martin Rose Ruble, all of Newark, New Jersey, U.S.A., 14th April, 1892; 5 years.

Claim.—1st. A blower or injector, consisting of a stationary chamber, and a series of radial tubes or passages, adapted to be revolved within said chamber, whereby, by means of centrifugal force, air or other fluids are conducted into said chamber, substantially as described and set forth. 2nd. A blower or injector, consisting of a stationary chamber, a series of radial tubes or passages, adapted to be revolved within said chamber, and elbows secured to the outer ends of said tubes or passages, and adapted to produce, when passing through the air, at their outlets, a vacuum and suction, substantially as described and for the purposes set forth. 3rd. A blower or injector, consisting of a drum or chamber, provided at each side with a centrally located opening, an open cylinder arranged between said openings and adapted to be revolved within said chamber, and a series of radial tubes or passages secured to and in said cylinder, and adapted to conduct air or other fluids from said cylinder into said chamber, substantially as described and for the purposes set forth. 4th. A blower or injector, consisting of a chamber, provided at each side with a centrally located opening, an open cylinder arranged between said openings, and adapted to be revolved within said chamber, a series of radial tubes or passages secured to and in said cylinder, and elbows arranged at the outer ends of said tubes or passages, and adapted to produce, when passing through the air, at their outlets, a vacuum and suction, whereby the air from the open cylinder is drawn into the chamber, substantially as described and for the purposes set forth. 5th. A blower or injector, consisting of a chamber, provided at each side with a centrally located opening, an open cylinder arranged between said openings, and adapted to be revolved within said chamber, a series of radial tubes or passages secured to and in said cylinder, and a shell or drum secured to said cylinder and surrounding said tubes, the outer ends of the latter extending through the periphery of said drum, all said parts being arranged and adapted to operate, substantially as described and for the purposes set forth. 6th. A blower or injector, consisting of a chamber, provided at each side with a centrally located opening, an open cylinder arranged between said openings and adapted to be revolved within said chamber, a shell secured to said cylinder, and a series of radial tubes or passages secured to and in said cylinder and extending through said shell,

and provided at their outer ends with elbows, said elbows being adapted to produce, when passing through the air, at their outlets, a vacuum and suction, all said parts being adapted to operate substantially as described and for the purposes set forth. 7th. A blower or injector, consisting of a chamber, provided with one or more outlets, a series of radial tubes or passages adapted to be revolved within said chamber and to produce a blast at the said outlets, and a siphon secured to said outlets, and adapted to increase the said blast or pressure, substantially as described and for the purposes set forth. 8th. The method of producing a blast or pressure by means of centrifugal force, acting upon the air contained in a series of radial tubes or passages, secured to a revolving air chamber, as described and set forth. 9th. The method of producing a blast or pressure by means of centrifugal force and suction force, acting upon the air contained in a series of radial tubes or passages, secured with their inner ends to a revolving air chamber, and provided at their outer ends with elbows, as described and set forth. 10th. In a blower or injector, the combination with the outlet of a tube secured thereto, a smaller tube arranged within said tube and provided at its inner end with a branch tube extending at an angle, through said surrounding tube, all said parts being arranged and adapted to operate substantially as described and for the purposes set forth. 11th. A blower or injector, consisting of a chamber, provided at each side with a centrally located opening, a shaft adapted to be revolved in said chamber, a series of triangular chambers arranged radially around said shaft and adapted to be revolved therewith, the spaces between said chambers forming radial air or fluid passages, side plates d^1 , d^2 , holding said triangular chambers together, and elbows formed at the outer ends of said passages, substantially as described and set forth.

No. 38,744. Anti-Friction Bearings for Vehicles.

(*Coussinets à anti-friction pour voitures.*)

William John Brewer, New York, State of New York, U.S.A., 14th April, 1892; 5 years.

Claim. 1st. In anti-friction bearings, the combination of a vehicle, the main axle and wheels, an anti-friction axle and its lever wheels, brackets in which said anti-friction axle is journaled and springs interposed between the brackets and the vehicle body, substantially as described. 2nd. In anti-friction bearings, the combination of the vehicle pedestals, the main axle and wheels, the journals of which extend into a bearing enclosed in an outer box which plays vertically in slots in the pedestals, an anti-friction axle and its lever wheels, brackets in which said anti-friction axle is journaled, and springs interposed between the brackets and the vehicle body, substantially as described. 3rd. In anti-friction bearings, the combination of the anti-friction axle, a bracket in which the axle is journaled and mounted, so as to have vertical movement, springs bearing upon the bracket, and a longitudinal frame forming a lateral support for the bracket, substantially as described. 4th. In anti-friction bearings, the combination of the anti-friction axle, a bracket in which the axle is journaled, and a pair of rolls carried by the bracket normally out of contact with the axle, and adapted to contact with and bear against the same as the position of the bracket changes with respect to the centre of gravity, substantially as described. 5th. In anti-friction bearings, the combination of the anti-friction axle, a bracket mounted so as to have vertical movement, and in which the axle is journaled, a longitudinal frame rigidly mounted, rods passing freely through holes in the bracket and secured to the said frame, and springs surrounding the rods and bearing against said bracket, substantially as described. 6th. In anti-friction bearings, the combination of a vehicle, the main driving axle and wheels, a divided anti-friction axle and its lever wheels, brackets, said anti-friction axle is journaled and springs interposed between the brackets and the vehicle body, substantially as described. 7th. In anti-friction bearings, the combination, with the axle box in which the main axles are journaled, of an external cushion spring 32, Figure 1, substantially as described. 8th. In anti-friction bearings, the combination, with the main axles and anti-friction axles, of a frame for sustaining and carrying a motor, substantially as described, with reference to Figure 6. 9th. In anti-friction bearings, the combination, with the anti-friction axle, a pivoted axle box, with auxiliary anti-friction rollers, substantially as described with reference to Figure 7.

No. 38,745. Process of Treating Ores Containing Nickel in Combination with Sulphur and Iron as Sulphides. (*Procédé de traitement des minerais contenant du nickel en combinaison avec du soufre et du fer comme sulphure.*)

Charles Gordon Richardson and Arthur Bawden English, assignees of Arthur Law Grant, all of Toronto, Ontario, Canada, 14th April, 1892; 5 years.

Claim.—1st. The separation of nickel from iron in nickel ores containing sulphur, by the action of sulphate of calcium alone, or admixed with other re-agents, substantially as and for the purpose specified. 2nd. The oxidation of the sulphur contained in the ore by part of oxygen, contained in the sulphate of calcium and the concomitant liberation of the sulphur contained in the sulphate of calcium with the remaining portion of oxygen contained in the same, substantially as and for the purpose specified. 3rd. The production of sulphurous

acid gas by the action of sulphate of calcium upon the sulphide or sulphides of iron in the presence or not of silica or silicates, and the utilization of the sulphurous acid gas so obtained in and for the manufacture of sulphuric acid, or such other purpose or purposes as may be desired, substantially as and for the purpose specified. 4th. A mixture of silicates of calcium, iron and aluminium or other metal or metals forming a fusible slag, prepared by the above process, which may be cast into blocks or other suitable form for use in road making or building purposes, substantially as and for the purpose specified.

No. 38,746. Projectile. (Projectile.)

Philip Henry Holmes, Gardiner, Maine, U.S.A., 14th April, 1892; 15 years.

Claim.—1st. A projectile having a guiding portion adapted to fit the breech of a gun, said guiding portion consisting of plumbago, combined with a binding material and compressed into a solid homogeneous mass, which will be shaped by the rifling of the gun, and will serve to rotate the projectile as it is fired, substantially as described. 2nd. A projectile having a guiding portion adapted to fit the breech of the gun, said guiding portion consisting of plumbago, and divided fibre intimately mixed and compressed and combined with a fluid binder, forming a solid homogeneous mass, substantially as described. 3rd. A projectile guiding ring having a substantially uniform surface to be formed by the rifling of the gun, said guiding ring consisting of plumbago, and divided fibre intimately mixed, compressed and bound together, substantially as set forth. 4th. A guiding ring for projectiles, formed of a compound consisting of plumbago, fibre, and a drying oil. 5th. A projectile having a guiding ring composed of plumbago and fibre and a binding material, said ring being made in halves and secured to the projectile by cement.

No. 38,747. Corn Cultivator. (Cultivateur à blé-d'inde.)

Calvin H. Gilbert, Rutledge, Missouri, U. S. A., 14th April, 1892; 5 years.

Claim.—1st. The combination, with the plow-beam curved at its rear end, the foot bifurcated and embracing the beam, the bolt passing through the bifurcations and beam, and the shovel secured to the lower end of the foot, of a U-shaped fastening plate embracing the beam and having its terminals toothed, a disk having an opening in its periphery, an inner toothed face, and an outer square boss, a bolt passing through the disk, beam, and fastener, and provided with a nut, and the spring-rod having one end inserted in the opening of the fastener, said rod being forwardly, upwardly, and rearwardly curved, and at its rear end laterally bent, and passed through perforations formed in the upper end of the bifurcated foot in front of the bent end of the beam, substantially as specified. 2nd. The combination, with the beam, the pivoted foot carrying a shovel, and the bolt passing through the beam and foot, of the U-shaped fastener embracing the beam and having its terminals toothed, the toothed disk located at the opposite side of the beam, and having a wrench receiving surface, a bolt connecting the disk beam and fastener, and provided at one end with a clamping-nut, and a spring-rod connected to the disk and to the upper end of the foot, substantially as specified.

No. 38,748. Nut-Lock. (Arrête-écrou)

William Timmis, Wilksburg, Pennsylvania, U. S. A., 14th April, 1892; 5 years.

Claim.—1st. The combination in a nut-lock, of a base plate having an aperture through which the bolt passes, a recess *d*, a projection *b* adjacent thereto, an eccentric depression commencing at one wall of the recess *d*, and greatly increasing in depth and width therefrom to the projection *b*, of a spring washer having a flat outer face and inclined inner faces, said washer being thickest at the portion adjacent to the aperture therein, one end of the washer having a projection *f*, and a pawl on the opposite end and face, a flat portion being formed on the face of the washer adjacent to the pawl *g*, and a nut having a ratchet face, said nut being of less diameter than the washer, substantially as shown, and for the purpose set forth. 2nd. As an improved article of manufacture, a base plate for nut-locks, having an aperture *a*, through which the bolt passes, and an eccentric recess of greatly increased depth surrounding the bolt aperture, said depression also increasing in width from its commencement or narrowest point, for the purpose set forth. 3rd. In combination with a nut-lock, a spring washer, constructed substantially as shown, and provided with a flat outer face and projection or pawl *g*, and a beveled or inclined inner face, a nut *F*, having a ratchet face the teeth of which terminate in flat portions, adapted for use with a base plate having a central aperture, a recess *d*, and eccentric depression *c*, substantially as set forth. 4th. The combination in a nut-lock, of a base plate *A*, having an aperture through which the bolt passes, a recess *d*, a projection *b*, and a depression *c*, the periphery of which is eccentric with the aperture *a*, said depression increasing in depth from the recess *d*, to the projection *b*, a helical spring washer *B*, having a projecting portion *f*, and a pawl *g*, and a nut having a ratchet face, the parts being organized, substantially as shown, and for the purpose set forth.

No. 38,749. Nut Lock. (Arrête-écrou.)

Balthaser S. Raybuck, Freed, West Virginia, U.S.A., 11th April, 1892; 5 years.

Claim.—1st. The combination, with the threaded bolt, of the perforated disk, the front face of which is provided with a series of countersunk teeth, and the rear face of which is provided with diametrically opposite superficial ribs adapted to engage with recesses formed at opposite sides of the bolt-hole of an object, the nut mounted on the bolt and provided upon its inner face with a concentric recess, and a spring pawl located in the recess and having the metal of the bolt over the same for a portion of its length and its opposite end deflected to form an engaging end, substantially as specified. 2nd. The combination, with the bolt having the head formed at one end and provided at diametrically opposite sides of the bolt and upon its inner face with superficial radial ribs, of the circular washer, the rear side of which is provided with diametrically opposite radial locking ribs, and the outer face of which is provided with a concentric series of countersunk teeth, the nut mounted on the bolt and having its inner face provided with a narrow annular recess, having a radial branch *11*, the spring wire *12* fitting the groove, the edges of the latter being upset to inclose a portion of the wire, which wire has its free end deflected to form an engaging pawl, and the transverse recess formed in the inner face of the nut and in the path of the pawl, whereby a pawl disengaging key may be inserted, substantially as specified.

No. 38,750. Link for Drive Chains.

(Maille pour chaînes sans fin.)

Charles Edwin Hart, New Britain, Connecticut, U.S.A., 14th April, 1892; 5 years.

Claim.—1st. As an improved article of manufacture, a chain link having an open centre made of thin metal, with the lengthwise corrugations or ribs extending along the side parts and into the knuckle, the cylindrical knuckle having an open pintle socket at one end of the link, and the integral pintle at the other end, all substantially as described. 2nd. An interchangeable link for a drive chain, comprising in one piece of metal a thin body part, a cylindrical knuckle having the open pintle socket, the lengthwise corrugations or ribs extending along the side parts of the link and into the knuckle, the upturned lip forming the inner wall of the knuckle, and the tubular pintle with the joint removed from the bearing surface, all substantially as described. 3rd. An interchangeable link for a drive chain, comprising in one piece of metal a thin body part, a cylindrical knuckle with an open pintle socket, lengthwise corrugations or ribs extending along the side parts of the link and into the knuckle, and the tubular pintle, all substantially as described. 4th. An interchangeable link for a drive chain, comprising in one piece of metal a thin body part, a cylindrical knuckle having the open pintle socket, lengthwise corrugations or ribs extending along the side parts of the link and into the knuckle, and the pintle formed on the end of the link opposite the knuckle, all substantially as described.

No. 38,751. Link for Drive Chains.

(Maille pour chaînes sans fin.)

Charles Edwin Hart, New Britain, Connecticut, U.S.A., 14th April, 1892; 5 years.

Claim.—1st. A blank for a drive chain link having a pintle section and offset flattened ends, all substantially as described. 2nd. The improved blank for making a drive chain link that consists of a piece of flat metal having a central pintle section *a*², and the offset ends *a*¹, adapted to form a knuckle, all substantially as described. 3rd. As an improved article of manufacture, a drive chain link formed of a single piece of metal bent into oblong form with a central opening, and having flattened ends rolled up to form a knuckle, the joint between the parts coming in the knuckle end of the link, all substantially as described. 4th. As an improved article of manufacture, a drive chain link composed of a single piece of metal bent to oblong form with a rounded pintle, twisted side parts and a knuckle formed by rolling up the flattened offset ends of the blank, the inner wall of the pintle socket being formed by an upward projecting loop from the body of the link, all substantially as described.

No. 38,752. Extension Table. (Table à rallonge.)

William Henry Pickett, Warren, Pennsylvania, U.S.A., 18th April, 1892; 5 years.

Claim.—1st. The combination, in an extension table, of a stationary centre panel *1*, a pair of adjustable leg-frames *9*, each comprising side rails *13*, and provided with parallel slat supporting bars *10*, arranged between the side rails and projecting under the centre panel, bracket arms or guides *12*, on the under side of the centre panel, with which the inner end portions of the slat supporting bars engage, flexible table top sections resting upon the side rails of the leg-frames and sustained between such side rails by the parallel slat supporting bars, and means for simultaneously adjusting the leg-frames to extend and retract the flexible table top sections, substantially as described. 2nd. An extension table having a stationary panel *1*, a flexible table top section, and an adjustable leg-frame *9*, comprising inner and outer cross rails *18* and *10a*, side rails *13*, engaged with the flexible table top sections, and supporting bars *10* arranged between the side rails, connected with the outermost cross

rail and extending past the innermost cross rail, along the under side of the stationary panel for the purpose of sustaining the flexible table top section at points between the side rails of the leg-frame, substantially as and for the purpose described. 3rd. The combination, in an extension table, of a panel or leaf 1, an adjustable leg-frame 9, a flexible table top section composed of slats 30, provided with transverse orifices 34 which have a triple bearing, and cables 33 extending through the orifices and resting against the said triple bearing, substantially as described. 4th. The combination, in an extension table, of a panel or leaf 1, an adjustable leg-frame 9, a flexible table top section composed of slats 30, provided with transverse orifices 34, each containing a centre knife-edge 35, opposite edge bearings 36, and a concavity 37 between such opposite edge bearings, and flexible cables 33 connecting the slats and resting against the said bearings, substantially as described. 5th. The combination, in an extension table, of a panel or leaf 1, an adjustable leg-frame 9, having side rails 13 provided with attached metallic plates projecting laterally from the inner vertical surfaces of the side frames, and comprising upper and lower parallel portions connected by the curved switch portion 17, and a flexible table top section composed of slats 30, having transverse grooved under surfaces forming tongue-pieces 44, which engage with the metallic plates, substantially as and for the purpose described. 6th. The combination, in an extension table, of a stationary panel 1, an adjustable leg-frame 9, a flexible table top section connected with the panel and engaging the leg-frame, a screw-shaft 8, for adjusting the leg-frame to extend and retract the flexible table top section, a transverse counter-shaft 5 geared to the screw shaft for rotating the latter, and jointed lengthwise-movable crank sections 22 and 23, adapted to be drawn outwardly at one side of the table for the purpose of adjusting the leg-frame, substantially as described. 7th. The combination, in an extension table, of a stationary panel 1, an adjustable leg-frame 9, a flexible table top section attached to the panel and engaging the leg-frame, a transverse tubular shaft 5 journaled in bearings on the panel, mechanism operated by the tubular shaft to adjust the leg-frame, and a crank movable lengthwise into and out of the tubular shaft, and adapted to be withdrawn at one side of the table, for the purpose of adjusting the leg-frame to extend and retract the flexible table top section, substantially as described. 8th. The combination, in an extension table, of a stationary panel 1, an adjustable leg-frame 9, having trackways 16, a flexible table top section composed of transversely perforated slats 30, strung upon a flexible cable 33, and having tongue-pieces 44, engaging the trackways of the leg-frame, and an adjustable spring yielding connection 42 between the inner end of the cable and the under side of the panel, substantially as described. 9th. The combination, in an extension table, of a stationary panel 1, an adjustable leg-frame 9, having trackways 16, a flexible table top section attached to the centre panel and composed of perforated slats 30, strung upon a flexible cable 33, and having tongue-pieces 44, engaging the trackways of the leg-frame, a bracket 40 secured to the under side of the stationary panel, and an adjustable spring yielding connection 42 between the inner end of the cable and the bracket, substantially as described. 10th. The combination, in an extension table, of a panel 1, an adjustable leg-frame having attached metallic plates to form guide flanges 16, and flexibly connected slats 30, having grooves 43, each provided with concave surfaces 45 to form opposite edge bearings 46, which rest upon the metallic plates for reducing friction, substantially as described. 11th. An extension table having a sliding leg-frame 9, and a flexible table top section composed of flexibly connected slats 30 having convex and concave edges 31 and 32, extending concentric to each other the full thickness of the slats, and preserved in superficial contact to turn on each other like knuckles, substantially as described. 12th. The combination, in an extension table, of a panel or leaf 1, an adjustable leg-frame 9, a flexible table top section composed of slats 30, provided with transverse orifices 34, each containing a centre knife edge 35, opposite edge bearings 36, and a concavity 37 between such opposite edge bearings, and flexible cables 33 connecting the slats and resting against the said bearings, substantially as described. 13th. The combination, with the adjustable leg-frame 9, and a counter shaft 5, of jointed lengthwise-movable crank sections 22 and 23, substantially as described. 14th. The combination, with the adjustable leg-frame of an extension table, of a tubular or hollow shaft 5, devices operated by the shaft to adjust the leg-frame, and crank sections 22 and 23 movable lengthwise into and out of the tubular or hollow shaft, substantially as described.

No. 38,753. Butter Tub. (*Tinette*.)

Charles D. Fillmore, Oxford, Nova Scotia, Canada, 20th April 1892; 5 years.

Claim.—1st. The combination of the tub A, having L-shaped grooves A¹, A², and the glass lining B, having on the exterior projections B¹, B², fitting into said grooves, as and for the purpose set forth. 2nd. The combination of the tub A, having inclined grooves A², and the cover E, having radial projections E², fitting into said grooves, and an annular flange E¹, as and for the purpose set forth. 3rd. The combination of the tub A, having L-shaped grooves A¹, A², inclined grooves A² internally, the lining B, having projections B¹, fitting into said grooves A¹, and the cover E, having an annular flange E¹, and radial projections E², as and for the purpose set forth.

No. 38,754. Insulator. (*Isolateur*.)

Louis McCarthy, Boston, Massachusetts, U. S. A., 20th April, 1892; 5 years.

Claim.—1st. An insulator, comprising a bell or case adapted to hold a series of sheets of mica, a metallic supporting piece placed therein, and a series of sheets of mica surrounding said piece, and adapted to insulate the same from said bell or case, substantially as and for the purposes set forth. 2nd. An insulator, having the metallic or conductive portions thereof separated by an interposed layer of insulating material, devices whereby the whole is secured together, and an outer layer or jacket of insulating material whereby the joint is covered, and whereby also the space between the outer or proximate parts of the conductive portions is prevented from becoming electrically bridged, substantially as and for the purposes set forth.

No. 38,755. Box Making Machine.

(*Machine à fabriquer les boîtes.*)

James Frederick Gilliland, Adrian, Michigan, U.S.A., 20th April, 1892; 5 years.

Claim.—1st. A machine for preparing material for boxes, consisting of a press provided with thin sharp cutting-dies, the cutting-edges of which run at right angles with each other, a part of the cutting-edges being arranged longitudinally of the feed of the material, and thus adapted to split the lumber into the required number of matching projections, and the others arranged transversely of the feed of the material, and alternately at the ends of the longitudinal cutting-edges, and thus adapted to cut said projections off alternately, thus at the same time severing the lumber into parts, and forming a series of matching projections on each part, substantially as shown and described. 2nd. A machine for preparing material for boxes, in the general form of a press arranged substantially in line across the feed of the machine, said dies being secured to the movable portion of such press, sufficient in number to produce the four sides of the box simultaneously, each die having a series of cutting-edges arranged in right angular relation with each other, and thus adapted to form matching projections while separating the lumber, thus cutting the lumber necessary to form the four sides of the box at one operation and saving all waste, substantially as set forth. 3rd. In a box-making machine, the combination, with dies formed to cut the lumber into pieces, and at the same time form matching projections upon the ends of the pieces, of strippers secured to the bed-plate, and extending over the lumber and provided with small projections arranged to enter grooves formed in the face of the lumber operated upon, and thus guide said lumber accurately in its passage through the machine. 4th. The combination, in a box-making machine, of the dies for cutting the lumber into pieces, said dies being each formed of a series of sharp thin cutting-edges arranged in right-angular relation, and strippers D arranged alongside said dies, all substantially as described, and for the purposes specified. 5th. The combination, in a box-making machine, of a series of dies arranged to cut the lumber into pieces, and form matching projections on the ends of said pieces, and a plain cutting or shearing die extending between certain of said cross-cutting dies, and adapted to shear off the portion from the edge of one or more of the parts, thus providing an entrance for a cover or bottom when said parts are assembled, substantially as set forth.

No. 38,756. Method of Preparing Fish for Food.

(*Méthode de préparer le poisson pour nourriture.*)

Peter Wilhelm Schoman, Flensburg, German Empire, 20th April, 1892; 5 years.

Claim.—1st. A process for obtaining from fish a preservable and easily transportable food, which consists in kneading together the dried and ground flesh of fish with boiled cole-rapes, turnips or similar vegetables, and thereupon following baking of the cakes formed from the said mixture, and providing the cakes with a gelatine-coating, produced from the cuticle surrounding the bones of the fish, to which are added some alum and carbonate of soda, substantially as and for the purpose set forth. 2nd. The herein-described fish-cake, prepared from the dried ground flesh of fish, boiled cole-rapes, turnips or like vegetables, under addition of salt and suitable spices, which are provided with a coating of gelatine containing some alum and carbonate of soda, substantially as and for the purpose set forth.

No. 38,757. Treatment of Gums and Preparation of Varnishes Therefrom. (*Traitement des gommes et préparation des vernis d'elles.*)

Ella Truesdale Hand Smith, 71 Edith Road, West Kensington, England, executrix of the will of George Hand Smith, 20th April, 1892; 5 years.

Claim.—1st. In the manufacture of varnishes, the reduction of the relatively hard or refractory gums or resins to a state fitting them for fuller solution, by oil or ordinary solvent by the aid of a small quantity of dissolved softer gum or resin, (the softer gum being dis-

solved either separately from or in the presence of the harder gum) as set forth. 2nd. In the manufacture of varnishes, effecting the solution at a low temperature of varnish gums, relatively hard and refractory to solution, by the addition thereto of a small quantity of the products of distillation of gums or resins, admixed in a body of suitable solvent, as set forth.

No. 38,758. Lamp Extinguisher. (*Eteignoir de lampe.*)

Misael Lajoie, Montreal, Quebec, Canada, 20th April, 1892; 5 years.

Claim.—In a lamp extinguisher, the combination, with the rod I, and flame deflector J, of the chamber E, formed in the base of the lamp, the cylindrical cup *i*, secured to the lower end of the said rod, and the spring M, substantially as set forth.

No. 38,759. Time Safe Bolt Retracting Device.

(*Verrou à rétraction à système chronométrique pour coffre-fort.*)

Francis M. Williams, Brownsville, Pennsylvania, U.S.A., 20th April, 1892; 5 years.

Claim.—1st. In a time safe bolt retracting device, the combination of a solid door, two time pieces suitably secured on the inner side thereof, a balance wheel intermediate said time pieces, having a cog pin on the side thereof, levers H and F, suitably pivoted between said time pieces near said balance wheel, the outer ends thereof projecting toward said time pieces and terminating in a jog or inwardly projecting arm, the inner end of said lever H having on its lower surface a notch adapted to fit the cog pin on the side of said balance wheel, a counterpoise pivoted upon an arm secured thereto, said arm having a lip, said counterpoise being secured to said balance wheel by a rod, and the locking bolts, the inner end of the centre one of which is surrounded by a spring and provided with a downwardly projecting head, substantially as and for the purpose herein set forth. 2nd. In a time safe bolt retracting device, the combination of a solid door, two time pieces, a ratchet wheel and pawl to prevent premature rotation of the same, a balance wheel intermediate said time pieces and having a cog pin on the side thereof, levers H and F, suitably pivoted between said time pieces near said balance wheel, the outer ends of said levers terminating in an inwardly projecting arm adapted to strike or come in contact with the hands of said time pieces, the inner end of said lever H having on its lower surface a notch adapted to fit the cog pin on the side of said balance wheel, and a counterpoise pivoted upon an arm secured thereto, said arm having a lip, and said counterpoise being secured to said balance wheel by a rod and sliding bolts, the inner end of the centre one of which is surrounded by a spring and provided with a downwardly projecting head, substantially as and for the purposes herein set forth.

No. 38,760. Plumb and Level. (*Plomb et niveau*)

Newel Halsey Spencer, Elmira, New York, U.S.A., 20th April, 1892; 5 years.

Claim.—1st. A level having a curved open-sided guide and a gravitating rolling body movably confined in said guide, as set forth. 2nd. A level having straight parallel sides, and a segmental guide with indicating lines, and a gravitating rolling sphere moving in said guide, to determine the level of a given body, as set forth. 3rd. An attachment, for the purpose specified, consisting of a case having a curved guide and indicating lines, and a movable rolling sphere movable in the guide, and arranged to serve, substantially as specified. 4th. A level consisting of a two-part case with coincident curved guide grooves, indicating lines, and a gravitating rolling sphere, as and for the purpose specified. 5th. An attachment for the purpose described, consisting of the part A, with circular grooved opening and side grooves at the opposite sides thereof, the part B, with end extensions and central curved grooved portion, the two parts being designed to be detachably held together, and gravitating body confined between the curved portions of said parts, as set forth.

No. 38,761. Tobacco Pipe. (*Pipe à fumer.*)

Damase Marc Poulin, Boston, Massachusetts, U.S.A., 20th April, 1892; 5 years.

Claim.—1st. A pipe, having a bowl open at top and bottom, and a stem, combined with a receptacle longitudinally movable in said bowl, said receptacle having a perforated top for supporting the tobacco in the bowl, and a side passage communicating with the stem of the pipe in the various positions of said receptacle, substantially as described. 2nd. The combination of a bowl open at top and bottom, and having a longitudinal bore with a receptacle *c*, longitudinally movable therein, said receptacle having a perforated top, and the bowl having a lateral passage for the stem, and a passage between the bowl and receptacle, affording connection between said stem passage and the interior of the receptacle, substantially as described.

No. 38,762. Suspended Gate. (*Barrière suspendue.*)

Airam Duperlow, Stratford, Ontario, Canada, 20th April, 1892; 10 years.

Claim.—The combination of the standard C, and the suspending wire H, and the latch D, substantially as and for the purpose hereinbefore set forth.

No. 38,763. Steam Trap. (*Purge de vapeur.*)

Franz Funke, Milwaukee, Wisconsin, U.S.A., 20th April, 1892; 5 years.

Claim.—The combination, of the chamber B, having the valve controlled steam inlet K, and the air passage *n*, communicating with the escape opening, and governed by the screw rod N, the said escape opening E, and the therewith connecting tube C, the rod H, secured in a socket in the standard, and the cap A, secured to the tube C, as described, and provided at bottom with the spring *m*, all substantially as set forth.

No. 38,764. Method of Impregnating Porous Bodies.

(*Méthode d'imprégner les corps poreux.*)

Edwin T. Greenfield, and Julius Nagel, both of New York, State of New York, U.S.A., 20th April, 1892; 5 years.

Claim.—1st. The process of treating an organic, fibrous, porous or cellular body, which consists in impregnating it with a suitable material or compound maintained in a liquid condition by heat, by alternate immersions and rests, substantially as set forth. 2nd. The process of treating an organic, fibrous, porous or cellular body, which consists in impregnating it with a suitable material or compound maintained in a liquid condition by heat, by alternate immersions and rests, the time of immersions and rests being varied in relation to one another, substantially as set forth. 3rd. The process of treating an organic, fibrous, porous, or cellular body, which consists in impregnating it with a suitable material or compound maintained in a liquid condition by heat, by alternate immersions and rests, the rests being effected in a medium cooler than the impregnating compound, substantially as set forth.

No. 38,765. Car Coupler. (*Attelage de chars.*)

Edward William Mackenzie Hughes, Eristane, Helensburg, Dumbarton, Scotland, 20th April, 1892; 5 years.

Claim.—1st. In a car coupler, a combined wrought metal shank and draw head body composed of a tube, part of which constitutes the shank, the remainder being split, flared and shaped to the desired contour, and welded to constitute the walls of the coupler head, substantially as described. 2nd. In a car coupler, a shank and draw head body formed from a single piece of wrought metal tube as set forth, in combination with two stamped wrought metal gusset plates, welded or otherwise, united to said draw head body, substantially as described. 3rd. In a car coupler, the combination of a shank and draw head body formed integral with each other from a single piece of wrought metal tube, substantially as set forth, stamped metal gusset plates, welded or otherwise, united to said draw head body, and a wrought metal coupling knuckle situated between said gusset plates and acting in the usual manner, substantially as described. 4th. In a car coupler, the combination of a shank and draw head body formed integral with each other from a single piece of wrought metal tube, substantially as set forth, wrought metal stamped gusset plates, welded or otherwise, united to said draw head body, a wrought metal coupling knuckle acting between said gusset plates, a stop plate, riveted or otherwise, secured to said shank, and one gusset plate, said stop plate and gusset plate having holes for the reception of a bolt to lock the coupling knuckle, substantially as described. 5th. In a car coupler, the combination of a shank made from a wrought metal tube, and walls of the coupler head formed with a socket upon them made from wrought metal shaped as set forth and screwed to said shank, substantially as described. 6th. In a car coupler, the combination of a shank made from a wrought metal tube closed and screwed at one end, walls of the coupler head made from a strip of wrought metal having a socket to receive said shank, said walls being shaped to the required contour, and welded, and wrought metal gusset plates, welded or otherwise, secured to said walls, substantially as described. 7th. In a car coupler, the combination of a shank made from a wrought metal tube closed and screwed at one end, walls of coupler head from a strip of wrought metal shaped to the required contour, and having a socket to receive said shank, gusset plates stamped from wrought metal, and welded or otherwise, united to said walls, a coupling knuckle forged from wrought metal and acting between said gusset plates, and a stop plate, riveted or otherwise, secured to the shank and one gusset plate, said stop plate and gusset plate having holes for the reception of a bolt to lock the coupling knuckle, substantially as described.

No. 38,766. Process of Treating Copper Ores and Mats. (*Mode de traitement des minerais de cuivre et matte.*)

Louis Auguste Polatan, Paris, France, 20th April, 1892; 15 years.

Claim.—1st. The herein described process for the precipitation or cementation of copper, which consists in bringing cupreous liquors in the form of more or less dilute solutions of sulphates or chlorides, or mixtures of sulphates and chlorides, either of copper alone or of copper and other metals, into contact with a matt of copper and iron, with or without impurities, or into contact with ores of an analogous composition to the matt, substantially in the manner specified. 2nd. The application of this improved process of precipitation or cementing copper in the treatment of copper ores, and particularly sulphide or pyritic ores and cupriferous iron pyrites, as well as in the treatment of copper mats and copper waters generally.

No. 38,767. Machine for Making Panel Doors.*(Machine pour faire les panneaux de porte.)*

Alexander McKay, Vancouver, and Henry Valentine Edmunds, Westminster, both of British Columbia, Canada, 20th April, 1882; 5 years.

Claim.—1st. In a machine for doweling panel doors, the combination of suitable frames supporting guide rods, a pair of guide rods B, supporting adjustably compound sliding boxes, the compound boxes C, supported on the guides B, and each opposite pair holding two guide rods F, and having a shaft D journaled therein, shafts D journaled in the boxes C, and having pulley D¹, long key bed *d*, and pinion E, a pair of guide rods F held in a pair of boxes C, and supporting sliding carriages, blocks G connected in pairs by the rods I, and forming carriages sliding on the rods F and having journaled therein drill spindles, a series of drill spindles G¹ journaled in the blocks and carrying pinions G², geared together, and one of them gearing into the pinion E, substantially as set forth. 2nd. In a machine for doweling panel doors, the combination of suitable frames supporting guide rods, a pair of guide rods B, supporting adjustably compound sliding boxes, the compound boxes C, supported on the guides B, and each opposite pair holding two guide rods F, and having a shaft D journaled therein, the shafts D journaled in the boxes C, and having pulley D¹, long key bed *d*, and pinion E, a pair of guide rods F held in a pair of boxes C and supporting sliding carriages, blocks G connected in pairs by the rods I, and forming carriages sliding on the rods F, and having journaled therein drill spindles, a series of drill spindles G¹ journaled in the blocks and carrying pinions G² geared together, and in the pinion E, racks I¹ at the ends of the rods I and gearing in pinions, shaft J journaled in stands A¹, and carrying pinions J¹ and hand wheel J², said pinions gearing into the racks I¹, substantially as set forth. 3rd. In a machine for doweling panel doors, the combination of a pair of boxes adapted to slide parallel to each other holding the ends of a pair of guide rods, and having journaled in it a shaft, the shaft D journaled in said boxes, provided with means of rotating it and with long key bed and sliding pinion, a pair of guide rods F, having their ends held in the boxes C and supporting the sliding carriage, a pair of blocks G connected by the rod and adapted to slide on the guide rods F, and having a series of drill spindles journaled in it, drill spindles G¹ journaled in blocks G, and carrying pinions G¹¹ geared together, and in the pinion E, substantially as set forth.

No. 38,768. Clothes Pin. (Epingle à linge.)

John A. Johnson and Charles H. Grout, both of Trempealeau, Wisconsin, U.S.A., 20th April, 1892; 5 years.

Claim.—A clothes pin made of a wire bent at one end to form a clip for receiving the clothes line, with the opposite end formed into a loop having a narrow tapering portion and a spring tongue extending through the loop for receiving and clamping the clothes, substantially as specified.

No. 38,769. Car Coupler. (Attelage de chars.)

Charles A. Gould, New York City, U.S.A., assignee of Alfred John Allen, Essex Center, Ontario, Canada, 20th April, 1892; 5 years.

Claim.—1st. In a car coupler, the combination with a draw head having a shoulder *d*, of the pivoted coupling hook having the shoulder *c*, adapted to strike against the shoulder *d*, to act as a stop in the closed condition of the coupling hook, substantially as described. 2nd. In a car coupler, the combination, with the draw head, the coupler hook and a pivot pin for said coupler hook secured thereto, substantially as described. 3rd. In a car coupler, the combination, with a draw head, the coupling hook, a pivot pin for said coupling hook secured thereto and extending beneath the draw head, a crank arm secured to said pin, and means extending to the side of the car for actuating said crank arm to open the coupling hook, substantially as described. 4th. In a car coupler, the combination of the draw head, the rotating coupler hook pivoted thereto and secured to its pivot pin, a crank connected with the coupling hook, and means extending to the side of the car for opening said hook, substantially as described. 5th. In a car coupler, the combination, with the chambered draw bar, of a latch pivoted therein by means of a pin extending across said draw bar, and adapted to be vertically reciprocated by means of connections extending to the side of the car, substantially as described. 6th. In a car coupler, the combination, with a draw bar, the pivoted coupler hook for rocking the arm C, a pivoted latch adapted to engage with a locking arm of the hook, and the cam shaped bearing O on said latch, substantially as described. 7th. In a car coupler, the combination, with a draw head, the coupling hook and the locking latch, of means substantially as described, for partially lifting the latch by the movement of the coupling hook, as set forth. 8th. In a car coupler, the combination, with the rotatory coupling hook, and a lock for said hook in its coupled position, of a mechanism for automatically throwing said hook to its open position upon the release of its lock, substantially as described. 9th. In a car coupler, the combination of the rotatory coupling hook, the crank lever G for rotating said hook, connecting rod Z and counter balancing lever Y, substantially as described. 10th. In a car coupling, the combination of the coupling hook, the latch for the hook, the lever N, crank shaft R, toothed segment R¹, and notched segment R², substantially as described.

No. 38,770. Sash Fastener. (Arrête-croisée.)

Charles Spicer Apple, Bellaire, Ohio, U. S. A., 21st April, 1892; 5 years.

Claim.—An improved sash fastener, consisting of a right angled frame, a curved lever pivoted therein, and provided with a flat bearing face at its lower end.

No. 38,771. Car Coupler. (Attelage de chars.)

Joseph W. Klingler, Beaver Springs, Pennsylvania, U. S. A., 21st April, 1892; 5 years.

Claim.—1st. In automatic car-coupling, the draw-heads having the longitudinal central openings, the buffers arranged to slide in said openings, and the hooked jaws adapted to be operated by the buffers to engage with shoulders on the draw-heads, substantially as described. 2nd. In an automatic car-coupling, the draw-heads having the central longitudinal openings, the buffers arranged to slide in said openings, and adapted to receive the coupling-link, and the hooked jaws pivotally secured in recesses in the draw-heads and connected with the buffers, substantially as described. 3rd. In an automatic car-coupling, the draw-heads having the central longitudinal openings, the buffers arranged to slide within said openings, the grooves or recesses on opposite sides of the draw-heads communicating with the central openings therein, and the angular jaws pivotally secured in said grooves or recesses, substantially as described. 4th. In an automatic car-coupling, the draw-heads having the longitudinal central openings therein, the buffers arranged to slide in said openings and having recesses in their abutting ends adapted to receive a coupling-link, and the coupling-pins fitted in pin-holes in the draw-heads, the buffers and the link, substantially as and for the purpose set forth. 5th. In an automatic car-coupling, the draw-heads having the central longitudinal openings, the buffers arranged to slide in said openings, and the angular jaws pivotally secured on opposite sides of the draw-heads, having their short ends arranged to operate in slots in the buffers and their long arms provided with hooks to engage with shoulders on the draw-heads, substantially as described.

No. 38,772. Musical Instrument.*(Instrument de musique.)*

Herrman S. Saroni, Marietta, Ohio, U. S. A., 21st April, 1892; 5 years.

Claim.—1st. In a mechanism for picking zithers, the trigger F, provided with points *f*, *f*¹, *f*¹¹, constructed and arranged to operate, substantially as set forth. 2nd. The combination of the trigger F, and finger D, with the rod C, the springs *c*¹, *d*¹¹¹, and the key A, for the purpose herein specified. 3rd. The combination of the key A, or a series of such keys, the rod C, the finger D, and the trigger F, with a series of strings stretched over the sounding-board of a shallow or zither body, for the purpose herein set forth.

No. 38,773. Railway Switch. (Aiguille de chemin de fer.)

Martin Hynes, Hamilton Station, Minnesota, U.S.A., 21st April, 1892; 5 years.

Claim.—1st. The combination of the switch rails, suitable head blocks upon which the rails are supported, clutch bars to which the rails are secured, and an operating mechanism whereby the motive power for moving the rails is applied to them, both at their free end and at their center, substantially as shown. 2nd. The combination of the switch rails, the head blocks upon which the rails move, clutch bars to which the rails are secured, rack bars secured to the clutch bars, a vertical operating lever provided with operating wheels, and the shaft provided with pinions, substantially as described. 3rd. The combination of the switch rails, one of which is shorter than the other, the rails of the side track, the head block G, the clutch bar provided with an inclined plane or wedge, the rack bar, the lever for moving the clutch bar, and the short section of the rail W, which is pivoted to the head block, substantially as specified.

No. 38,774. Bridle Bit. (Mors de bride.)

Howell Edwin Evans, assignee of William Van Arsdale, both of Racine, Wisconsin, U.S.A., 21st April, 1892; 5 years.

Claim.—1st. In a bridle bit, the combination, with a main bar A, of a ring B hinged to each end thereof, and curved outwardly at its front portion and slightly inward at its rear portion, making the same practically compound in curvature, and two rein-attaching bars *c*, *f*, provided upon each of said rings, and arranged respectively in line and out of line with the pivots of the aforesaid rings, substantially as set forth. 2nd. In a bridle bit, the combination of a straight bar A, rings B, B hinged thereto, and each provided with two rein-attaching bars *c*, *f* arranged respectively in line and out of line with the pivots of the rings, substantially as set forth. 3rd. In a bridle bit, the combination of a straight bar A, having eyes or hooks *a*, rings B, B, curved outwardly at their front portions and slightly inward at their rear portions, making the same practically compound in curvature, each ring having the following elements: an arm *b* for engagement with the

eye *a*, braces *c*, *c*, to support the arm *b*, braces or arms *d*, *d*, extending at right angles to the braces *c*, *c*, across the ring from front to rear, and being struck outwardly on an arc of a circle to join the front outwardly curved portion of said ring, and re-attaching bars *e*, *f* arranged respectively in line and out of line with the pivot *b*, substantially as set forth.

No. 38,775. Signal for Railway Crossings.

(*Signal pour passage de chemin de fer.*)

Henry Y. Read, Cheapside, Ontario, and James G. Read, Moose-jaw, North-West Territories, both of Canada, 21st April, 1892; 5 years.

Claim.—1st. The combination of a signal board C, provided with the illuminated plate E mounted by a glass bull's eye, and the arm F, and the plate D, formed with a notch *d*, said signal board and plate being pivotally supported on the bolt B, and means for operating and holding them at the position to which they may be adjusted, substantially as shown and described, and for the purpose specified. 2nd. The signal board C, provided with the arm F, and pivotally supported on the bolt B, and means for operating said signal board, in combination with the spring buffer I, substantially as shown and described, and for the purpose specified. 3rd. The signal board C, provided with the arm F, and pivotally supported on the bolt B, and plate D, formed with the notch *d*, and means for operating them, in combination with the dog J, provided with the weight *f*, and means for operating said dog J, substantially as shown and described, and for the purpose specified. 4th. The crank shafts H, *h*, formed with crank arms, as shown and described, and means for operating them, in combination with the cables G, K, signal board C, formed with arm F, plate D, formed with the notch *d*, and dog J, provided with the weight *f*, substantially as shown and described, and for the purpose specified. 5th. The combination of the trip arms S, P, formed with curved upper faces, the tripping levers O, M, supported in suitable bearings and formed of spring steel or other suitable material, and provided with the anti-friction wheels R, the crank shafts H, *h*, the signal board C, formed with the arm F, the plate D, formed with the notch *d*, the dog J, provided with the weight *f*, and means for connecting the tripping levers with the crank shafts, and the latter with the signal board and dog, respectively, substantially as shown and described, and for the purpose specified.

No. 38,776. Floor Jack. (*Cric pour plancher.*)

Giles Bowler, Toronto, and George Alexander Thompson, Township of Etobicoke, both in Ontario, Canada, 21st April, 1892; 5 years.

Claim.—An improved floor jack consisting of a bar A, having a head B formed on it at one end, and a pawl E, pivoted on its other end to engage with ratchet teeth *a* made in the bar C, which is held against the bar A by the clips F, and having a clamp D connected to or formed on its end, in combination with the lever G pivoted on the bar C, and provided with a pivoted pawl H, to engage with the ratchet teeth *a* made in the bar A, substantially as and for the purpose specified.

No. 38,777. Automatic Electric Heat Alarm.

(*Avertisseur automatique électrique de la chaleur.*)

The Electric Heat Alarm Company, Bangor, assignees of Morrill, Scott Pierce, Westport, Leonard H. Desisles, Lemoine, and Orville C. Oliver, Eden, all of Maine, U.S.A., 21st April, 1892; 5 years.

Claim.—An automatic electric heat alarm, consisting of the combination of a hollow metallic reservoir; a quantity of mercury within said reservoir; a metallic plug partially filling said reservoir and having a small, downwardly-extending tubular bore; a conductor-wire or spindle supported and insulated within said plug and extending to such point as that it may be reached by said mercury when expanded and risen in said tube; the whole in combination with an electric battery having one of its poles connected with said plug and the other with said insulated conductor-wire or spindle; and a bell or other alarm or indicator connected with and operated by said electric battery.

No. 38,778. Flour Cabinet. (*Garde-farine.*)

Albert Alexander Tinker, Madison, Wisconsin, and Cephas M. Evans, Detroit, Michigan, both in the U. S. A., 21st April, 1892; 5 years.

Claim.—1st. In a cabinet, substantially as described, the combination of the bins, the ledge C, arranged below and in advance of said bins, the drawer below the said ledge, and the board or leaf pivotally connected at a point in advance of its rear end and having its portion in rear of its axis, arranged to swing in the space between the bins and ledge, and having its upper side at its rear edge unobstructed, whereby when the board is tilted material may be scraped or freely discharged off its said rear edge into said drawer, all substantially as described, and for the purpose set forth. 2nd. The improved cabinet, substantially as herein described and shown, consisting of the compartments A, having inclined front sides *a*, the bins B, below such compartments A, the ledge C, arranged in front of and below the ledge, and stopped at its rear end short of

the back of the case, whereby air can circulate in rear of such drawer, the lower door having wire netting or the like, and the molding board or leaf made of a thickness equal the distance between the plane of the ledge C, and bottom of bins B, such leaf being pivotally connected at E in advance of its rear end, and arranged when opened to abut the inner side of the bin bottom in rear of its axis, and the upper side of the ledge C in advance of such axis, and when closed to leave a space or air-passage in front of the bins, all substantially as and for the purpose set forth. 3rd. In a cabinet, substantially as herein described, the combination of the compartments A, having front side or wall *a*, the bins B, below and extended in front of the compartments A, the inside lid hinged at one edge to the wall *a*, above such forward extensions of the bin, and adapted to turn up against said wall in its open position or down to cover the bin B, in its closed position, and the molding board or leaf arranged below said bins, all substantially as and for the purposes set forth.

No. 38,779. Explosive Compound. (*Composé explosif.*)

Addison Crittenden Rand, New York, State of New York, U.S.A., 21st April, 1892; 15 years.

Claim.—1st. An explosive compound of an oxidant, as chlorate of potash in a powdered state, and a hard, dense, non-porous mineral substance in the form of coarse grains, said mineral grains being distributed in about the proportions named throughout the mass of the powdered oxidant, and a fluid hydrocarbon as nitro-benzal, incorporated in about the proportions named, in the mixture of said powdered oxidant and said mineral grains, substantially as and for the purpose specified. 2nd. An explosive compound composed of an oxidant as chlorate of potash, in a powdered state, and manganese peroxide in the form of coarse grains in about the proportions named, said grains being distributed throughout the mass of the powdered oxidant, and a fluid hydrocarbon as nitro-benzal, in about the proportions named, incorporated in the mixture of said powdered oxidant and said grains, substantially as and for the purpose specified.

No. 38,780. Screw. (*Vis.*)

Charles C. Holt and Thomas Hall, both of Lawrence, Massachusetts, U.S.A., 21st April, 1892; 5 years.

Claim.—A combined screw and nail, comprising the head and the body composed of the portions 3 and 4, the portion 3 being cylindrical and the portion 4 polygonal in cross-section, and the tapering point 5 of the same shape as the portion 4, the portion 4 and point 5 being provided with one continuous twist, substantially as described.

No. 38,781. Galvanic Battery for Electric Light.

(*Pile galvanique pour lumière électrique.*)

Doctor Louis Weigert, Berlin, Prussia, 21st April, 1892; 5 years.

Claim.—In a galvanic battery, the employment of an exciting fluid consisting of a concentrated solution of one or several chlorides (such as of copper, iron, zinc, etc.), in combination with an oxidizing agent, such as salt of mercury, substantially as herein described.

No. 38,782. Car Coupler. (*Attelage de chars.*)

Joseph Callantine, Peru, Indiana, and John D. Baer, Detroit, Michigan, both in the U.S.A., 21st April, 1892; 5 years.

Claim.—1st. In a car coupler, the combination, with a draw head formed with an interior recess, of a rigid locking jaw, a pivoted locking jaw, a weighted lever, and an arm carried by the lever. 2nd. In a car coupler, a draw head having an interior recess, in combination with a rigid locking jaw, a pivoted locking jaw carrying an arm, a weighted lever carrying an arm, and mechanism connecting with the arm of the locking jaw, whereby the latter jaw and the weighted lever may be actuated in unison. 3rd. In a car coupler, the combination, with a draw head, of a rigid locking jaw having a recess, a pivoted locking jaw engaging the said rigid jaw, a pivoted weighted lever carrying an arm, and mechanism for actuating the pivoted locking jaw and weighted lever in unison.

No. 38,783. Method of and Apparatus for Destroying Garbage, Night Soil, etc. (*Méthode et appareil pour détruire les tripailles, vidanges, etc.*)

The Dominion Sanitary and Cremation Company, assignee of Andrew Engle, all of Des Moines, and Samuel C. Thompson, Metz, all in Iowa, U.S.A., 21st April, 1892; 5 years.

Claim.—1st. The herein described method of simultaneously destroying garbage and similar refuse substances, and night soil and other wet offensive matter, which mode or method consists in drying and burning the garbage in independent receptacles, and directing the products of combustion thereof to the night soil in a single receptacle, to heat, evaporate and burn such wet matter within a single receptacle by the joint action of a series of garbage destroying furnaces. 2nd. An apparatus for simultaneously destroying garbage and similar refuse matter, and night soil and other wet offensive waste products that accumulate in towns and cities, consisting of a receptacle or furnace chamber that has a water tight bottom, an air tight roof and conduits extending up from the roof to terminate in a wagon platform above the said roof, a furnace at one end of said receptacle, a chimney joined to said furnace, a series of furnaces on

the outside of each parallel wall of the said receptacle and communicating with the receptacle, and a garbage receptacle over the top of each one of the furnaces in said outside series, and each such receptacle provided with a garbage support in the bottom, and an opening in its top, arranged and combined to operate in the manner set forth. 3rd. In an apparatus for destroying garbage, night soil and analogous offensive waste matter, the combination of a receptacle furnace chamber adapted to retain night soil and other wet matter, a furnace at one end of said chamber and having communication therewith, a chimney having communication with said furnace, and a furnace having a garbage receptacle at its top and an opening communicating with the chamber adapted to retain night soil and other wet matter, to operate in the manner set forth.

No. 38,784. Lubricator. (Graisseur.)

William Mieding and Joseph Mieding, both of New Orleans, Louisiana, U.S.A., 21st April, 1892; 5 years.

Claim.—1st. The combination, with an oil cup or reservoir, having an oil-dropping nipple and an internal vertical tube, of the top or cap plate having a pendent internally-threaded sleeve, a removable screw-threaded bushing engaging the pendent sleeve, and provided with a vertically-slotted lower end, an adjusting-nut resting against the screw-threaded bushing, the valve-stem having a shouldered valve, a cross-pin or lugs engaging the slotted portion of the bushing, and a screw-threaded upper extremity on which the screw-nut is mounted, and a spring bearing at one end against the shouldered valve, and at the opposite end against the slotted part of the bushing, substantially as and for the purpose described. 2nd. A lubricator, consisting of an oil cup or reservoir having a top or cap plate provided with a pendent sleeve, a collar engaged with the sleeve, a cup-shaped filter or strainer resting on the collar, and a filter or strainer supporting cage, consisting of wires or rods secured to the collar and sustaining the filter or strainer, substantially as described. 3rd. A lubricator, consisting of an oil-cup or reservoir, having a top or cap plate provided with a pendent externally screw threaded sleeve, a screw-threaded collar engaging the sleeve, a cup-shaped filter or strainer resting on the collar, and a filter or strainer supporting cage consisting of wires or arms secured at one end to the collar, and the opposite end to a ring adapted to rest against the inside of the top or cap plate, substantially as described.

No. 38,785. Nut Lock. (Arrête-écrou.)

James Crawford Grimes and Reuben Hodges Grimes, assignees of Phillips Bailey Grimes, all of Glenwood, Wisconsin, U.S.A., 21st April, 1892; 5 years.

Claim.—1st. In a nut lock, the screw threaded bolt, provided with longitudinal notches, the correspondingly threaded nuts provided on its interior with longitudinal recesses joined by a circumferential recess, and a spring having arms with outwardly flaring ends, and joined by a curved portion, the whole being adapted to lie in the recesses in the nut, and the arms adapted to lie on the notched bolt, whereby the removal of the nut is normally prevented by the engagement of the notches with the spring, and whereby the elasticity of the entire spring is made available, and its ready removal or insertion provided for, substantially as set forth. 2nd. The threaded bolt provided with grooves arranged transversely to the threads, a threaded nut provided with spring catches secured in its interior lengthwise thereof, and between the bolt and nut, and having slots to receive the springs and adapted to engage them though the major part of their length, said springs being normally in contact with the bolt, and having flared or bevelled ends to adapt them to receive a releasing device, substantially as set forth.

No. 38,786. Razor Guard. (Garde de rasoir.)

Peter D. Murphy and Charles O. Chaplin, both of Lockport, State of New York, U.S.A., 21st April, 1892; 5 years.

Claim.—1st. The razor guard consisting of the holder formed of a single piece of elastic metal, and having a backward curved slotted edge, the thumb-screws arranged in its back edge portion near the ends to engage the corresponding surface of the razor blade, and the thumb-screws arranged in one side of said holder near its ends to engage the opposite surface of the razor blade about in a plane, transversely passing through the razor blade and the aforesaid screws, substantially as described. 2nd. The razor guard consisting of a holder such as A', and provided with slots *b*, at or near its lower edge, a tubular spring clamp B', provided with studs adapted to project through suitable formed slots in the holder, and the cam adjusting pieces secured on said projecting studs, whereby the device is made adjustable to fit any size razor blade, substantially as set forth.

No. 38,787. Inscription and Motto Plates.

(*Plaque d'inscription et de devise.*)

Charles Marcus Underwood, Hamilton, Ontario, Canada, 22nd April, 1892; 5 years.

Claim.—1st. An inscription or motto plate consisting of a main frame having a depressed panel plate between two perpendicular slits, a letter plate holder to fit in said panel having bent prongs at each end, and letter plates and blank plates bent down at top and bottom, as and for the purpose described. 2nd. A letter plate holder adapted

to be inserted within a frame or to be used in relief, consisting of a plate or frame around and underneath which to clasp the bent down ends of the letter plates, said holder having a bent down prong or substitute at each end for the purpose of fastening itself to a plate, substantially as set forth. 3rd. A plate with letters, figures or designs on its face surface, having both ends above and below the letters turned down at right angles, for the purpose of bending around and underneath and fastening itself to the letter plate holder, substantially as described.

No. 38,788. Washing Machine. (Machine à blanchir.)

A. Leroy Burke, Hamilton, Ontario, Canada, 22nd April, 1892; 5 years.

Claim.—In a double action convex oscillating clothes washer, as described, the water tight receptacle A, having a concave circular metallic bottom B, in which are affixed the corrugations C, and cross support *a*, the oscillating washer F, having affixed corrugations V, on its convex circular part, the vertical levers I, having vertical slot P, the transverse bars D and J, the lateral supporting levers M, the curved double action lever connecting link K, the horizontal manipulating hand lever H, and the latticed clothes receiver P, having projections T, and the stops S, all formed, arranged and combined, substantially as and for the purpose specified.

No. 38,789. Means for Sorting Nails in Nail Machines. (Moyen d'assortir les clous.)

William Mithel Stone, Keeseville, New York, U.S.A., 22nd April, 1892; 5 years.

Claim.—The combination of the revolving ring C, having recesses D, for carrying nails, the block A, for supporting said ring, and having the discharge pocket E, for the defective nails, and the magnet J, for drawing the defective nails into the discharge pocket E, while the gage F, holds the perfect nails in a vertical position, and enables the ring to carry them along to a discharge place further on, substantially as described.

No. 38,790. Pipe Coupler and Valve.

(*Joint de tuyau et soupape.*)

William Thompson Messenger, Boston, Massachusetts, U.S.A., 23rd April, 1892; 5 years.

Claim.—1st. The combination of a pair of coupling pieces, one provided with a valve seat, with a coupling nut and a chamber engaged at its ends by the said coupling pieces and enclosed in said nut, being laterally removable from between said coupling pieces without separating them, and a valve co-operating with the seat on the coupling piece, substantially as described. 2nd. The combination of a pair of coupling pieces, and a co-operating coupling nut, with an independent chamber enclosed within the said coupling nut, and engaged at its ends by said coupling pieces, being laterally removable from between said coupling pieces, without separating them, one of said coupling pieces being provided with a valve seat and valve stem guide, and a valve co-operating with said seat and having a stem that works in said guide, substantially as described. 3rd. The combination of two coupling pieces, and a co-operating coupling nut with a chamber enclosed within the said nut, and interposed between the said coupling pieces, the said chamber being made in two parts, one laterally removable from between the other, and the adjacent coupling piece, and one of said coupling pieces being provided with a valve seat and valve stem guide, and one portion of said chamber being provided with a valve stem guide, and a valve co-operating with said seat, having a stem co-operating with said guides, substantially as described.

No. 38,791. Attachment for Threshing Machines.

(*Appareil pour machine à battre.*)

Jacob Spaetzle, Township of Wilmot, Ontario, Canada, 23rd April, 1892; 5 years.

Claim.—The combination of the exhaust fans D, in connection with opening G in top of C, with semi-circular cover E and linen hose F, substantially as and for the purpose hereinbefore set forth.

No. 38,792. Vehicle Motor. (Moteur pour voitures.)

William Henry Thompson and George Morris, both of Hamilton, Ontario, Canada, 23rd April, 1892; 5 years.

Claim.—1st. In combination with a vehicle, a frame attached thereto, carrying a spur driving wheel, an intermediate pinion wheel, and a pinion on the vehicle axle, all made to engage with each other, and a crank handle to operate them, substantially as and for the purpose specified. 2nd. In combination with a vehicle, a frame attached thereto, carrying a spur driving wheel, an intermediate pinion, and a pinion on the vehicle axle, and a crank handle or handles to operate said gear wheels, and devices on the front axle for steering the vehicle, all constructed substantially as and for the purpose specified. 3rd. In combination with a vehicle, the frame G attached thereto, the spur wheel H on a countershaft *b*, pinion *c*, keyed on the axle D, immediately under the wheel H, and the intermediate spur wheel I, keyed on the lower countershaft *d* in the said frame, all the spur gear meshing into each other, and driven by the crank handle *e* for moving a vehicle, substantially as specified. 4th.

In combination with a vehicle, the frame G attached thereto, the spur wheel H on the countershaft *b*, pinion *c*, keyed on the axle D, immediately under the wheel H, and the intermediate spur wheel I, keyed on the lower countershaft *d*, in the said frame, the spur gear meshing one into the other, the crank handle *e* for driving the gear, and the steering device consisting of the reach C, rod *g*, on axle E, and handle *h*, substantially as and for the purpose specified.

No. 38,793. Combined Desk and Easel.

(*Papitre et chevalet combinés.*)

Lydia B. B. Hill, assignee of John Orange Richmond, both of Hart, Michigan, U.S.A., 23rd April, 1892; 5 years.

Claim.—1st. The combination of the rear supporting legs, the front supporting legs having the adjustable upper section *1a* secured upon them, the hinged connecting bars 5, the hinged supporting bars 6, hinged at their ends on the front and rear legs, the top formed in the two sections 7, 8, and the hinged bracing-rods 13, 15, and the fixed eyes 14, 16, with which they are adapted to engage, substantially as set forth. 2nd. The combination, with the rear legs and the connecting bars 5, of the front legs 1, having the reduced ends *1b*, and the inwardly projecting stop-pins 12, the upper adjustable sections *1a* having the reduced lower ends *1c*, formed with longitudinal slots *1d*, the clamping-screws 10, having the thumb-nuts 11 on their outer ends, and the desk top hinged on the upper ends of the rear legs 3, and the adjustable sections *1a*, substantially as set forth. 3rd. The combination of the rear legs 3, the front legs having the upper adjustable sections, the hinged connecting bars 5, the hinged supporting bars 6, *6a*, formed with the series of apertures 13, the hinged brace rods 13, 15, arranged as specified, and the fixed eyes 14, 16, the upper top sections 7 and the lower easel section 8, hinged at its lower end and having hinged to its under side the brace rods 17, formed with bent lower ends, substantially as set forth.

No. 38,794. Floor Cloth Squeezer.

(*Pressoir pour torchons de plancher.*)

William Keane, Stratford, Ontario, Canada, 23rd April, 1892; 5 years.

Claim.—The body B, formed with the perforations *b*, *c*, and the slots *a*, and bearings *e*, formed with sockets *s*, centrally located on said body B, and hooks *d*, in combination with a body A, formed with the ribs *b*, perforations *k*, and the flanges *l*, on which the trunnions *g* are formed being centrally located on said body A, and the handle *h*, substantially as shown and described and for the purpose specified.

No. 38,795. Tobacco Pipe. (*Pipe à fumer.*)

Joseph Lauthoff, Detroit, Michigan, U.S.A., 23rd April, 1892; 5 years.

Claim.—1st. A tobacco pipe consisting of a bowl A and a shell A', provided with a passage through its base, an intermediate section B and stem C, each provided with smoke passages and forming an intercepting chamber B', C', substantially as described. 2nd. A pipe consisting of a bowl, an intermediate section, a stem removably engaged with the intermediate section and forming an intersecting chamber B', C', tubes forming smoke passages in said bowl, section and stem, the tube in the intermediate section projecting into said chamber and formed with lateral openings to spread the smoke in said chamber, substantially as described. 3rd. A pipe consisting of a bowl, a communicating intermediate section, a communicating stem forming with said section, an intercepting chamber B', C', said intermediate section provided with a passage *b*², closed at its outer extremity in said chamber and provided with lateral openings to spread the smoke, the communicating tube in the stem projecting forward into said chamber, substantially as described. 4th. A pipe consisting of a bowl A, an interior shell A', closing the base of the bowl A, a perforated cap closing said bowl, a communicating intermediate section removably connected with said bowl, a communicating stem removably connected with the intermediate section, an intercepting chamber formed by said section and stem, said section and stem each provided with tubes forming smoke passages projecting toward each other in said chamber, substantially as described.

No. 38,796. Nail Puller. (*Arrache-clous.*)

Melville Loftin, Hildreth, Illinois, U.S.A., 23rd April, 1892; 5 years.

Claim.—A nail puller comprising a handled claw hammer, an arm pivoted on the sides of the hammer body and extending in opposite directions from its fulcrum, the said arm being forked and its open end straight to permit of turning the hammer body within said arm, and a point formed on the other end of said arm and extending outwardly at an obtuse angle from said arm, substantially as shown and described.

No. 38,797. Sash Lock. (*Arrête-croisée.*)

The De Mars Sash Lock Company, assignee of Joseph De Mars, all of Albuquerque, New Mexico, U.S.A., 23rd April, 1892; 5 years.

Claim.—1st. An improved sash lock comprising a suitable casing or support and two bolts supported thereby, and arranged transversely of and at right angles to each other, one of such bolts being

movable longitudinally, and the other being movable both longitudinally and rotarily, and provided with means whereby its rotary movement may operate the first bolt, all substantially as and for the purposes set forth. 2nd. The improved sash lock herein described, consisting of the casing or support, the two bolts supported there by independent springs for operating the said bolts in one direction, one of said bolts being movable longitudinally, and provided with a bearing, and the other bolt being movable both longitudinally and rotarily, and having a crank-like arm arranged to engage the bearing of the first bolt, all substantially as set forth. 3rd. The improved sash lock, comprising the casing or support, the bolt I, having a crank arm J, and movable both longitudinally and rotarily in the casing, and the bolt F, movable longitudinally in the casing, and having between its ends a recess in which the said crank arm operates, all substantially as and for the purposes set forth. 4th. In a sash lock, the combination of the casing formed with a shell open at the bottom, and provided with notches C, C, and D, D, the bottom plate fitted to said shell, and having short lugs C', C', D', D', fitted to said notches C, D, the bolt F held in notches D, and having a bearing *g*, and an actuating spring and the cross bolt I, having a crank arm to engage the bearing *g*, and a spring for actuating the said bolt I, all substantially as set forth.

No. 38,798. Device for Interchangeably Arranging Characters. (*Appareil pour arranger alternativement les caractères.*)

James Noble, Toronto, Ontario, Canada, 25th April, 1892; 5 years.

Claim.—1st. A device for interchangeably arranging letters or characters, comprised of a frame work having a guide or spacing bar, provided with a series of slots or channels, in combination with the letters or characters each of which is provided with a projecting pin or lug, to enter its respective groove or channel in the guide or spacing bar, substantially as specified. 2nd. A device for interchangeably arranging letters or characters, consisting of a frame work comprised of two longitudinal bars, the ends of which are connected by means of vertical bars, a rabbet formed along the front and inner edges of the longitudinal bars, one or both of said longitudinal bars provided with a series of grooves or channels, a vertical groove or channel formed in the inner sides of each of the vertical bars, in combination with the removable back adapted to enter the grooves in the vertical bars and move therein, the letters or characters of the alphabet, each of which is provided with a projecting lug or pin to enter its respective groove or channel in said guide or spacing bar, substantially as described. 3rd. A device for interchangeably arranging letters or characters consisting of a series of letters or characters in combination with a frame work, having a guide or spacing bar adapted to properly space the different letters or characters and retain the same properly in place, substantially as specified.

No. 38,799. Lubricator. (*Graisneur.*)

Robinson W. Green, Guelph, Ontario, Canada, 25th April, 1892; 5 years.

Claim.—In a sight feed lubricator, a pipe D, connected with the main steam pipe B, said pipe D, enters the lubricators at E, and passes directly through the same, coming out at the bottom F, and then connecting with pipe C, substantially as and for the purposes specified.

No. 38,800. Dress Stay. (*Buse de corsel.*)

Morris Plant Bray, New York, state of New York, U.S.A., 25th April, 1892; 5 years.

Claim.—The herein described dress stay, consisting of a fabric covering, having two parallel pockets formed therein, combined with elastic stays introduced, one in each of said pockets, and a flexible tip lapped over each end and extending down onto the opposite surfaces of the covering, with a rivet through the said tip and covering between the stays, the said rivet interlocking with the adjacent edges of the two stays, substantially as described.

No. 38,801. Method and Means of Manufacturing Cyanides. (*Méthode et moyen de fabrication de cyanide.*)

George Thomas Beilby, St. Kitts, Statedford, Midlothian, North Britain, 25th April, 1892; 5 years.

Claim.—1st. The process for the production of cyanides of the fixed alkalies, consisting in bringing ammonia into intimate contact with a liquid-fused mixture of anhydrous alkali, cyanide and carbon. 2nd. The process for the production of cyanides of the fixed alkalies, consisting in bringing the vapours of alkaloidal bases into intimate contact with a liquid-fused mixture of anhydrous alkali, cyanide and carbon. 3rd. The process for the production of cyanides of the fixed alkalies, consisting in bringing ammonia into intimate contact with a liquid-fused mixture of anhydrous alkali, cyanide and carbon, the fused cyanide so produced being run or emptied out directly from the apparatus. 4th. The process for the production of cyanides of the fixed alkalies, consisting in bringing ammonia into intimate contact with a liquid-fused mixture of anhydrous alkali, cyanide and carbon, the cyanide produced being sublimed and obtained as a sublimate. 5th. The apparatus for the production of

cyanides of the fixed alkalis, consisting in a melting pot or vessel heated by suitable means, and having an open ended or perforated pipe descending to or entering at or near the bottom thereof, so as to enable ammonia or the vapours of alkaloidal bases to be distributed by bubbling or otherwise through the liquid-fused mixture contained in the bottom of such melting pot or vessel, substantially as specified. 6th. The apparatus for the production of cyanides of the fixed alkalis, consisting in a melting pot or vessel, heated by suitable means, and having an open ended or perforated pipe descending to or entering at or near the bottom thereof, so as to enable ammonia or the vapours of alkaloidal bases to be delivered to the bottom of such melting pot or vessel, in combination with a set of perforated shelves arranged one above the other in the pot or vessel, and over and through which a liquid-fused mixture of alkali, cyanide and carbon is caused to flow downwards in succession, and of a set of stirrers arranged to sweep such shelves, either the shelves or the stirrers being caused to rotate, substantially as specified. 7th. The apparatus for the production of cyanides of the fixed alkalis, consisting in a melting pot or vessel, heated by suitable means and having an open ended or perforated pipe descending to or entering at or near the bottom thereof, so as to enable ammonia or the vapours of alkaloidal bases to be delivered to the bottom of such melting pot or vessel, in combination with a set of pairs of shelves arranged one above the other within the pot or vessel, one of each pair of the shelves being perforated or having openings at or near its periphery, while the other one of each pair of shelves has perforations or openings at or near its centre, substantially as specified.

No. 38,802. Mouth-Piece for Speaking Tubes.

(*Embouchure pour porte-voix.*)

William Horace Ross, Camden, New Jersey, and William Bryant, Philadelphia, Pennsylvania, both in the U.S.A., 25th April, 1892; 5 years.

Claim.—1st. A mouth-piece for speaking tubes consisting of a suitable chamber provided with a mouth-piece proper at one end, and at its other end with suitable means for connecting with a speaking tube, a whistle located in said chamber and free of any attachment thereto, the whole constructed, arranged and adapted to operate, as and for the purposes set forth. 2nd. In combination with a speaking tube, a mouth-piece consisting of a suitable chamber provided with a mouth-piece proper, and a whistle located in said chamber free of any attachment thereto, and self-adjusting as described, and for the purposes set forth. 3rd. In mouth-pieces for speaking tubes of the character herein described, a valve or whistle located therein free of any attachment thereto, and provided on one side with prongs or projections, as and for the purpose set forth.

No. 38,803. Corset. (*Corset.*)

Frederick Compton, Toronto, Ontario, Canada, assignee of Wallace White Gould, Bridgeport, Connecticut, U.S.A., 25th April, 1892; 5 years.

Claim.—A corset consisting of sections having straight and curved edges, as set forth, whereby, in the completed corset, the straight edge of each section is joined to the adjacent curved edge of the next section, substantially as described.

No. 38,804. Drag Saw Rail Cutting Machine.

(*Scierie à scie traînante pour couper les rails.*)

Robert C. Cowan, Montreal, Quebec, Canada, and Terrick G. Haultain, New York, State of New York, U.S.A., assignees of Joseph Warren Calif, North Easton, Massachusetts, U.S.A., 25th April, 1892; 5 years.

Claim.—1st. An upright standard or support adapted to be removably secured to a rail, combined with a rocker arm and link mounted laterally of said standard at its top, and a drag saw pivotally hung to said link to move in right lines, substantially as set forth. 2nd. In combination with the standard, its hooked foot, and the co-operating hooked lever to grasp the rail head, a rocker arm, the pendent link, a pivotal block in said link at one end, and a saw adapted to be removably united at its front end to the block, substantially as explained. 3rd. The combination, with the standard 2, its foot 4, the hooked lever 6 pivotally secured, the operating rod 9, and the lateral shaft 12, of the rocker arm pendent from said shaft, the link 15 pivotally mounted at the end of said rocker arm, and the block 17, which unites the saw with the link, substantially as described and stated.

No. 38,805. Revolving Hat Case.

(*Montre-tournaute pour chapeaux.*)

David Henry Sanders and Edwin Orin Wood, both of Flint, Michigan, U.S.A., 25th April, 1892; 5 years.

Claim.—1st. A hat case comprising a stationary portion closed at top and bottom and a revolving portion completely covered by said closed top and journaled in said stationary portion, and comprising supports for a number of sizes and shapes of hats, and a wall partly surrounding the hat supports and united therewith and constituting the front portion of the case, the said revolving portion being adapted to be rotated to cause its wall to recede within the stationary portion, and thereby open the case and move the hat supports to the

front within the stationary portion to expose the hats thereon for handling, the reverse movement of the revolving portion serving to return the wall to the front to close the case and cover up the hats, substantially as described. 2nd. A hat case comprising a stationary portion closed at top and bottom, and a revolving portion journaled within such stationary portion and constructed with crossed arms to receive and support the hats, standards in which such crossed arms are secured, and a wall movable with the arms and standards to open the case to expose the hats and to close the case to conceal the hats, substantially as described.

No. 38,806. Ore Concentrator.

(*Concentrateur de minéral.*)

William Henry Harrison Bowers and the Colorado Iron Works, all of Denver, Colorado, U.S.A., 25th April, 1892; 5 years.

Claim.—1st. In an ore concentrator, the concentrating table having a flexible bottom, and a flexible beam to which the bottom is secured, arranged between the sides of the table, means for vibrating the table, and a bumper block against which the said beam strikes, as the table is vibrated, substantially as described. 2nd. In an ore concentrator, a table having a bumper beam formed with one of its ends gradually diminishing in thickness, as the centre is approached, substantially as set forth. 3rd. In an ore concentrator, a table having a central bumper beam composed of two longitudinal parts, the lower part gradually decreasing in thickness as the centre is approached, and the upper part gradually increasing in thickness as the centre is approached, substantially as set forth. 4th. In an ore concentrator, a table having a central beam composed of two parts, the lower part gradually decreasing in thickness as it nears the centre, the upper part gradually increasing in thickness as it nears the centre, a bottom of suitable thin metal secured between the said two parts forming the bumper beam, and side pieces which correspond to the incline of the said bumper beam, substantially as set forth. 5th. In an ore concentrator, the combination of a longitudinally reciprocating table or concentrator having an inclined bottom, an ore supply trough, and a water supply trough, substantially as described. 6th. In an ore concentrator, the combination of a longitudinally reciprocating table or concentrator, a retracting spring therefor, an ore supply trough, and a washing water supply trough, substantially as described. 7th. In an ore concentrator, a table having a central beam composed of two parts between which the bottom is secured, the said parts being cut away at the centre, whereby increased flexibility is secured, as set forth. 8th. In an ore concentrator, the combination of a longitudinally reciprocating table, having a central bumper beam gradually decreasing in thickness as its centre is approached, side pieces curved to correspond with said bumper beam, a bottom secured to said beam and side pieces, means for reciprocating said table, and a spring secured to said table, substantially as described. 9th. In an ore concentrator, the combination of a longitudinally reciprocating table having a bumper beam composed of two parts, substantially as described, side pieces curved underneath to correspond with the cut in the bumper beam, a bottom secured between the parts of the said beam and to the sides of the table, means for reciprocating said table, and a retracting spring secured at one end to the said beam, substantially as described. 10th. In an ore concentrator, the combination of a longitudinally reciprocating table or concentrator, having a bottom of thin sheet metal, a bumper against which said table comes into contact, and an ore and water supply trough, substantially as described. 11th. In an ore concentrator, the combination of a longitudinally reciprocating table or concentrator, having a bottom of thin sheet metal, a retracting spring therefor at one end, a bumper at the other, and an ore and water supply trough, substantially as described. 12th. In an ore concentrator, the combination of the two sets of vertical supports, a longitudinally reciprocating table or concentrator suspended between said supports, a retracting spring located at one end beneath the table, a bumper located at the other end, and an ore and water supply trough, substantially as described. 13th. In an ore concentrator, the combination of the longitudinally reciprocating table having the central beam, a tappet arranged on one end of said beam, and the drive shaft provided with the cam for striking said tappet, substantially as described. 14th. In an ore concentrator, the combination, with a longitudinally reciprocating table or concentrator, of the vertical supports, the rock shafts held by said supports, and the vertically adjustable hangers or rods passing through said rock shafts and secured to the sides of the table, substantially as described. 15th. In an ore concentrator, the combination of a longitudinally reciprocating table or concentrator, the vertical supports, the rock shafts, the vertical hangers, and the diagonal hangers adjustable with respect to said vertical hangers, connected with the bottom of the table between its sides, substantially as described. 16th. In an ore concentrator, the combination of a longitudinally reciprocating table or concentrator, the rock shafts, the vertical supports, the vertical hangers adjustable vertically in said rock shafts, and the diagonal hangers independently adjustable with respect to said vertical hangers, connected with the table or concentrator between its sides, substantially as described. 17th. In an ore concentrator, the concentrating table consisting of a flexible bottom, and side pieces, to which the bottom is secured, in combination with rigid strips secured to the said side pieces outside of or below the bottom, substantially as set forth. 18th. In an ore concentrator, the concentrating table consisting of the flexible

bottom and the side pieces to which the bottom is secured, in combination with packing strips *o* placed between the bottom and the side pieces outside of or below the bottom, substantially as set forth. 19th. In an ore concentrator, the concentrating table consisting of the flexible bottom, the side pieces and the central flexible bumper beam, in combination with the rigid strips *O*¹, secured to the edges of the side pieces below the bottom, substantially as described.

No. 38,807. Steam Boiler. (*Chaudière à vapeur.*)

The Campbell and Zell Company, assignee of Robert Ross Zell, all of Baltimore, Maryland, U.S.A., 25th April, 1892; 5 years.

Claim.—1st. In a water tube boiler, the combination of a mud drum, cylindrical water drums arranged above said mud drum, with one series of inclined water tubes, arranged across the furnace in horizontal rows connecting said mud drum and one of the water drums, and another series of inclined water tubes, arranged across the furnace in horizontal rows connecting the two water drums, and a steam and water drum connected to the said water drums, substantially as set forth. 2nd. In a water tube boiler, the combination of a mud drum, cylindrical water drums arranged above said mud drum, with two series of water tubes arranged across the furnace in horizontal rows and parallel to each other in each row, and communicating at one end with one of the water drums, and at the other end communicating respectively with the mud drum and the other water drum, and a steam and water drum in communication with said water drums, substantially as set forth. 3rd. In a water tube boiler, the combination of a mud drum, cylindrical water drums at the front and rear of the furnace, arranged above said mud drum, with one series of curved inclined water tubes connecting said mud drum, and the front water drum, and another series of curved inclined water tubes connecting the front and rear water drums, a feed pipe entering the rear water drum, and a steam and water drum connected to the said water drums, said water tubes entering the drums at a line drawn through their centres, substantially as set forth. 4th. In a water tube boiler, the combination of a mud drum, cylindrical water drums arranged above said mud drum, with two series of water tubes arranged across the furnace in horizontal rows, and communicating at one end with one of the water drums, and at the other end communicating respectively with the mud drum and the other water drum, and a steam and water drum in communication with the said water drums, the said water tubes being arranged parallel to each other in each horizontal row, and located above the spaces between the tubes in the row beneath, substantially as set forth. 5th. In a water tube boiler, the combination of a mud drum, cylindrical water drums at the front and rear of the furnace arranged above said mud drum, with one series of curved inclined water tubes connecting said mud drum and the front water drum, and another series of curved inclined water tubes connecting the front and rear water drums, a feed pipe entering the rear water drum, and a steam and water drum connected to the said water drums, said water tubes entering the drums at a line drawn through their centres, substantially as set forth. 6th. In a water tube boiler, the combination of a mud drum, cylindrical water drums at the front and rear of the furnace, arranged above said mud drum, with two series of curved water tubes, arranged across the furnace in rows and communicating at one end with the front water drum, and at the other end communicating respectively with the mud drum and the rear water drum, pipes connecting the rear water drum and the mud drum, a feed water pipe entering the said rear water drum, and a steam and water drum in communication with said water drums, the said water tubes entering the drums at a line drawn through their centres, substantially as set forth. 7th. In a water tube boiler, the combination of a mud drum, two water drums arranged above said mud drum, with two series of water tubes communicating at one end with one of the water drums, and at the other end communicating respectively with the mud drum and the other water drum, a steam and water drum in communication with the said water drums, and a yielding support for the water drum with which all the tubes communicate for the purpose of allowing a longitudinal movement due to contraction and expansion, substantially as set forth. 8th. In a water tube boiler, the combination of a mud drum, front and rear water drums arranged above said mud drum, with two series of staggered water tubes communicating at one end with the front water drum, and at the other end communicating respectively with the mud drum and the rear water drum, a feed water pipe entering the said rear water drum, a steam and water drum in communication with said water drums, and deflectors arranged above the upper layer of each series of water tubes in opposite directions, so as to cause a circuitous travel to the products of combustion, substantially as set forth. 9th. In a water tube boiler, the combination of a mud drum, front and rear water drums arranged above said mud drum, with one series of curved inclined staggered water tubes connecting said mud drum and the front water drum, and another series of curved inclined staggered water tubes connecting the front and rear water drums, a feed water pipe, entering the said rear water drum, a steam and water drum in communication with said water drums, and deflectors arranged above the upper layer of each series of water tubes in opposite directions, so as to cause a circuitous travel to the products of combustion, substantially as set forth. 10th. In a water tube boiler, the combination of a mud drum, two water drums arranged above said mud drum, with two series of water tubes communicating at one end

with one of the water drums, and at the other end communicating respectively with the mud drum and the other water drums, a steam and water drum in communication with the said water drums, a yielding support for the water drum with which all the tubes communicate for the purpose of allowing a longitudinal movement due to contraction or expansion, a saddle supporting the other water drum, and longitudinal beams by means of which the said yielding support and saddle are supported, substantially as set forth.

No. 38,808. Ribbon Roller. (*Fuseau à ruban.*)

Frederick Olin Clarke, Listowel, Ontario, Canada, 26th April, 1892; 5 years.

Claim.—An improved machine for re-rolling ribbon in stock taking, consisting of two disks provided with spindles suitably journaled in heads carried on a bed plate, one head being adjustably connected to the bed plate and the spindle of the other disk provided with crank handle, substantially as and for the purpose specified.

No. 38,809. Ironing Board. (*Planche à repasser.*)

James Gates, Gananoque, Ontario, Canada, 27th April, 1892; 5 years.

Claim.—1st. In an ironing board of the class described, the combination of the bosom board A, having a longitudinal slot B, formed in its broader end, the cleats D, D, secured to the underside of the bosom board oppositely of the slot B, and set back from the fore end of the bosom board, and the leg E, pintled between said cleats and having a notch E¹, whereby the slot B permits the edge of a table to reach the said notch and bear on the top of the bosom board and be clamped by the leg, as set forth. 2nd. The bosom board A, having a slot B, and provided with cleats D, D, the leg E pintled to said cleats and intersecting the slot, and a sad iron stand F secured to said leg within the slot, as set forth. 3rd. The combination of the bosom board A, having a slot B, and cleats D, D, secured thereto oppositely of said slot and provided with bolts C, C, to prevent warping, and the leg E pintled to said cleats and having a notch E¹ across said slot B, and provided with a tooth E² to grip a table, as set forth.

No. 38,810. Suspenders. (*Bretelles.*)

Charles Robert Harris, Williamsport, Pennsylvania, U.S.A., 27th April, 1892; 5 years.

Claim.—1st. In suspenders, the combination, with shoulder straps and button straps, of a back and heart folded around the ends of the shoulder and button straps, respectively, a connecting ring or loop, and a thin metal lining interposed between the ring or loop and the back and heart, and held in place by the stitches which pass through the several parts, said lining adapted to sustain the strain brought upon the suspenders at this point and forming bearings for the ring or loop, substantially as set forth. 2nd. In suspenders, the combination, with shoulder straps and button straps, of a thin metal or woven wire lining joining the converging ends of these straps and back and heart, forming a facing over the lining, the lining adapted to sustain the strain brought upon the suspenders at this point, and the several parts, including the straps, lining and facing, all held together by stitches passing through them from one side of the suspenders to the other, substantially as set forth.

No. 38,811. Wrapper for Butter.

(*Enveloppe pour le beurre.*)

Frederick Cudney, Toronto, Ontario, Canada, 27th April, 1892; 5 years.

Claim.—1st. In a wrapper for butter and other substances of consistence, the wood board sheet to coil up and form the cylinder, substantially as shown and described. 2nd. In a wrapper for butter and other substances of consistence, the combination of the wood board sheet to coil as specified, and the sheet of oil proof material pasted to the wood board and extending over its edges so as to form the ends of the cylinder, substantially as shown and described. 3rd. In a wrapper for butter and other substances of consistence, the combination of the wood board sheet as specified, and the strips of paper pasted along the edges of the wood board sheet to form an outer covering to the ends of the cylinder formed by the wood board when coiled, substantially as set forth. 4th. In a wrapper for the purpose specified, the combination of the wood board sheet to form the cylinder when coiled as specified, the paper strips pasted to the wood board sheet along its opposite edges, and the oil proof material pasted on the said wood board sheet and extending over the edges thereof as specified, substantially as shown and for the purpose hereinbefore set forth.

No. 38,812. Combined Floating Crane and Elevator.

(*Grue et élévateur flottants combinés.*)

John E. Walsh, New York, state of New York, U.S.A., 27th April, 1892; 5 years.

Claim.—1st. The scow S, having a mast A, carrying two independent booms D, secured to an adjustable sleeve *a*, by means of the forks *a*², and the hinges *a*³, the latter carrying the rollers *r*¹, *r*², the trolleys R, carrying the pulleys *r*², the pulleys *r*³, ropes *h*, *h*¹, hoisting winches *w*, *w*¹, the screw *m*, crank *m*², shaft *m*³, and gear-

ing m^1 , as and for the purposes herein shown and described. 2nd. The scow S, having a mast B, carrying on two independent booms E, E, secured to an adjustable sleeve b , two elevator legs F, F, of unequal length, the screw n , gear n^1 , shaft n^2 , and crank n^3 , with the upright shaft i , carrying the pulley i^1 , the gearing i^2 , i^3 , i^4 , and i^5 , the shafts o^1 , o^2 and i^4 , pulleys and belts, and the elevator T, entering the chamber S^2 , the chutes t and f , and the engine K, as and for the purposes herein shown and set forth. 3rd. A loading and unloading apparatus, composing the scow S, having a chamber S^2 , and a mast A, carrying two independent booms D, D, secured to an adjustable sleeve a , and provided with trolleys, pulleys, ropes and winches, the mast B, carrying two independent elevator legs F, F, of unequal length, the booms E, E, secured to an adjustable sleeve b , an engine K, pulleys, belts, shafts and gear, the elevator T, and the chutes f and t , as and for the purposes herein shown and described. 4th. A hoisting apparatus, consisting of the scow S, masts A and B, elevators E, and cranes D, combined with protecting tent C', having the beams G, slotted to permit the free action of the hoisting rope h , as and for the purposes herein shown and set forth.

No. 38,813. Draft Equalizer. (Régulateur du tirage.)

Frank W. Reisinger, Mount Vernon, Iowa, U.S.A., 27th April, 1892; 5 years.

Claim.—A draft equalizer comprising the whiffletree-lever 14, pivoted at the end of its short arm to the tongue and curved inward across the tongue at the juncture of its long and short arms, as shown at 15, the whiffletree-lever 11, pivoted at its inner end to the pole in rear of the lever 14, and projecting oppositely thereto, the pulley 20, on the pole in rear of both levers, and the rods 17, 19 pivoted at their outer or forward ends to the levers 11, 14 respectively, and extending at their inner ends adjacent to the pulley and connected by a chain, substantially as set forth.

No. 38,814. Shutter Bower, (Arrête-voilet.)

Harvey V. Demarest, Nyack, State of New York, U.S.A., 27th April, 1892; 5 years.

Claim.—1st. The herein described window-fastener, the same consisting of an arm adapted to be connected to a shutter and provided at its opposite or free end with an angular perforation, and a locking-stud adapted to be secured to a window-sill, having its body angular in cross-section and adapted to receive said perforation, substantially as specified. 2nd. The combination, with the window-sill and the hinged shutter, of the bracket 4, secured to the face of the shutter, the link 6 pivoted to the bracket, the curved arm 8 pivoted to the free end of the link, provided near its rear end with a polygonal perforation and beyond the same curved in shape to form a handle, and the metal stud polygonal in cross-section, adapted to conform to and receive the perforation of the arm and mounted upon a perforated metal base, whereby it is adapted to be secured to the sill of a window, substantially as specified. 3rd. The herein described shutter-fastener, the same consisting of an arm provided at its rear end with a handle and in front of the same with an angular opening, a tapered angular stud adapted to be secured to the window-sill, and to receive the opening in the arm, and a link loosely pivoted to the outer end of the arm and adapted to be secured to a shutter, substantially as specified.

No. 38,815. Art of and Means for Manufacturing Paper. (Art et moyen de fabriquer le papier.)

Amasa Nathaniel Kidder, Chelmsford, Massachusetts, U.S.A., 27th April, 1892; 5 years.

Claim.—1st. The improvement in the art of manufacturing paper in cylinder machines which consists in agitating the pulp in close proximity to the cylinder, as described. 2nd. The improvement in the art of manufacturing paper in cylinder machines, which consists in agitating the pulp on a line at substantially a right angle to the motion of the cylinder, as described. 3rd. The improvement in the art of manufacturing paper in cylinder machines, which consists in agitating the pulp in close proximity to the cylinder and on a line substantially at a right angle to the motion of the same, as described. 4th. A machine for making paper, comprising in its construction a cylinder, a vibratory frame or support and agitating devices connected with the said frame, and extending in proximity with the cylinder, as described. 5th. A machine for making paper, comprising in its construction a cylinder, a vibratory frame or support, and a series of agitating devices divided centrally on a line parallel with the axis of the cylinder and hinged together, the agitating devices being connected to the said frame and arranged in proximity to the cylinder, as described. 6th. A machine for making paper, comprising in its construction a cylinder, a vibratory frame or support, and a series of agitating devices connected with the said frame and located in proximity with the cylinder, the said agitating devices having the form of blades extending in a line parallel with the motion of the cylinder, and provided on their outer edges with flanges, as described.

No. 38,816. Tufting Machine. (Machine à moutonner.)

Henry Thomas Shiple, Cleveland, Ohio, U. S. A., 27th April, 1892; 5 years.

Claim.—1st. In a tufting machine, substantially as described, the combination with the stock, the shaft G, journaled in said stock and having the arm B, and a suitable means for rotating said shaft; of the needle and the pitman carrying the needle connected to the arm B; substantially as and for the purpose specified. 2nd. In a tufting machine, substantially as described, the combination, with the stock, the shaft G, journaled in said stock, the arm B, connected to the shaft G, and having a plurality of apertures, and a suitable means for rotating the shaft G; of the needle, the pitman carrying the needle and having a plurality of apertures, and the thumb-screw connecting the pitman and the arm B, substantially as specified. 3rd. In a tufting machine, substantially as described, the combination, with the stock, having a longitudinal transversely-disposed slot; of a guide having a vertically-disposed aperture, and a binding screw reaching through the slot of the stock, and taking into a threaded seat in the guide; substantially as specified.

No. 38,817. Case for Medicinal Poultrice Materials.

(Coffre de matières médicinales pour cataplasmes.)

Edward Kent, 20 Royal Exchange, County of London, England, 27th April, 1892; 5 years.

Claim.—1st. In a poultice, the combination of the bag, with the face of open texture and the back of waterproof material, with sewing and quilting of any shape or form, substantially as herein described, and for the purpose set forth. 2nd. In a poultice, the combination of the several poultices connected together, substantially as shown for the purpose specified. 3rd. In a poultice, the combination of the ingredients concentrated in a bag, and the quilting and the several compartments or divisions, substantially as herein described, and according to the accompanying drawing. 4th. In a poultice, the combination of dividing into several poultices by cutting or separating the cases or bags where joined together, substantially as herein described, and according to the accompanying drawing.

No. 38,818. Car Coupler. (Attelage de chars.)

Milo Jackson Althouse, Waupun, Wisconsin, U.S.A., 27th April, 1892; 5 years.

Claim.—1st. A car coupler consisting of a head, parallel bars in the head to one side of its centre, a horizontally rotatable hook journaled in the head on the other side of the centre thereof, the distance from the centre of the head to midway of the parallel bars and to the axial line of the shaft of the hook being the same, and the edges of the wings of the hook being curved, whereby when two cars are brought together, each having such a coupler thereon, the hook of one coupler will enter the space between the parallel bars of the adjacent coupler, substantially as described. 2nd. A car coupler consisting of a head, parallel bars in the head to one side of its centre, a horizontally rotatable hook journaled in the head on the other side of the centre thereof, the distance from the centre of the head to midway of the parallel bars and to the axial line of the shaft of the hook being the same, the edges of the wings of the hooks curved, and a weight attached to one side of the shaft of the hook yieldingly holding the wings of the hook in a horizontal plane, whereby when two cars are brought together, each having such a coupler thereon, the hook of one coupler will enter the space between the parallel bars of the adjacent coupler and automatically engage therewith, substantially as described. 3rd. A car coupler consisting of a top and a bottom plate, parallel bars extending from such top to such bottom plate, a horizontal hook journaled in the frame, the hook being on one side of the central line of the frame and the parallel bars on the other, and the distance from the axial line of the shaft of the hook to the central line being the same as the distance from such central line to midway of the parallel bars, and connecting rods extending from the frame and attaching it to the head of the draft iron of a link and pin coupler, substantially as described. 4th. In a car coupler, a hook having double wings, with curved edges to such wings, in combination with a journal bearing in the draw bar, such journal bearing being circular in cross-section at the rear end thereof, and elliptical in cross-section at the front end thereof, with the minor axis vertical, and the major axis horizontal, whereby horizontal movement of the winged end of the hook is permitted in its journal bearing, substantially as described.

No. 38,819. Bridle for Paint Brushes.

(Bride de pinceau.)

Charles Boeckle, jr., Toronto, Ontario, Canada, 27th April, 1892; 5 years.

Claim.—1st. The combination in a brush, of a bridle band having perforations therein, pin c , permanently secured to the head of the brush and adapted to enter the perforations in the bridle band, and said bridle band constructed and arranged to move freely on said pins, substantially as described. 2nd. In a brush, the combination, with the head C, a plate D, secured thereto, and having pins projecting therefrom, of a bridle band lapping over said plate D, and having two sets of perforations therein, one set constructed to be

used for lacing the bridle band to the bristles of the brush, and the other set adapted to engage with the pins on the plate D, thereby forming an adjustable pivotal connection, the whole being constructed and arranged to allow the band to move freely on said pins, substantially as described.

No. 38,820. Car Coupler. (Attelage de chars.)

Frank Harvey and John Kane, both of Renova, Pennsylvania, U.S.A., 27th April, 1892; 5 years.

Claim.—1st. The combination, in a chambered draw bar, having a coupling head formed integral therewith, the coupling hook pivotally attached thereto, said coupling hook having a locking arm with the recesses *d*, beyond which said locking arm is reduced, said reduced portion having its upper end beveled, a latch horizontally pivoted to a vertical wall formed integral with the draw head, the front end of said latch being oppositely beveled on its under side from the end of the locking arm, and means for elevating said latch, substantially as set forth. 2nd. The combination, in a car coupling, of a draw and coupling head, constructed substantially as shown and provided, with a central flat vertical portion *G*, to which the latch *F*, having its rear end bifurcated, is pivoted, a raised portion or stop *E*, having a straight inner face and rounded outer portion, the forward end of the latch extending beyond the stop, and a coupling hook having an extended and oppositely beveled portion which engages with the front end of the latch, substantially as set forth. 3rd. The combination, in a car coupling, of a draw head carrying within the same a horizontally pivoted latch, the rear end of which is bifurcated and pivotally secured to the vertical web *G*, of the draw head, and a stop formed integral with the draw head, and provided with a straight wall, against which one side of the latch abuts, substantially as set forth.

No. 38,821. Electric Motor. (Moteur électrique.)

James T. Wilson, Tyrone, Pennsylvania, U.S.A., 28th April, 1892; 5 years.

Claim.—1st. An electric motor, mounted upon a movable frame, provided with cranks and connecting rods by means of which the motor and frame are reciprocated, substantially as specified. 2nd. The combination, with the motor *C*, provided with cranks *f*, and connecting rods *g*, of the reciprocating frame *A*, and the fixed guiding frame *D*, substantially as specified. 3rd. The combination, with the motor *C*, provided with cranks *f*, and connecting rods *g*, of the reciprocating frame *A*, and the fixed frame *D*, provided with grooved surfaces and balls *e*, adapted to roll in the grooves of the frames *A*, *D*, substantially as specified.

No. 38,822. Art of Coloring Pictures on Textile Fabrics. (Coloriage des dessins sur étoffes.)

Alois Ophoven, Paderborn, German Empire, 29th April, 1892; 5 years.

Claim.—The process of colouring pictures obtained through chemical or mechanical means, on silk or other textile fabrics, by rubbing pastel or other colors against their reverse side, substantially as described.

No. 38,823. Method of Ventilating Rooms.

(Méthode de ventiler les appartements.)

John Le Marchant Bishop, Manchester, England, 29th April, 1892; 5 years.

Claim.—1st. The use of the specially formed channel section appliance *M*, arranged to intercept the air currents passing laterally between a door and door frame or joint, and conducting the same in the manner, and for the purpose specified. 2nd. The use of the specially formed channel section appliance *M*, arranged to intercept the air currents passing laterally between the window sash and frame or casement, and conducting the same in the manner, and for the purpose specified.

No. 38,824. Hose Clamp.

(Collier pour tuyaux en caoutchouc.)

Frank Tilbert Weidaw, Syracuse, New York, U.S.A., 29th April, 1892; 5 years.

Claim.—1st. The combination, with the band, and means for contracting it, of the helical spring inserted within the band, and having its free end secured to the band. 2nd. The combination, with the band made in sections and means for contracting it, of the helical spring inserted within the band, and having its free ends secured to the band.

No. 38,825. Band Saw Mill. (Sciérie à scies sans fins.)

Isaac Newton Kendall, New Westminster, British Columbia, Canada, 29th April, 1892; 5 years.

Claim.—In a band saw mill, the combination, with the upper saw shaft, of the vertically adjustable supports for the same, the adjusting screws, the interiorly threaded worm wheels engaging the said adjusting screws, a shaft provided with hand wheels and with worms engaging the said worm wheels, and an independent adjusting screw extending vertically through the adjusting screw supporting the

rear end of said shaft, and having a hand wheel at its lower end, substantially as set forth. 2nd. The combination, in a band saw mill, with the upper saw shaft, of the tubular supporting devices; the supports mounted to slide vertically therein and having diaphragms at their lower ends, the wrought iron followers and interposed elastic cushions placed against the under sides of said diaphragms; and the adjusting screws arranged to bear against the said followers; as set forth. 3rd. In a band saw mill, the combination, with the frame, of a vertical supporting column arranged outside the lower saw carrying wheel, and having a bearing for the shaft of the latter, and having a vertically movable foot piece, which may be raised to permit the removal of the saw, substantially as set forth. 4th. In a band saw mill, the combination, with the frame, of a vertical supporting column arranged outside the lower saw carrying wheel, and having a vertically movable foot piece, which may be raised to permit the removal of the saw, substantially as set forth. 5th. In a band saw mill, the combination, with the frame, of the vertical supporting column arranged outside the lower saw carrying wheel, and having a vertically movable foot piece provided with a guard ring of lead or analogous material, substantially as set forth. 6th. In a band saw mill, the combination, with the frame, of the vertical supporting column arranged outside the lower saw carrying wheel and having a vertically adjustable foot piece, which may be raised to permit the removal of the saw, and a supporting socket for the said foot piece, substantially as set forth. 7th. In a band saw mill, the combination, with the frame, of the tubular supporting column arranged outside and adjacent to the lower saw carrying wheel, and having a diaphragm at its lower end, an adjusting screw swiveled in said diaphragm, a tubular extension piece screw threaded interiorly to engage said adjusting screw, and means for operating the latter, substantially as set forth. 8th. In a band saw mill, the combination, with the vertically adjustable saw guide having a rack bar, of means for adjusting the said saw guide, comprising a horizontal shaft provided at one end with a pinion to engage said rack bar and at the other end with a worm wheel, a vertical shaft having a worm at its upper end meshing with said worm wheel, a laterally movable slide having a box or bearing for the lower end of said vertical shaft, a horizontal friction disk at the extreme lower end of said vertical shaft, a horizontal shaft driven from the lower saw shaft and having a pair of friction wheels located on opposite sides of the friction disk at the lower end of the vertical shaft, and a vertical hand lever connected pivotally with the laterally movable slide bar, and weighted at its lower end to hold the friction disk at the lower end of the vertical shaft normally out of contact with the friction wheels upon the horizontal shaft, substantially as set forth. 9th. In a band saw mill, the combination of a vertical tubular support having a laterally extending tubular arm, a guide sleeve at the outer end of the latter, the vertically movable tube mounted in said guide sleeve and forming a receptacle for lubricating material, mechanism for adjusting the said tube in either upward or downward direction, and the saw guide at the lower end of said tube, having perforated faces communicating with the interior of said tube or receptacle, substantially as set forth. 10th. The combination, with the vertically slotted guide sleeve having flanges adjacent to the slot therein, of the vertically movable tube carrying the saw guide, the feather upon the latter engaging a groove in the slotted side of the guide sleeve, the clamping bolts connecting the flanges of the said tube, the rack bar upon the vertically movable tube, and adjusting mechanism for the latter, substantially as set forth. 11th. In a band saw mill, the combination, with a vertically adjustable tube to form a receptacle for lubricating material, of the saw guide at the lower end of said tube and the valved channel in said saw guide, substantially as and for the purpose set forth. 12th. In a band saw mill, a vertically adjustable saw guide mounted upon a tubular receptacle and having a valved channel connecting the escape openings in said saw guide with the said receptacle, substantially as and for the purpose set forth.

No. 38,826. Oil Can and Filler.

(Alimentateur pour bidon à huile.)

Edwin Webster Luce, Meadville, Pennsylvania, U.S.A., 30th April, 1892; 5 years.

Claim.—1st. The combination, with the oil can, the tube leading from near the bottom thereof, and the oil delivery spout, of the block *K* secured to the top of the can in which the tube terminates, and the block *M* in which the delivery spout terminates, said blocks being pivotally connected, whereby the oil passage may be opened or closed at will, for the purpose set forth. 2nd. The combination of the oil can, the pump barrel, the air tube leading from the pump barrel, the block *K* in which said tube terminates, secured to the top of the can, the block *M* pivoted to the block *K*, and the air supply spout terminating in the pivoted block *N*, said blocks having passages communicating between the tube and spout, which register and are open only when the spout is in its lower or operative position, as set forth. 3rd. In combination, the oil can, the pump barrel, the oil tube leading from inside the can, the air tube leading from the pump barrel, the block *K*, in which said tubes terminate, secured to the top of the can, the block *M* pivoted to the block *K*, and the oil delivery and air supply spouts secured to said block *M*, the blocks *K* and *M*, having passages which afford communication between the spouts and the can only when the spouts are in operative position, as set forth. 4th. In combination, a block rigidly fixed and form-

ing the termination of tubes, a second block forming the termination of the two spouts, and a pivot connecting the second block to the first, the two blocks having openings on their contiguous faces, affording free communication between each tube and its corresponding spout when the tubes are in their active or delivery position, and such communication being entirely cut off when the spouts are raised out of such active position, as set forth. 5th. In combination with the can, the perforated bar secured on the side thereof, and the lamp bracket having the projecting bent wires *i*, loop *k*, and inclined wire *l*, as and for the purpose set forth. 6th. In combination with the can, the relief valve, consisting of a screw cap having escape openings, a pin projecting through a central opening in the screw cap, and a corresponding opening in the top of the can, a disk secured to said pin inside the cap, and a spring around the pin serving to normally press the disk against the cap and close the escape openings, as set forth. 7th. The piston head consisting of the hooked bolt *t*, nut *t*¹, top and bottom cupped disks *t*², *t*³, leather or felt washers *t*⁴, *t*⁵ and central cupped washer *t*⁶, all the washers and disks being perforated to receive the bolt and held in position by the bolt and nut, as set forth. 8th. In combination, the sides of the can, the cupped bottom inserted and secured therein, allowing the sides to project below the said bottom, and the hoop passed around the sides and rigidly secured thereto and serving to hold the bottom and sides together, and with the projecting lower part of the sides to form a foot for the can, as set forth. 9th. A can for liquids having a pump, a pipe for discharging the liquid into a suitable vessel, and a pipe in addition thereto communicating between the receiving vessel and the pump, substantially as set forth. 10th. In combination with the can, the self-closing escape valve and devices consisting of the extended pump lever for opening the escape valve. 11th. A can provided with the hinged pipes leading from it to the receiving vessel, in combination with the pump for forcing the air into it, substantially as described.

No. 38,827. Water Tap Filter. (*Filtre pour robinet d'eau.*)

James Mortimer, Victoria, British Columbia, Canada, 30th April, 1892; 5 years.

Claim.—1st. An improved reversible filter for taps, consisting of the fluted casing A, and provided with the internal perforated projections *b* and *d*, substantially as and for the purpose herein described and shown. 2nd. An improved reversible filter for taps, having the removable screw mouth *d*, substantially as and for the purpose herein set forth and shown. 3rd. An improved reversible filter for taps, substantially as and for the purpose herein set forth and shown upon the accompanying drawing.

No. 38,828. Car Coupler. (*Attelage de chars.*)

Samuel Emerson Harris, Cooksville, Ontario, Canada, 30th April 1892; 5 years.

Claim.—1st. In a car coupling, the combination of a draw head B, having a mouth *b*, throat *b*¹, and bearing *d*, the link C, the pin D, passing through the bearing *d*, and perforations in the mouth *b*, block E, adapted to slide in said throat, block E¹, held in the rear of said throat by a pin *e*¹, spring E¹¹, secured to said blocks and operating the block E, the lever F, pivoted to the car end and having one end connected to the pin D, the chain G, secured to the other lever end and passing under a pulley to the car roof, and the pulley G¹, journaled to the car end under which said chain passes, substantially as set forth. 2nd. In a car coupling, the combination of a draw head B, having a mouth *b*, throat *b*¹, and bearing *d*, the link C, pin D, passing through the bearing *d*, and perforations in the mouth *b*, block E adapted to slide in said throat, block E¹ held in the rear of said throat by a pin *e*¹, and spring E¹¹, secured to said blocks and operating the block E, substantially as set forth. 3rd. In a car coupling, the combination, with the coupling pin D, of

the lever F, pivoted to the car end and connected to said link, the chain G, secured to the other end of said lever, and passing under a pulley to the top of the car, the pulley G¹, journaled to the car end, and under which said chain passes, the guides *g*, on the car end for said chain, the ring *g*¹, on said chain, and hook *g*¹¹, on the car end for securing said chain, and the hook (G¹¹), on the car end for securing said lever, substantially as set forth.

No. 38,829. Water Motor. (*Moteur à eau.*)

James Grant Kerr, Niagara Falls, Ontario, Canada, 30th April, 1892; 5 years.

Claim.—A water motor wheel, having buckets placed alternately right and left on the periphery of said wheel, substantially as described. A water motor case, having corrugations Q, as described, and for the purpose set forth. In a water motor, the combination of a wheel having buckets O and P, placed alternately right and left on its periphery, a casing made in halves and having corrugations Q, on each half thereof, substantially as and for the purpose set forth.

No. 38,830. Shawl Strap. (*Courroie pour chôte.*)

Earl Glen Wheeler, Amsterdam, New York, U.S.A., 30th April, 1892; 5 years.

Claim.—1st. A shawl strap, comprising a frame composed of longitudinally adjustable sections, a handle connected thereto, and chains to encircle the package, connected to such sections, in combination as set forth. 2nd. A shawl strap, comprising a frame, composed of sections connected together by heads secured to one section, and adapted to slide upon the other section, a handle flexibly connected to said heads, and chains connected to cross bars upon said sections, respectively, and adapted to lock into jaws upon said cross bars, in combination as set forth. 3rd. The combination, with the frame and the handle connected thereto, of the cross bars upon the frame provided with jaws, sloping and slotted longitudinally, and each provided with a stop shoulder within the jaw, and chains connected to said bars and adapted to be detachably locked in said jaws.

No. 38,831. Automatic Reservoir Pen Holder.

(*Porte-plume à réservoir automatique.*)

John Oliphant, Toledo, Ohio, U. S. A., 30th April, 1892; 5 years.

Claim.—1st. The combination, with the holder provided with a cavity, and a removable portion at the forward end thereof, of the tube arranged beneath the removable portion, the compressible bulb within the cavity of the holder, and sleeved upon the inner end of the tube, and the pivoted pressure-lever pivoted to the holder, and arranged in line with the bulb to compress the same, substantially as shown and described. 2nd. The combination, with the holder, of the tube, the compressible bulb, and the flexible tongue arranged to bear upon the pen near its point, substantially as and for the purpose specified. 3rd. The combination, with the holder and the compressible bulb and pivoted pressure-lever, of the tube held within the holder, and having its outer end reduced and adapted to bear upon the pen near its point, substantially as and for the purpose described. 4th. In a reservoir pen-holder, the combination, with the holder having a removable portion and formed with interior shoulders *b*, *b*¹, of the tube C, held within the holder, and the compressible bulb within the holder, with its outer end embracing the inner end of the tube, and held from movement outwardly by said shoulders, substantially as shown and described. 5th. In a reservoir pen-holder, the combination of the body A, with the end piece I, attached to a compressible bulb, the pressure bar J having notched ends, and the locking ring *f*, substantially as herein shown and described.

CERTIFICATES OF THE PAYMENT OF FEES FOR FURTHER TERMS HAVE BEEN ATTACHED TO THE FOLLOWING PATENTS.

2539. JOHN WILLIAMS, 2nd five years of No. 26,409, from the 6th day of April, 1892. Improvements in Rotary Ventilators, 2nd April, 1892.
2540. CASPER KISTLER, 2nd five years of No. 26,373, from the 4th day of April, 1892. Improvements in Watch Case Pendants, 4th April, 1892.
2541. ZEPHANIAH BREED, 2nd five years of No. 26,522, from the 25th day of April, 1892. Improvements in Cultivators or Weeders, 5th April, 1892.
2542. JOHN ALBERT SYMMES, 2nd five years of No. 26,400, from the 5th day of April, 1892. Improvements in Hay and Grain Cock Weather Shields, 5th April, 1892.
2543. WILLIAM BLIZARD WILLIAMSON and GEORGE HENRY WILLIAMSON, 2nd five years of No. 27,148, from the 11th day of July, 1892. Improvements on Metallic Boxes or Cases for Storing Articles of Food, Tobacco, Snuff and Paint, and for like purposes, 5th April, 1892.
2544. THOMAS DRAKE, 2nd five years of No. 27,201, from the 19th day of July, 1892. Improvements in the Method of Manufacturing Gas from Benzoline or other similar suitable Oil, and in apparatus employed therein, 5th April, 1892.
2545. JOHN WOODWARD, 2nd five years of No. 26,515, from the 23rd day of April, 1892. Improvements in Pumps, 6th April, 1892.
2546. JOHN PORCIUS GAGE, 2nd five years of No. 26,565, from the 29th day of April, 1892. Improvements in Bench Planes, 6th April, 1892.
2547. JENNIE M. PULVER, 2nd five years of No. 26,717, from the 14th day of May, 1892. Improvements in Packing for Piston Rods, 7th April, 1892.
2548. JOSEPH DALE, 2nd five years of No. 26,752, from the 20th day of May, 1892. Improvements in Land Rollers, 9th April, 1892.
2549. CHARLES RUEA NELSON, 2nd five years of No. 26,420, from the 9th day of April, 1892. Improvements in Bead Fasteners for Window Frames, 9th April, 1892.
2550. ELIZABETH ROSS ADDISON, 2nd five years of No. 26,450, from the 15th day of April, 1892. Improvements in Clothes Mangles, 11th April, 1892.
2551. CONSOLIDATED CAR HEATING COMPANY (assignee), 2nd five years of No. 26,601, from the 4th day of May, 1892. Improvements in Hose Coupling, 11th April, 1892.
2552. CONSOLIDATED CAR HEATING COMPANY (assignee), 2nd five years of No. 26,696, from the 11th day of May, 1892. Improvements in Car Heating Apparatus, 11th April, 1892.
2553. CONSOLIDATED CAR HEATING COMPANY (assignee), 2nd five years of No. 26,697, from the 11th day of May, 1892. Improvements in Car Heating Apparatus, 11th April, 1892.
2554. ABNER MULHOLLAND ROSEBRUGH, 2nd five years of No. 26,438, from the 12th day of April, 1892. Improvements in Combined Telegraphic and Telephonic Circuits, 11th April, 1892.
2555. QUINBY SILAS BACKUS, 2nd five years of No. 26,537, from the 26th day of April, 1892. Improvements in a combined Heating and Cooking Device, 12th April, 1892.
2556. QUINBY SILAS BACKUS, 2nd five years of No. 26,545, from the 26th day of April, 1892. Improvements in Steam Heaters (radiators), 12th April, 1892.
2557. ALEXANDER HERON, 2nd five years of No. 26,539, from the 26th day of April, 1892. Improvements on Car Couplers, 13th April, 1892.
2558. WALTER LOOMIS STRONG, 2nd five years of No. 29,595, from the 31st day of July, 1893. Improvements in Propeller Wheels, 13th April, 1892.
2559. WILLIAM S. McLEOD, 2nd five years of No. 26,543, from the 26th day of April, 1892. Improvements in Pumps, 14th April, 1892.
2560. CHESTER W. M. SMITH, 2nd five years of No. 26,559, from the 29th day of April, 1892. Improvements in Railway Passenger Cars, 16th April, 1892.
2561. THOMAS NOPPER, 2nd five years of No. 26,497, from the 21st day of April, 1892. Improved Automatic Lubricator, 18th April, 1892.
2562. H. CORDENIS SMITH & CO. and JACOB AMOS, 2nd five years of No. 27,014, from the 22nd day of June, 1892. Improvements in Machines for Pearling Barley, Wheat, &c., 18th April, 1892.
2563. ELIZA HARVEY METCALF, 2nd five years of No. 26,549, from the 27th day of April, 1892. Improvements on Burial Cases or Casket Holders, 20th April, 1892.
2564. THOMSON INTERNATIONAL ELECTRIC WELDING CO. (assignee), 2nd five years of No. 27,468, from the 18th day of August, 1892. Improvements in the Art of Electric Welding, 21st April, 1892.
2565. THOMSON INTERNATIONAL ELECTRIC WELDING CO. (assignee), 2nd five years of No. 27,469, from the 18th day of August, 1892. Method of and Apparatus for Electric Welding, 21st April, 1892.
2566. THOMSON INTERNATIONAL ELECTRIC WELDING CO. (assignee), 2nd five years of No. 27,470, from the 18th day of August, 1892. Apparatus for Electric Welding, 21st April, 1892.
2567. ANDREW ROGERS MOORE, 3rd five years of No. 14,704, from the 29th day of April, 1892. Improvements in Field Rollers, 23rd April, 1892.
2568. WILLIAM EDWARD BRINE, 2nd five years of No. 27,076, from the 28th day of June, 1892. Composition of matter to be used as a Preventative against and the Cure of Bites of Mosquitoes, Black Flies and other Insects, 23rd April, 1892.
2569. CHARLES WILLIAM CHISHOLM, 2nd five years of No. 26,928, from the 11th day of June, 1892. Improvements in Car Couplings, 25th April, 1892.
2570. JEAN-BAPTISTE TRUDEL, 2nd five years of No. 26,624, from the 6th day of May, 1892. Composition of matter for the Cure of Rheumatism, 25th April, 1892.
2571. WILLIAM SANSON, 2nd five years of No. 26,786, from the 30th day of May, 1892. Improvements in Oil Well Pump Valves, 27th April, 1892.
2572. WILLIAM HUNTER, 3rd five years of No. 14,778, from the 15th day of May, 1892. Improvements in Car Couplers, 23rd April, 1892.
2573. MICHAEL HURLEY, 3rd five years of No. 14,702, from the 29th day of April, 1892. Apparatus for Heating Railroad Cars, 29th April, 1892.
2574. NARCISSE LEGER, 2nd five years of No. 26,573, from the 2nd day of May, 1892. Improvements in Washing Machines, 30th April, 1892.

TRADE MARKS

Registered during the month of April, 1892, at the Department of Agriculture—
Copyright and Trade Mark Branch.

4279. ERNEST B. SMITH, of London, Ont. Sign, (New York Store) to distinguish Registrant's place of business for Groceries, Wines and Liquors, 1st April, 1892.
4280. THE D. F. JONES MANUFACTURING CO., L'D., of Gananoque, Ont. Shovels and Spades, 1st April, 1892.
4281. ROBERT D. HUME, of Gold Beach, Curry Co., Oregon, U. S. A. Canned Fish, 5th April, 1892.
4282. THE CANADA PAINT CO., L'D., of Montreal, Que. Paint, 5th April, 1892.
4283. THE CANADA PAINT CO., L'D., of Montreal, Que. Varnishes, 5th April, 1892.
4284. THE CANADA PAINT CO., L'D., of Montreal, Que. White Lead and Paints, 5th April, 1892.
4285. THE CANADA PAINT CO., L'D., of Montreal, Que. Paint, 5th April, 1892.
4286. HORACE PERCY WILKINS, of Toronto, Ont. Pills, 7th April, 1892.
4287. MICHAEL DWYER, of Halifax, N. S., trading as JOHN TOBIN & CO. Tea, 9th April, 1892.
4288. MICHAEL DWYER, of Halifax, N. S., trading as JOHN TOBIN & CO. Tea, 9th April, 1892.
4289. MICHAEL DWYER, of Halifax, N. S., trading as JOHN TOBIN & CO. Tea, 9th April, 1892.
4290. ALEXANDER ROBERTSON & HENRY BROOKS, of Mount Forest, Ont. Mineral Waters, 11th April, 1892.
4291. D. RITCHIE & CO., of Montreal, Que. Cigarettes, Snuff and Tobaccos, 12th April, 1892.
4292. JOHN McEWAN, of 5 Billiter Avenue, London, England. Tea, 19th April, 1892.
4293. WILLIAM HENRY, of Montreal, Que. All kinds of Laundry Work, 19th April, 1892.
4294. JAMES FERGUSON & EDWIN HOLNESS, trading as FERGUSON & CO., of 52-53 Great Tower Street, London, England. General Trade Mark, 19th April, 1892.
4295. JAMES FERGUSON & EDWIN HOLNESS, trading as FERGUSON & CO., of 52-53 Great Tower Street, London, England. General Trade Mark, 19th April, 1892.
4296. W. H. DONOVAN, of Halifax, N. S. Ginger Ale, Soda Water, &c., 19th April, 1892.
4297. T. H. TAYLOR & CO., of Chatham, Ont. Flour, 20th April, 1892.
4298. THE ICHTHYOL GESELLSCHAFT CORDES, HERMANNI & CO., of Hamburg, Germany. General Trade Mark, 21st April, 1892.
4299. C. ALFRED CHOUILLOU, de Montréal, Qué. Cognacs fine Champagne, 21 Avril, 1892.
4300. THE J. G. BRILL CO., of Philadelphia, Pennsylvania, U. S. A. Motor Trucks for Street Cars and the like, 22nd April, 1892.
4301. THE ACADIA POWDER CO., L'D., of Halifax, N. S. A Flameless Explosive, 22nd April, 1892.
4302. GUMERSINDO GARCIA CUERVO, of Santiago de las Vegas, Island of Cuba. Cigars, 22nd April, 1892.
4303. THE WATERLOO MANUFACTURING CO., L'D., of Waterloo, Ont. Separators, 23rd April, 1892.

4304. THE CANADA PAINT CO., L'D., of Montreal, Que. Paints and Colours, 26 April, 1892.
4305. BRENER BROS., of London, Ont. Cigars, Cigarettes and Tobaccos, 28th April, 1892.
4306. MATILDA SPRING, of the Township of North Dorchester, County of Middlesex, Ont. A Patent Medicine, 28th April, 1892.
4307. JAMES PENDER & CO., L'D., of St. John, N. B. Wire Nails, 28th April, 1892.
4308. THOMAS DIPPY MILLAR, of Ingersoll, Ont. Cheese, 29th April, 1892.
4309. AUGUSTUS SCHOENHEIT, of San José, State of California, U. S. A., 29th April, 1892.
4310.)
4311.) THE CANADA PAINT CO., L'D., of Montreal, Que. White Lead, Paints,
4312.) Colours and Varnishes, 29th April, 1892.
4313.)
4314.)

COPYRIGHTS

Entered during the month of April, 1892, at the Department of Agriculture—

Copyright and Trade Mark Branch.

6388. PRINT as per exhibit. The Wightman Sporting Goods Co., Montreal, Que., 1st April, 1892.
6389. THE MERRY MAIDENS (Connaissez-vous la belle). English version by Alfred P. Graves. French words and music by Francis Thomé. Chappell & Co., London, England, 2nd April, 1892.
6390. DANSE ROMANTIQUE. Jersey or Military Schottische for piano, by F. E. Galbraith. Whaley, Royce & Co., Toronto, Ont., 4th April, 1892.
6391. ATLAS OF THE CITY OF WINDSOR AND VICINITY, by Geo. McPhillips, Windsor, Ont., 4th April, 1892.
6392. NOTES HISTORIQUES SUR LA VIE DE P. E. RADISSON par Louis Arthur Prud'homme, St. Boniface, Man., 4 Avril, 1892.
6393. THE RAILROAD MEN'S TIME BOOK, 1892. Geo. M. Morrison, Toronto Junction, Ont., 5th April, 1892.
6394. PROSPECTUS OF THE YORK COUNTY LOAN AND SAVINGS COMPANY. Edward Jos. Lomnitz, Toronto, Ont., 6th April, 1892.
6395. INSURANCE PLANS OF THE CITY OF LONDON, ONTARIO, CANADA. Charles Edward Goad, Montreal, Que., 6th April, 1892.
6396. THE MONTHLY LAW DIGEST AND REPORTER. Edited by F. Longueville Snow. Vol. 1, No. 1. January, 1892. Amedée Periard, Montreal, Que., 6th April, 1892.
6397. CRADLE SONG. Words by A. Monro Grier. Music by Emma Fraser Blackstock. The Anglo-Canadian Music Publishers' Association, L'd., London, England, 7th April, 1892.
6398. ALMOST PERSUADED. Sacred Song. Words by P. P. Bliss. Music by S. T. Church. The Anglo-Canadian Music Publishers' Association, L'd., London, England, 7th April, 1892.
6399. THE CANADIAN QUEEN MILITARY SCHOTTISCHE, by H. H. Godfrey, Toronto, Ont., 7th April, 1892.
6400. MONTREAL POCKET GUIDE, APRIL, 1892. Alex. Scarlett & Co., Montreal, Que., 7th April, 1892.
6401. INSURANCE PLAN OF THE CITY OF TORONTO, ONTARIO, CANADA. Vol. III. Charles Edward Goad, Montreal, Que., 8th April, 1892.
6402. A-CAN-A-TA (game). Thos. A. M. Moore, Chatham, Ont., 12th April, 1892.
6403. BAS-RELIEF, consisting of two angels holding a cloth on which is represented the face of Jesus Christ crowned with thorns, below which are ordinary representations of the Sacred Hearts of Jesus and Mary, &c. Henri Mederic Leblanc, Montreal, Que., 13th April, 1892.
6404. MY DARLINGS. Polka for the piano, by W. Austin. I. Suckling & Sons, Toronto, Ont., 13th April, 1892.
6405. FORGET-ME-NOT. (Blümlein, vergiss-mein-nicht.) Op. 270. Gavotte for the pianoforte, by Theod. Giese. The Anglo-Canadian Music Publishers' Association, L'd, London, England, 13th April, 1892.
6406. THE CLANG OF THE HAMMER. Song. Words by G. W. Southey. Music by Theo. Bonheur. W. Morley & Co., London, England, 13th April, 1892.
6407. PERPETUAL READY REFERENCE GUIDE TO THE STATUTES OF ONTARIO, viz. : The Revised Statutes of 1887 and all subsequent Amending, Repealing, Cognate and new Acts. Compiled by F. K. Blatch, Ottawa, Ont., 14th April, 1892.
6408. THE HISTORY OF THE YEAR. A review of the events of 1891, all around the world, with special reference to Canadian affairs. Edited by Charles Morrison. Illustrated. Wm. J. Dyas, Toronto, Ont., 16th April, 1892.
6409. BESIDE ME. Song. Words by Clifton Bingham. Music by Tito Mattei. Patey & Wells, London, England, 16th April, 1892.
6410. THERE'S NOT ANOTHER LIKE IT. Song. Words by James Fax. Music by Chas. Bohner. Whaley, Royce & Co., Toronto, Ont., 16th April, 1892.

6411. THE DOMINION CASKET. Vol. 1. No. 1, April 1st, 1892 (journal). The Gazette Printing Co., and Edward Charles Mann, Montreal, Que., 19th April, 1892.
6412. RAPPORTS JUDICIAIRES REVISÉS DE LA PROVINCE DE QUÉBEC, par l'Hon. M. Mathieu. Tome II. Wilfrid John Wilson, Montréal, Qué., 20 Avril, 1892.
6413. AN OUTLINE SYLLABUS OF PRACTICAL LANGUAGE TRAINING IN PUBLIC SCHOOLS, by R. K. Row. The Copp, Clark Co., L'd., Toronto, Ont., 21st April, 1892.
6414. MATTHEW ARNOLD'S ESSAY ON WARDSWORTH. Macmillan & Co., London, England, 21st April, 1892.
6415. SYLVIA. Bon-Ton. By Jos. Monk. The Anglo-Canadian Music Publishers' Association, L'd., London, England, 21st April, 1892.
6416. PUBLIC SCHOOL HISTORY OF ENGLAND, by W. J. Robertson, B.A. The Copp, Clark Co., L'd., Toronto, Ont., 22nd April, 1892.
6417. MARCHE DES POMPIERS. Morceau Militaire pour piano, par Michael Watson. The Anglo-Canadian Music Publishers' Association, L'd., London, England, 22nd April, 1892.
6418. THE UPPER TEN AND THE LOWER FIVE, or THE NOBLEMAN AND THE BEGGAR. A Comic Duet. Words and Music by Arthur Lloyd. The Anglo-Canadian Music Publishers' Association, L'd., London, England, 22nd April, 1892.
6419. ANALYTIC SLATE (geometric chart). Owen Jones Owen, of Blaenaw, Festiniog, County of Merioneth, Wales, Great Britain, 22nd April, 1892.
6420. SOLDIERS OF LIBERTY, or FROM THE GREAT DEEP, by Emily P. Weaver. William Briggs (Book Steward of the Methodist Book and Publishing House), 23rd April, 1892.
6421. REPORTS OF CASES DECIDED IN THE COURT OF APPEAL during parts of the years 1890 and 1891. Reported under the authority of the Law Society of Upper Canada. Vol. XVIII. The Law Society of Upper Canada, Toronto, Ont., 23rd April, 1892.
6422. LES VOIX INTIMES. Par J. B. Caouette, Québec, Qué., 25 Avril, 1892.
6423. PACTE D'UNION ÉTERNELLE ENTRE LA FAMILLE CHRÉTIENNE ET LA SAINTE-FAMILLE (image). A. N. Th. Valiquette, O.M.I., St.-Sauveur de Québec, Qué., 25 Avril, 1892.
6424. PACTE D'UNION ÉTERNELLE ENTRE LA FAMILLE CHRÉTIENNE ET LA SAINTE-FAMILLE TEINTE COLORIÉE (image). A. N. Th. Valiquette, St.-Sauveur de Québec, Qué., 25 Avril, 1892.
6425. CAVANAGH'S PHRENOLOGY (chart). Francis L. Cavanagh, Toronto, Ont., 26th April, 1892.
6426. SPLASH AND DASH. Polka for piano, by Miss C. G. Armstrong. J. L. Orme & Son, Ottawa, Ont., 26th April, 1892.
6427. RECORD OF EXPENSE OF GAS COOKING STOVE (diagram). E. A. Rhys-Roberts, Hamilton, Ontario, 27th April, 1892.
6428. ANITA. Valse Espagnole pour piano, par B. Renhô. Whaley, Royce & Co., Toronto, Ont., 27th April, 1892.
6429. GROSSE ISLE, 1847. (Temporary Copyright.) Narrative which is now being preliminarily published in separate articles in "The Catholic Record," London, Ont. James Manus O'Leary, Ottawa, Ont., 27th April, 1892.
6430. THE MORAL CRUSADER, WILLIAM LLOYD GARRISON. A Biographical Essay founded on "The Story of Garrison's Life told by His Children." By Goldwin Smith, D.C.L. Williamson & Co., Toronto, Ont., 28th April, 1892.
6431. THE OFFERTORY SENTENCES. Music by Edmund Rogers. Chappell & Co., London, England, 28th April, 1892.
6432. THE MIDNIGHT VISION. Sacred Song. Words and Music by Chas. J. Baguley. The Anglo-Canadian Music Publishers' Association, L'd., London, England, 28th April, 1892.
6433. RESTRAINING THE MAD DOG. Illustration contained in "Grip" of April 9th, 1892. Thomas Grainger Wilson, Toronto, Ont., 28th April, 1892.
6434. GOLDEN BELL. Song and Dance by Allie Brown. Whaley, Royce & Co., Toronto, Ont., 29th April, 1892.
6435. THE 42ND BATTALION MARCH. Solo, B Flat Cornet, by A. W. Hughes. Whaley, Royce & Co., Toronto, Ont., 29th April, 1892.
6436. CARMENCITA VALSE par Mabelle Ruthven. The Anglo-Canadian Music Publishers' Association, L'd., London, England, 30th April, 1892.
6437. TO THE WOODS. (Gruss dem Walde.) Song. Words and Music by F. Warner. The Anglo-Canadian Music Publishers' Association, L'd., London, England, 30th April, 1892.

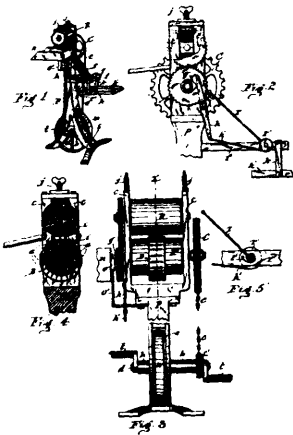
THE CANADIAN PATENT OFFICE RECORD.

ILLUSTRATIONS.

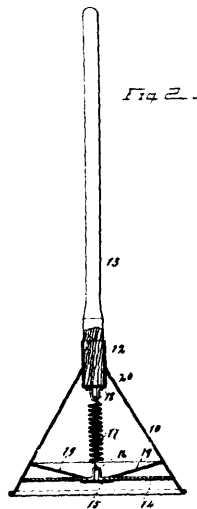
Vol. XX.

APRIL, 1892.

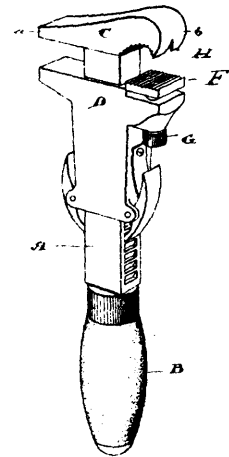
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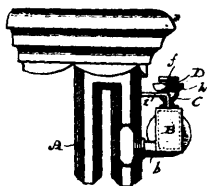
38603 Ellis and Bastable's Machine for Treating Leaf Tobacco.



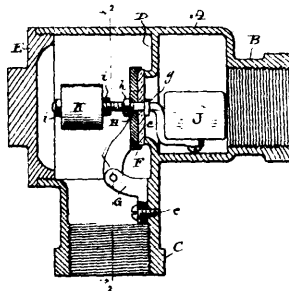
38604 Rousseau's Clothes Washer.



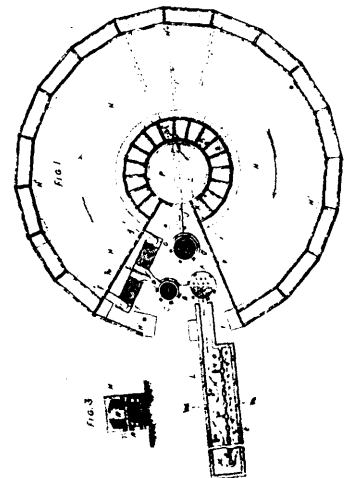
38605 Gundlack's Monkey Wrench.



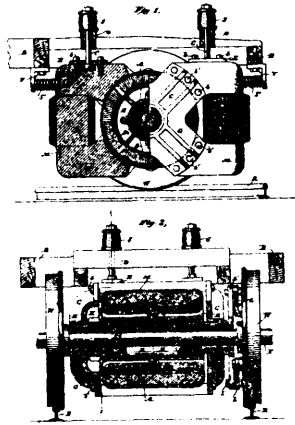
38606 Stager's Steam Radiator Attachment.



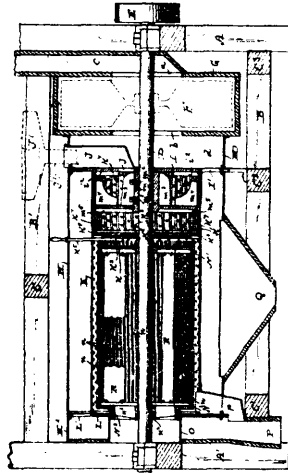
38607 Stager's Return Bends for Steam Radiators.



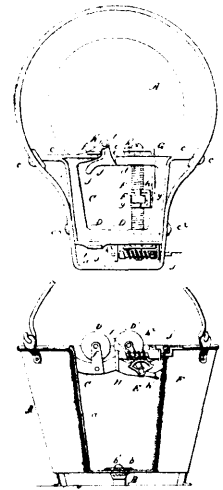
38608 Deplace's Apparatus for the Manufacture of Sulphuric Acid.



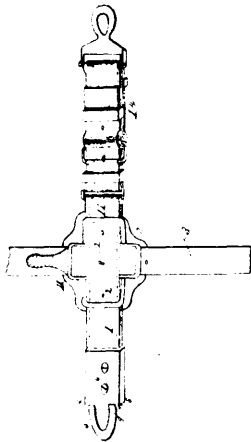
38609 Dobbie's Electric Motor.



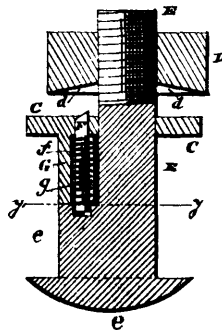
38610 Fisher's Grain Cleaning Machine.



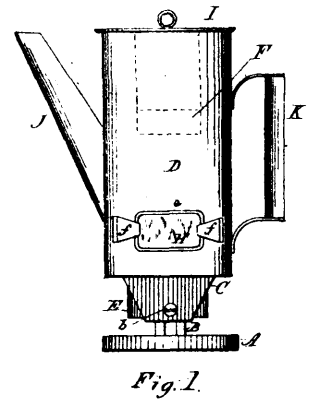
38611 McCausland Mop Wringer.



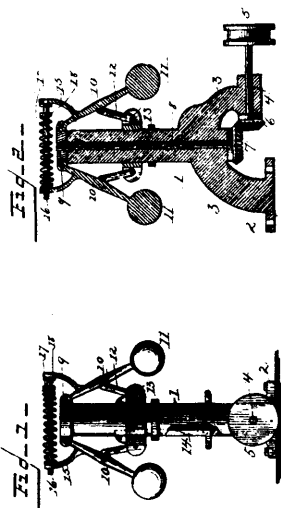
38612 Roberts' Tug for Harness.



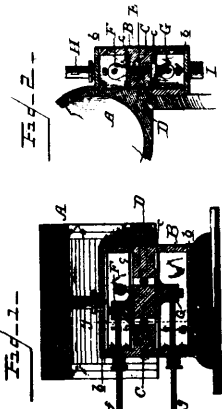
38613 Gram and Bard's Nut Lock.



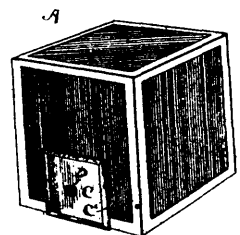
38614 Holden's Kettle.



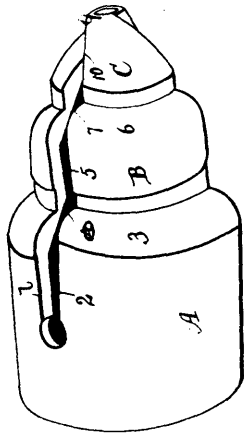
38615 Fussell's Governor for Steam Engines.



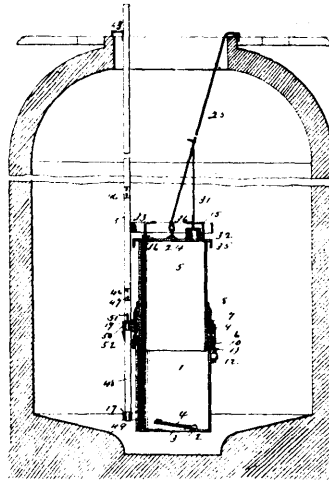
38616 Fussell's Valve and Valve Chest for Steam Engines.



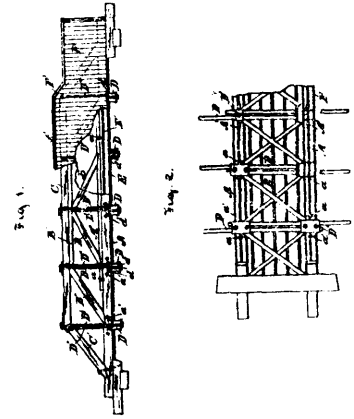
38618 Buford's Tea Chest.



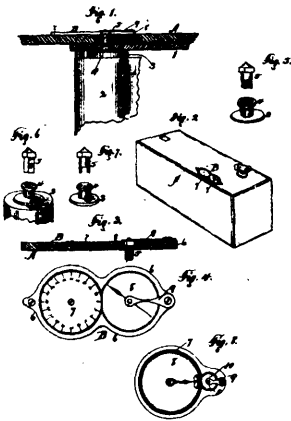
38619 Chesnut's Reamer.



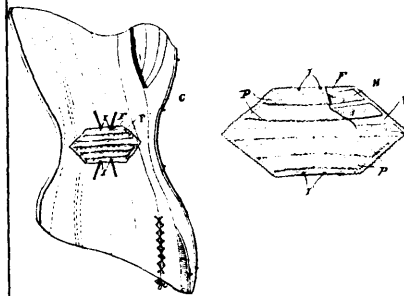
38620 Wilson's Device for Removing Debris from Cisterns.



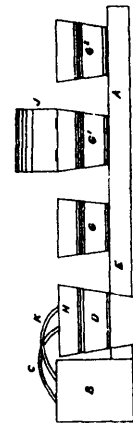
38621 Boyle's Bridge.



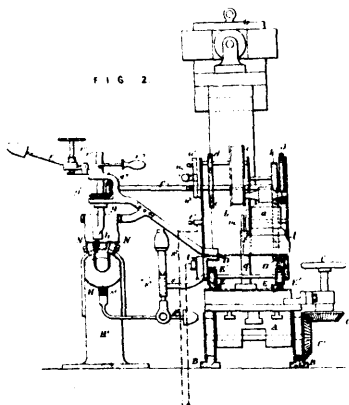
38622 Moore's Automatic Registering Photographic Apparatus.



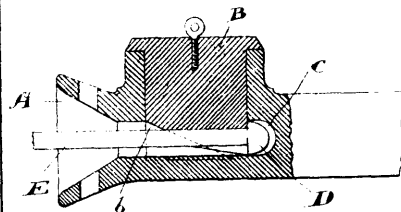
38623 Parramore's Corset.



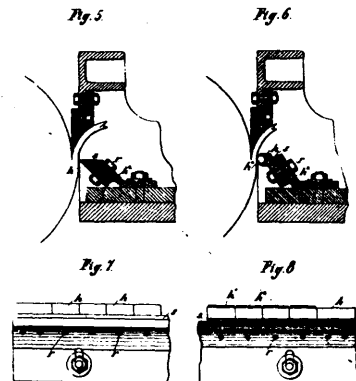
38624 Fraser's Water Trough for Horses, &c.



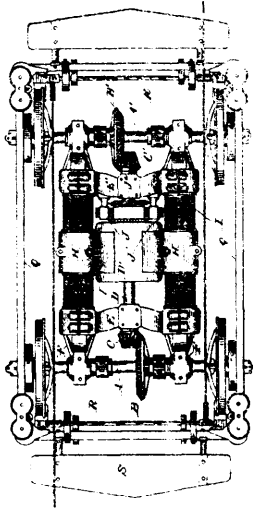
38626 Howard's Heating and Welding by Electricity.



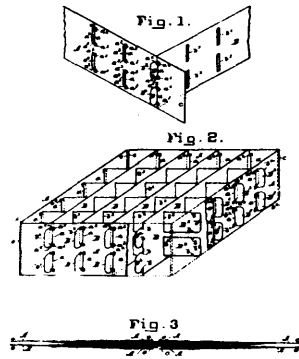
38627 Coleman's Car Coupler.



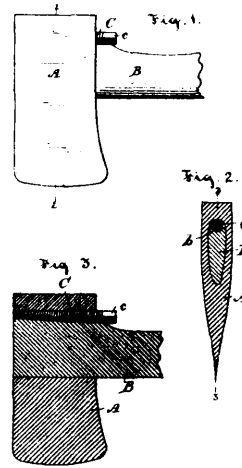
38628 Oncken's Veneer and Board Cutting Machine.



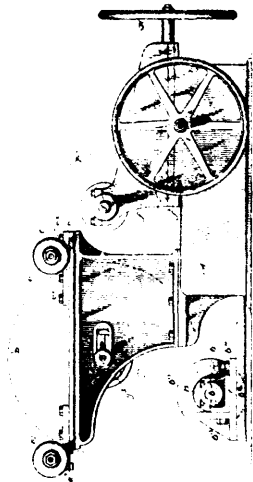
38630 Rae's Motor.



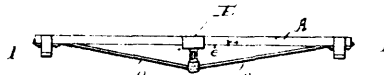
38631 Page's Carrier for Fruit or Eggs.



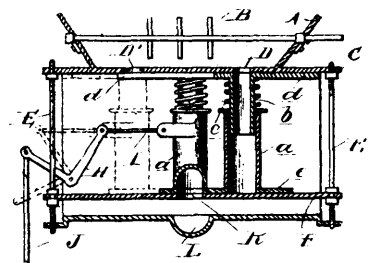
38632 Leduc's Axe.



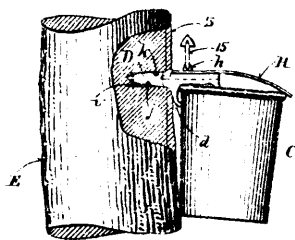
38633 Barr's Machine for Truing Circular Bodies.



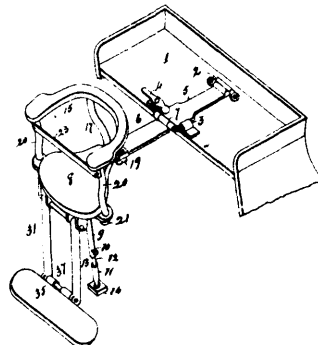
38634 Pungs' Brake Beam.



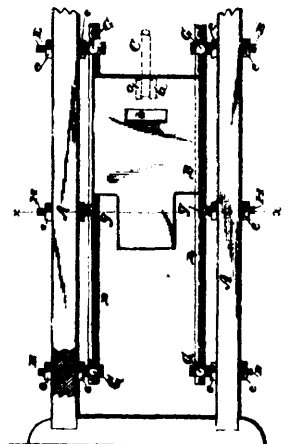
38635 Craney's Bag Filler.



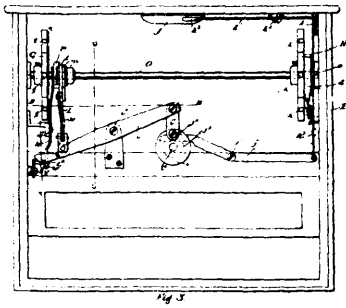
38636 Currier's Sap Spout.



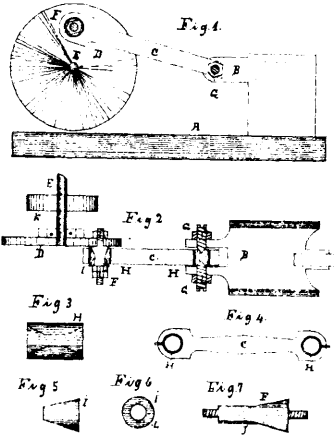
38637 Huber's Seat for Vehicles.



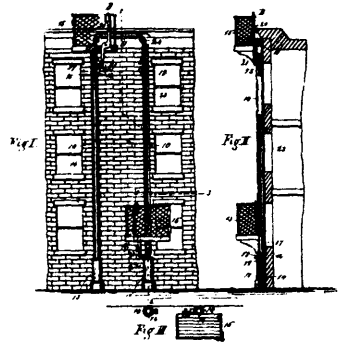
38638 Minor's Excelsior Machine.



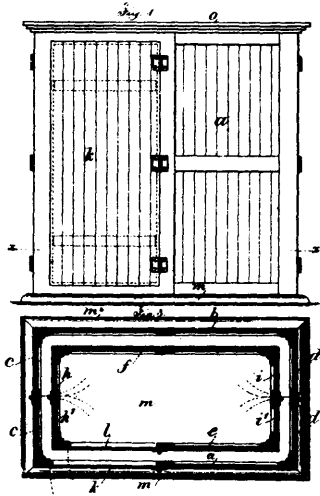
38639 Soly's Station Indicator.



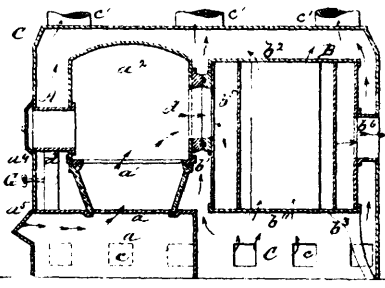
38640 Henderson's Pitman Connections.



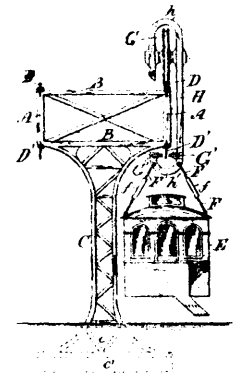
38641 Schwannecke's Fire Escape.



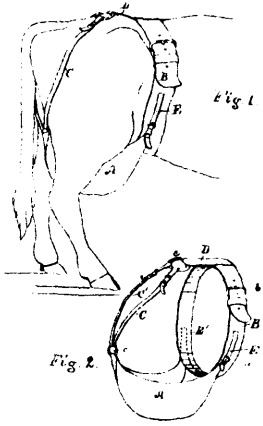
38642 Hodsdon's Portable Wooden Booth.



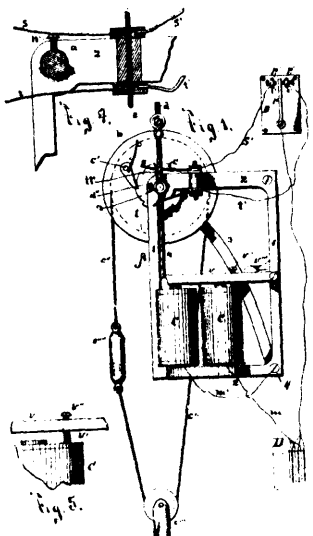
38643 Richardson's Hot Air Furnace.



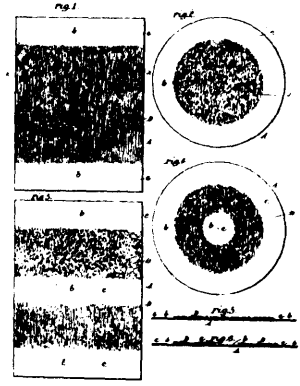
38644 Wicksteed's Elevated Railway.



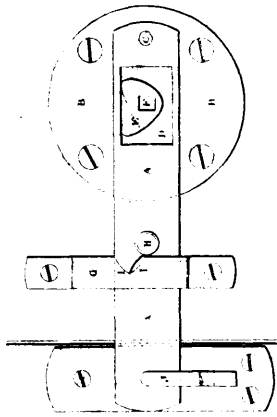
38645 Chase's Cow Bag Protector.



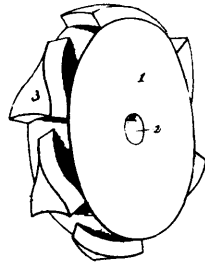
38646 Beers' Draft Register.



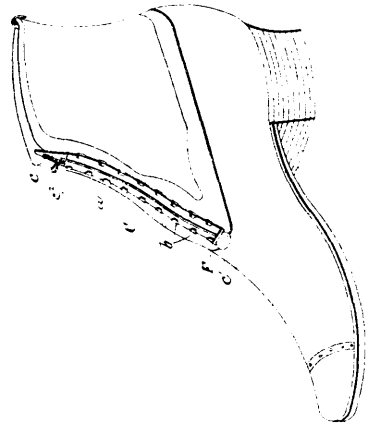
38647 Osgood's Medicinal Plaster.



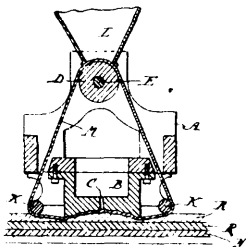
38648 Gagnon and Lefebvre's Door Latch.



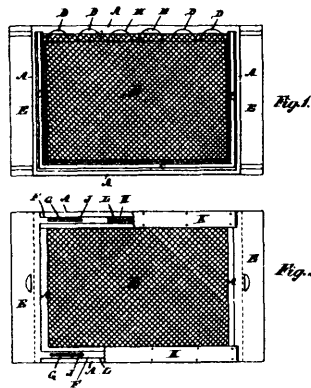
38649 Dunlap's Wheel for the Propulsion of Vessels.



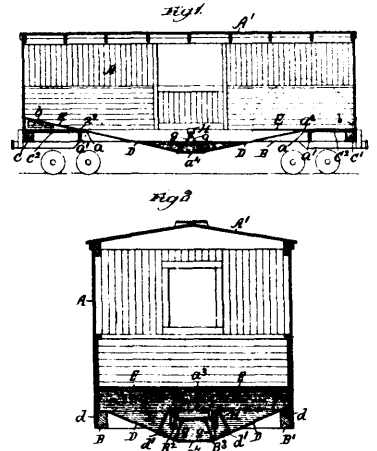
38650 Harvey's Shoe Fastening.



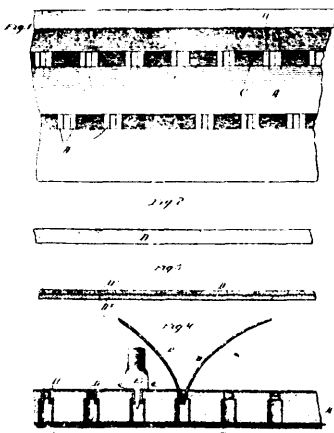
38651 Mitchell's Diaphragm Die for Plastic Molding.



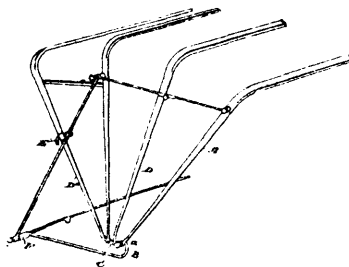
38652 Shirreff's Screen for Doors and Windows.



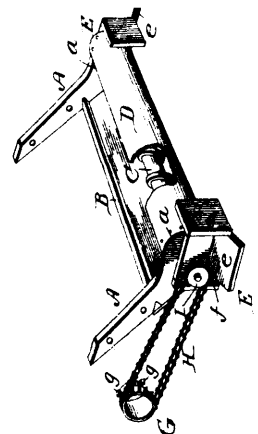
38653 Joy's Method of Constructing Railway Cars.



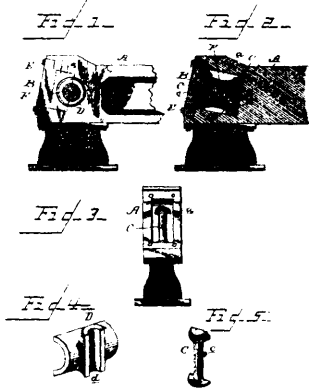
38654 Newell's Method of Bushing Key-board Mortises.



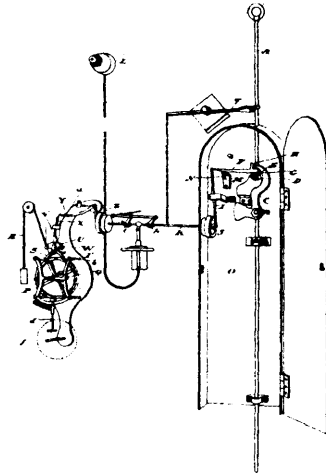
38655 Conboy's Buggy Top.



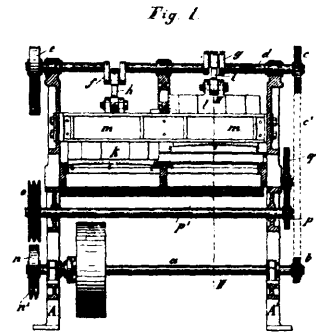
38656 Robinson's Fertilizer Distributor Attachment.



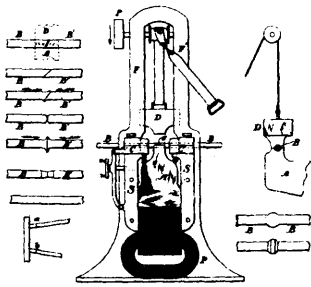
38658 Fussel's Journal Box.



38659 Nesbitt's Stop for Engines.



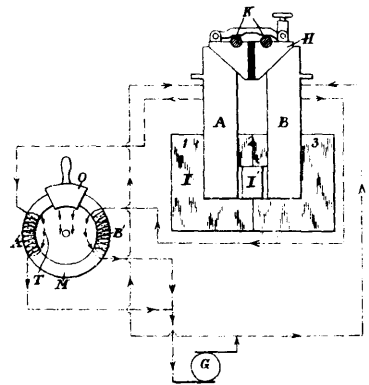
38660 Onoken's Barrel.



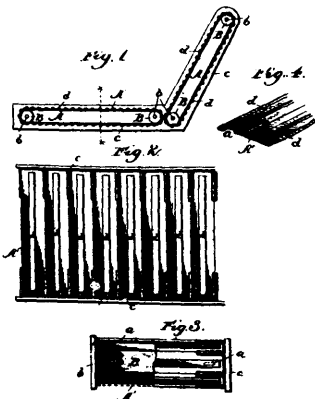
38661 Thomson's Apparatus for Forming and Welding Metals by Electricity.



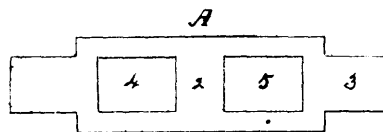
38662 Thomson's Process of Electric Welding.



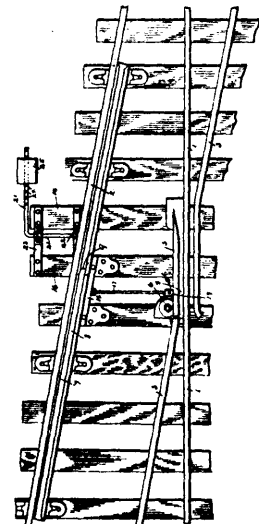
38663 Lemp's Electric Welding Transformer.



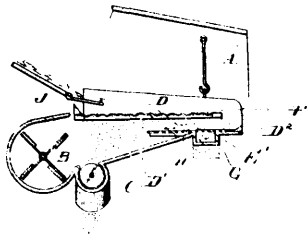
38664 Gaither's Conveyor.



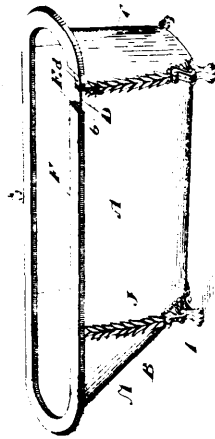
38665 Vinson's Drive Chain.



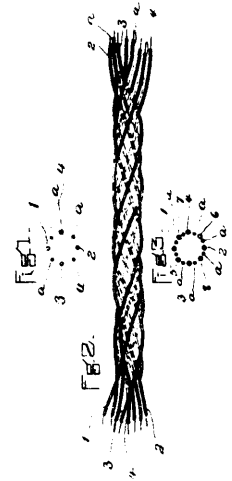
38666 Ratchford's Railway Frog.



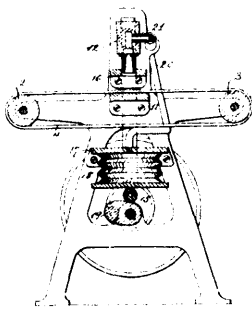
38667 Cook's Straw Separator for Threshing Machines.



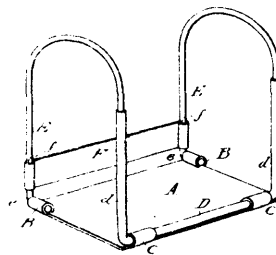
38668 Booth's Bath Tub.



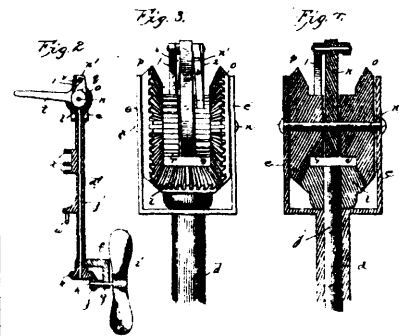
38669 Sawyer's Electric Cable.



38670 Hull's Machine for Shaping Plastic and Similar Material.



38671 Lomb's Letter File.



38672 Williams' Method of Propelling and Steering Boats.

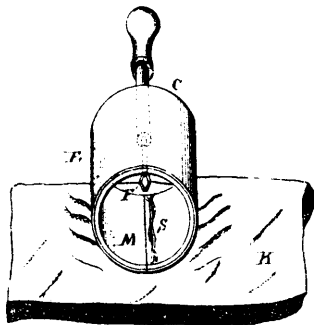
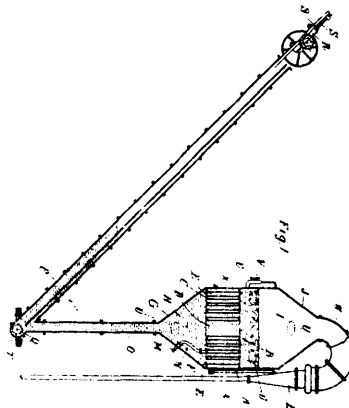
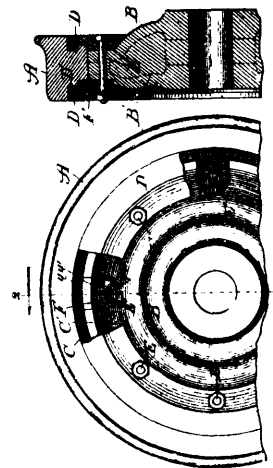


FIG. 2.

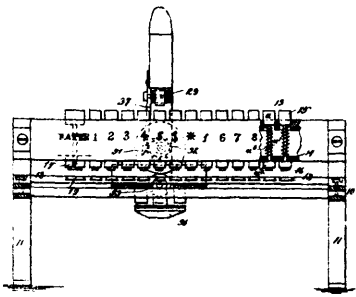
38673 Grant and Velten's Ferrule.



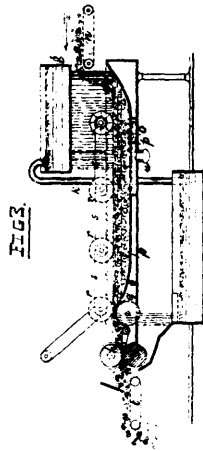
38674 Craney's Salt Grainer.



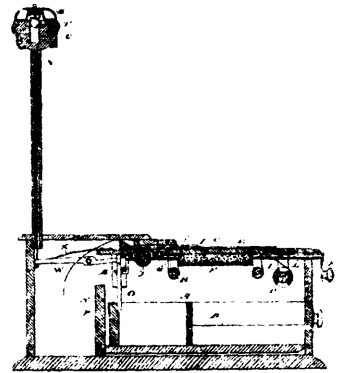
38675 Davies' Car Wheel.



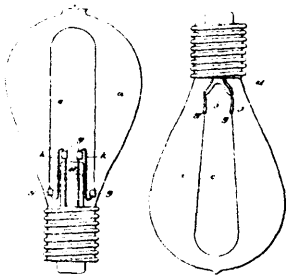
38676 Abbott's Machine for Perforating Dates and Amounts on Documents or Cheques.



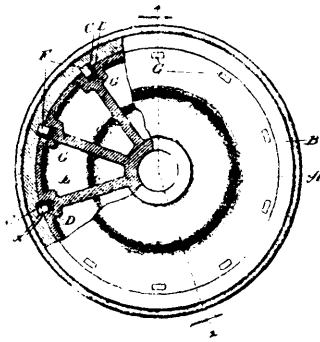
38677 Smith's Apparatus for Treating Wool and other Fibrous Material.



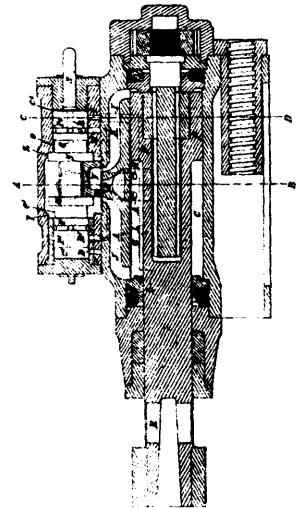
38678 Pasmore's Cash Register.



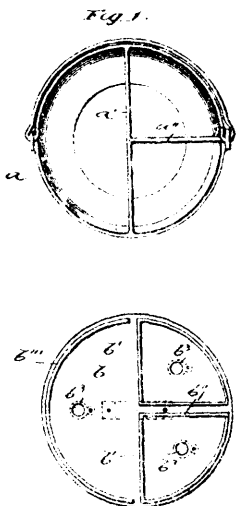
38679 Carey's Method of Applying Carbon Filaments to Electric Lamps.



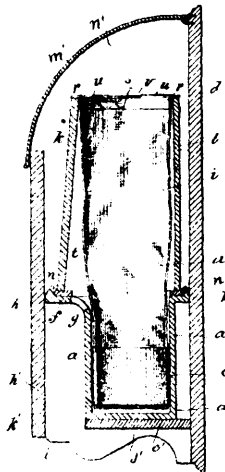
38680 Davies' Car Wheel.



38681 Daw's Valve.



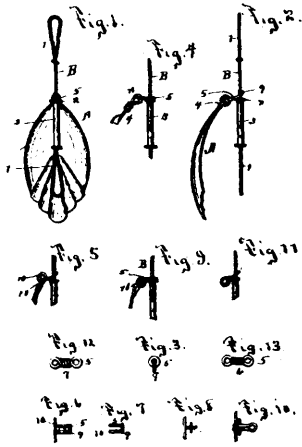
38682 Barry and James' Household Utensil.



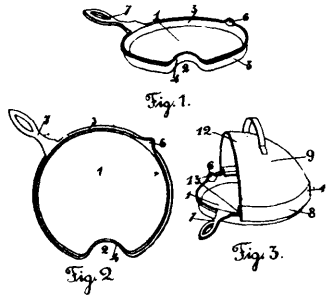
38683 Haven's Disinfecting and Deodorizing Apparatus.



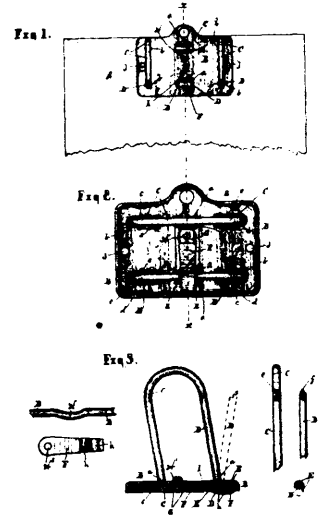
38684 Close's Violin.



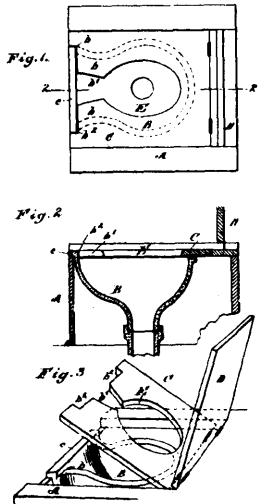
38685 Skinner's Spoon Bait.



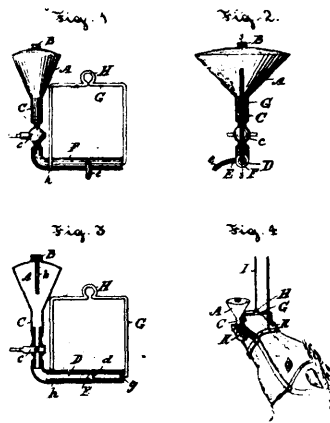
38686 Robertson's Frying Pan.



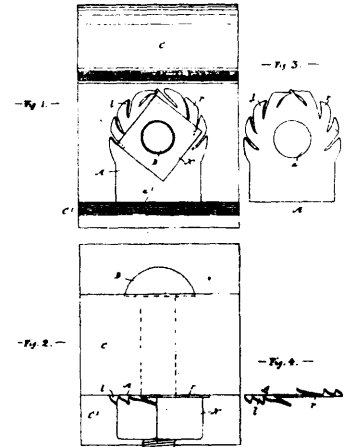
38687 Gottwals' Letter File.



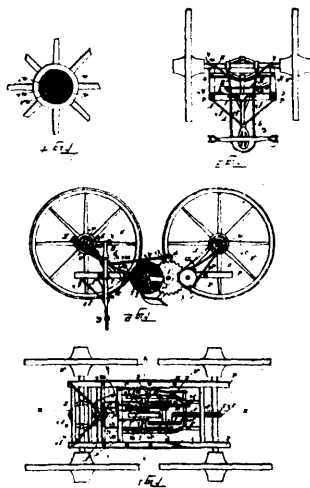
38688 Chadbourne's Closet.



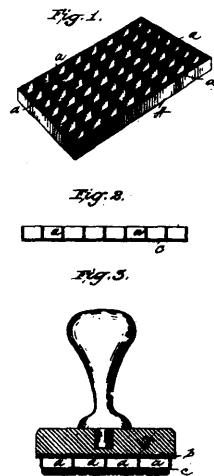
38689 Fisher and Taylor's Drench Horn.



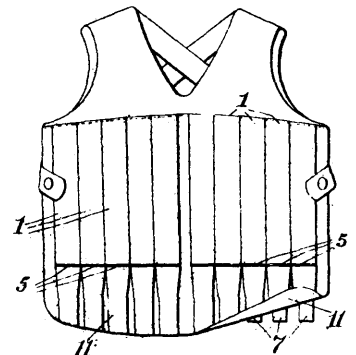
38690 Nichol's Nut Lock.



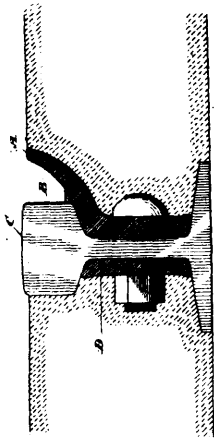
38691 Lybe's Velocipede.



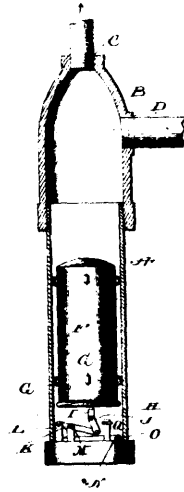
38692 Buck's Stamp.



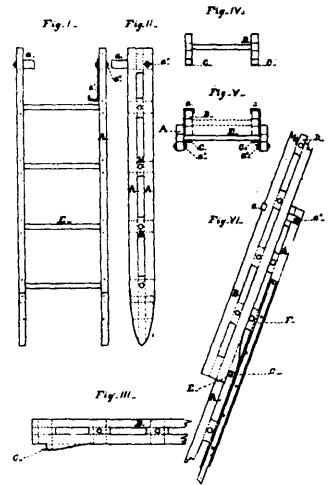
38693 Dean's Holder for Cartridges.



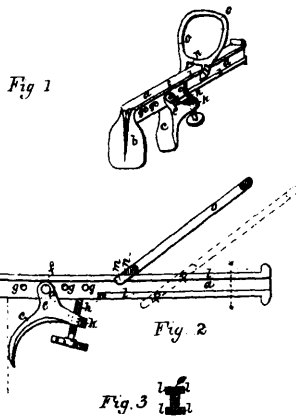
38694 Jenning's Rail for Street Railways.



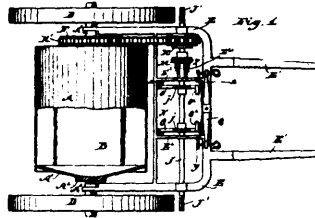
38695 Stock's Apparatus for Separating Oil and Water from Gas.



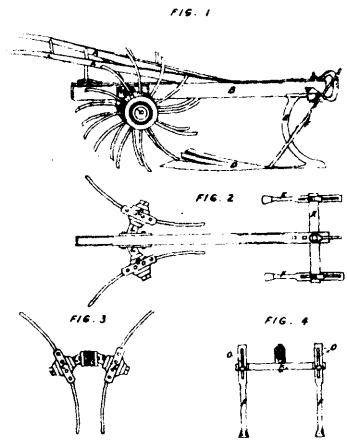
38696 Kew's Extension Ladder.



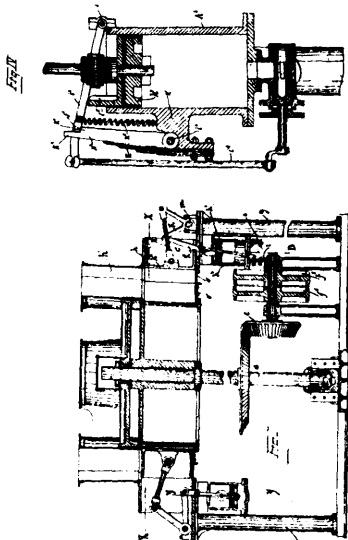
38697 Barnum's Surgical Appliance.



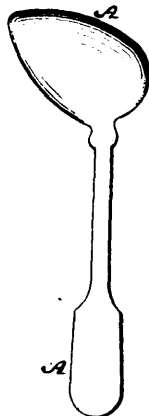
38698 Libbey's Cart.



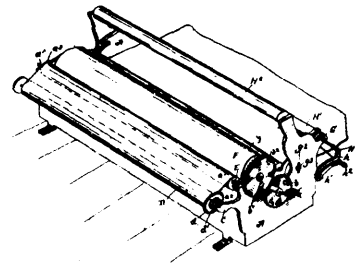
38699 Martin's Machine for Digging Potatoes.



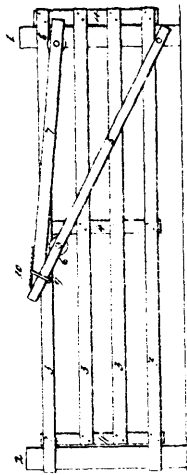
38700 Stephan's Machine for Cutting Beet-Roots.



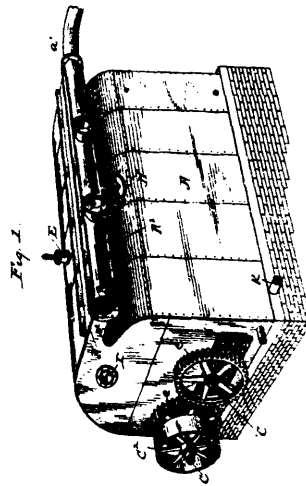
38701 Plotts' Spoon.



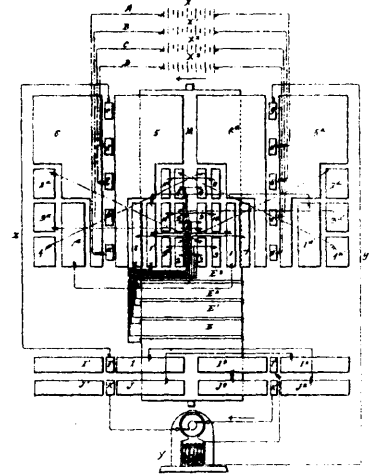
38702 McQueney's Machine for Pasting Wall Paper.



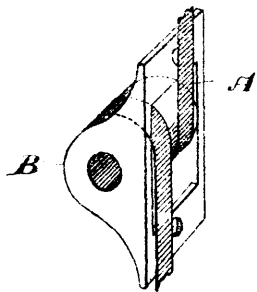
38703 Wood's Gate.



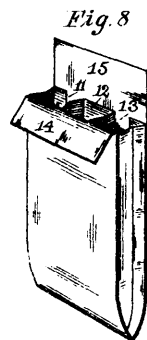
38704 Evans' Apparatus for Evaporating Naptha.



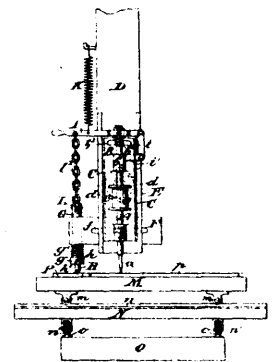
38705 Rae's Controlling Switch for Electric Railways.



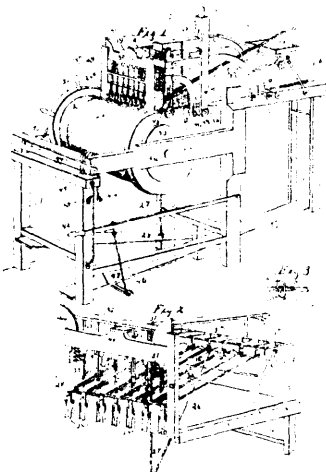
38706 O'Connor's Sash Balance.



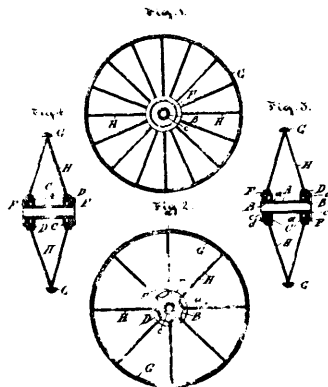
38707 Lorenz's Bag.



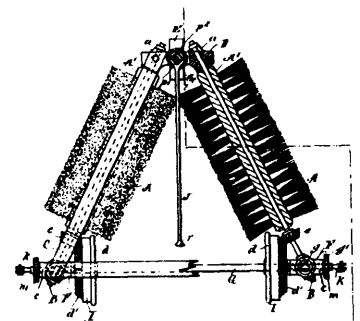
38708 Prybil's Machine for Drilling to a Pattern.



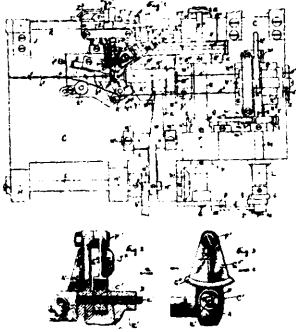
38711 Strong and Williams' Box Making Machine.



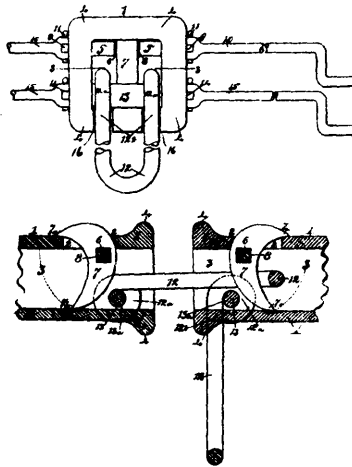
38712 Sheridan's Wheel.



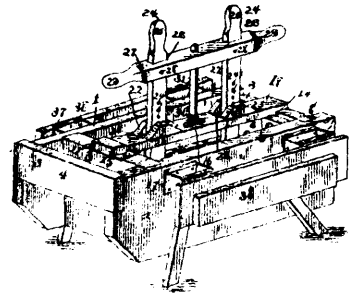
38713 Kjellstrom's Road Sweeper.



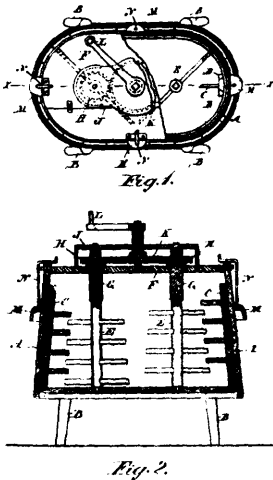
38714 Curtis' Method of Manufacturing Barbed Wire.



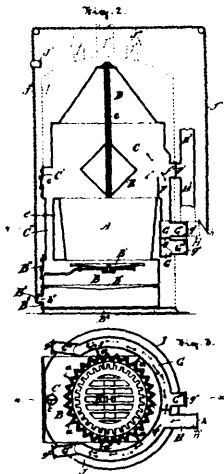
38715 Jones' Car Coupler.



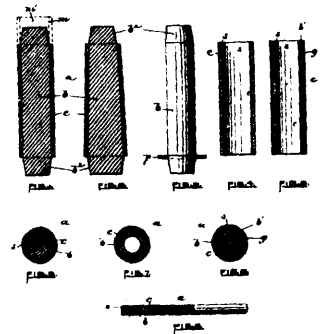
38716 Dearth's Washing Machine.



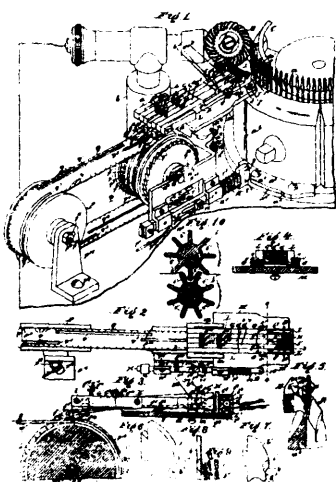
38717 Simpson's Churn.



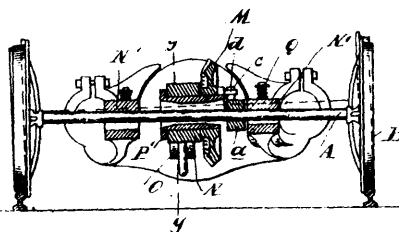
38718 Butterworth's Warm Air Furnace.



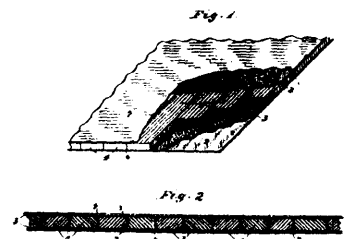
38720 Burdon's Compound Ingot and Wire made therefrom.



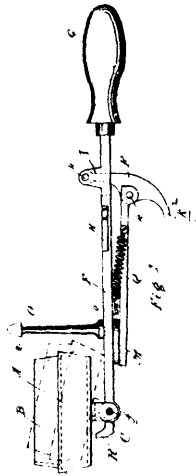
38721 Dinneen and Hagerty's Circular Knitting Machine.



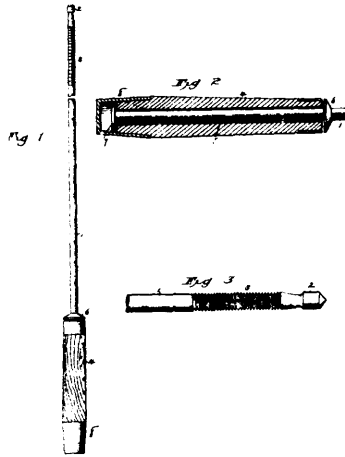
38722 Rae's Electric Car Motor.



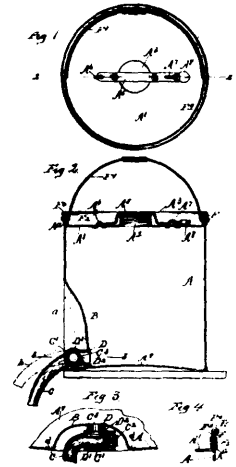
38723 Baker and Randall's Composition Material.



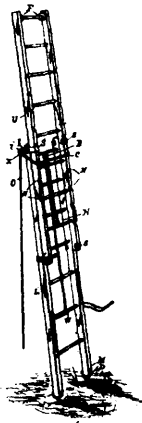
38724 Morency, Morier and Lafleur's Fire Lighter.



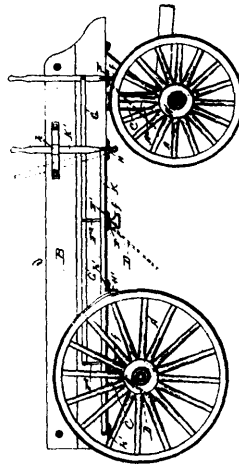
38725 Patterson's Wiping Rod.



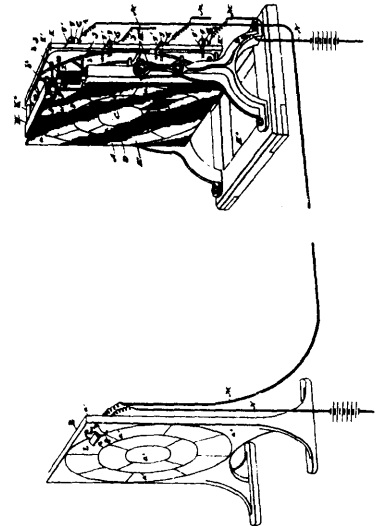
38726 Hart's Oil Can.



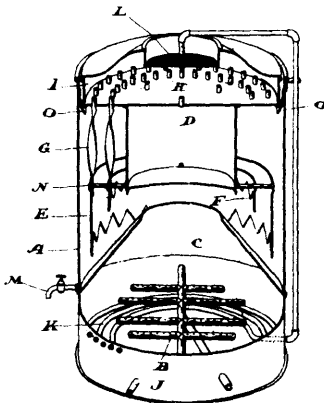
38727 Wilson's Ladder.



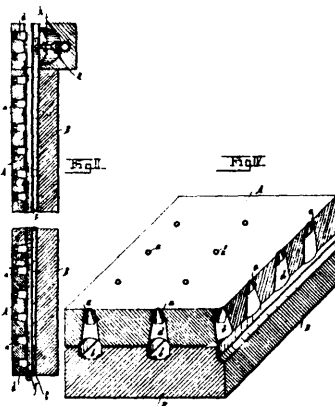
38728 Dougine's Wagon.



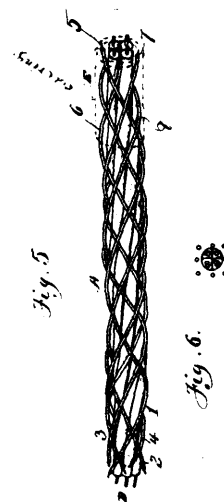
38729 Ely's Target.



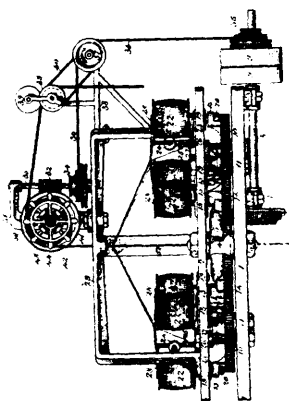
38730 Lloyd's Water Heater.



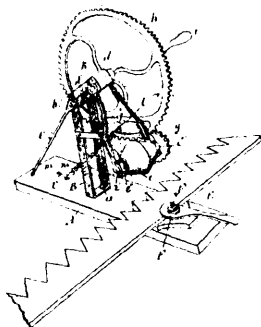
38731 Jungbluth's Malt Floor.



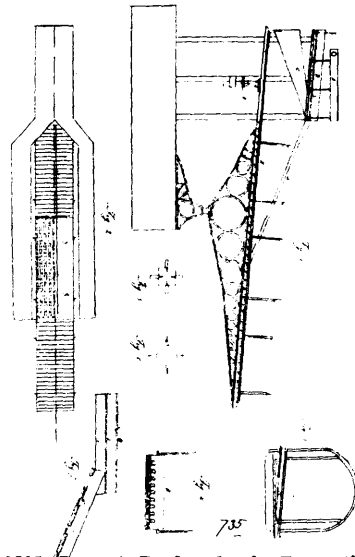
38732 Sawyer's Electric Cable.



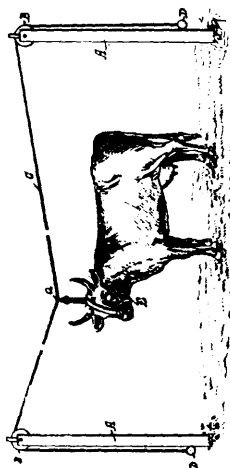
38733 Avis' Sash Cord Machine.



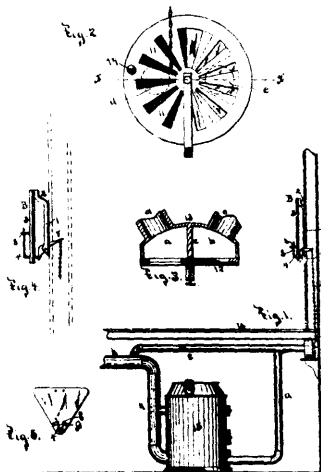
38734 Cline's Sickle Grinder.



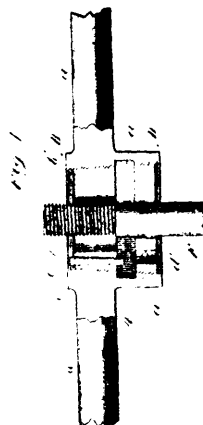
38735 Lacour's Dredger for the Excavation of Golden Alluvium.



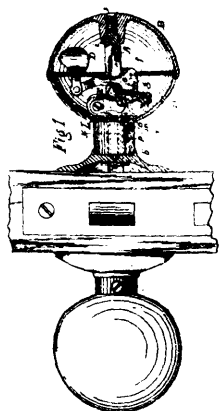
38736 Rooney's Stock Tether.



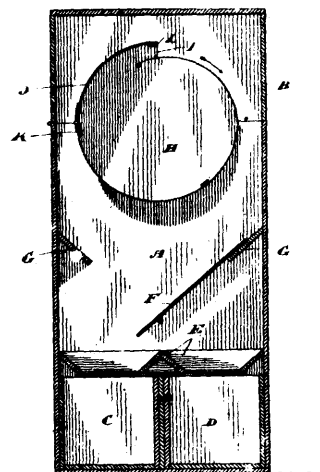
38737 Howard's Draft Regulator.



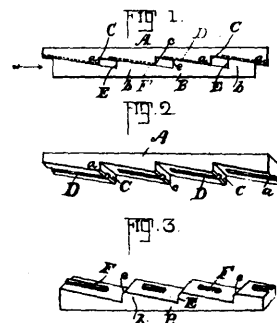
38738 Fletcher's Die Stocks and Die.



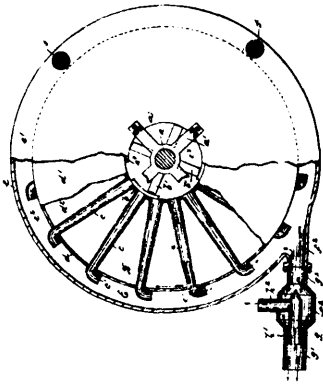
38739 Garlick's Alarm Knob.



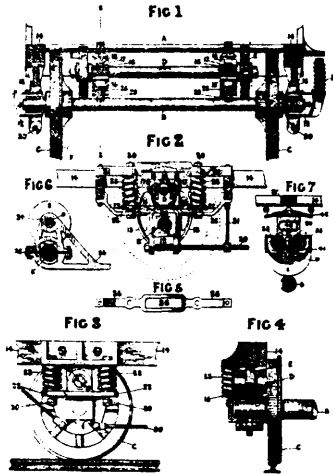
38741 Stovel's Cinder Sifter.



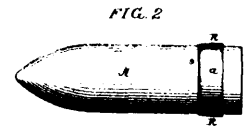
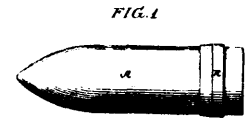
38742 Johnston's Printers Side and Foot Stick.



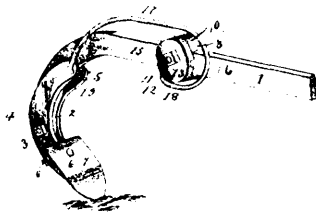
38743 Ruble's Centrifugal Blower and Injector.



38744 Brewer's Anti-Friction Bearings for Vehicles.



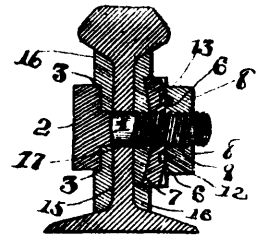
38746 Holmes' Projectile.



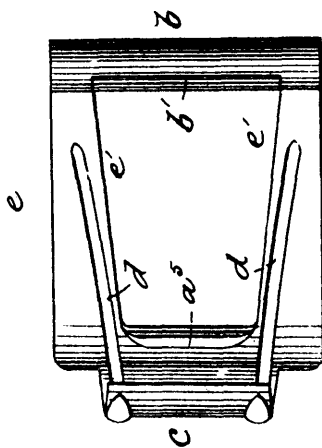
38747 Hilbert's Corn Cultivator.



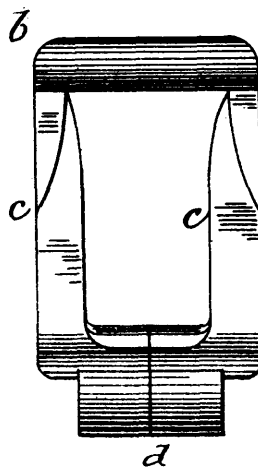
38748 Timmis' Nut Lock.



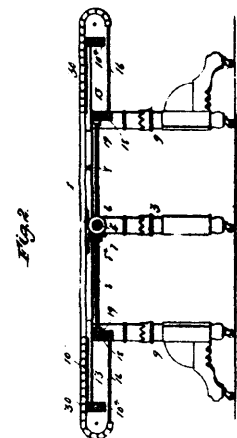
38749 Raybuck's Nut Lock.



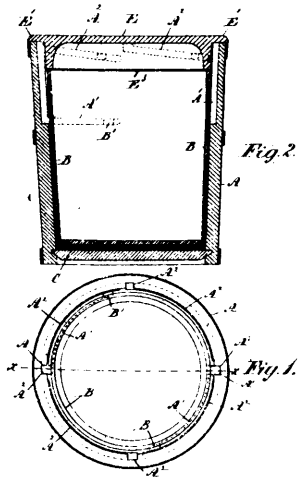
38750 Hart's Drive Chain Link.



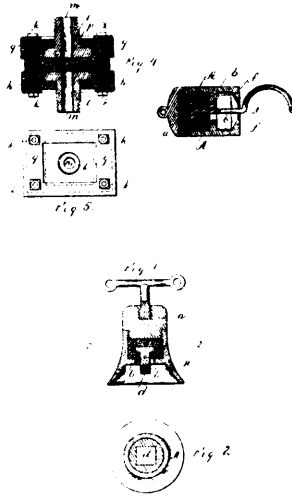
38751 Hart's Drive Chain Link.



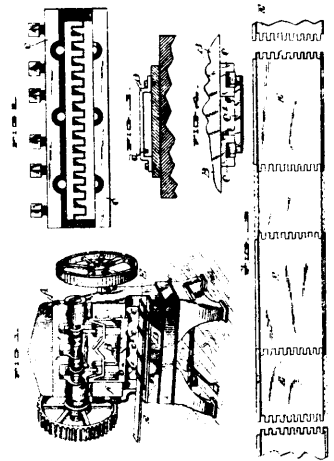
38752 Pickett's Extension Table.



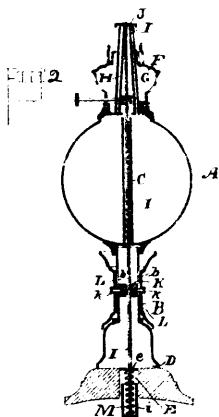
38753 Fillmore's Butter Tub.



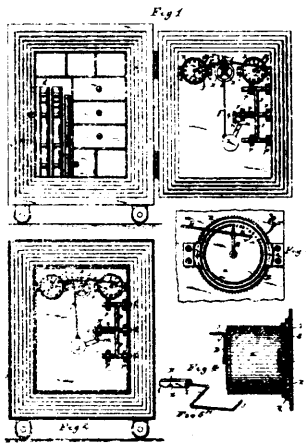
38754 McCarthy's Insulator.



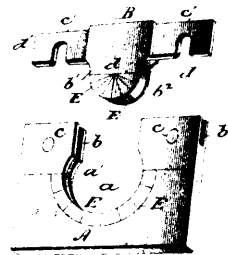
38755 Gilliland's Box Making Machine.



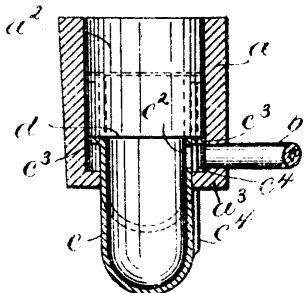
38758 Lajoie's Extinguisher for Lamps.



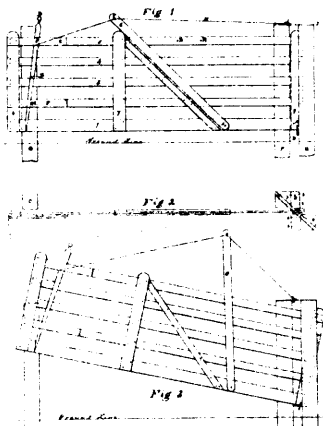
38759 Williams' Time Safe Bolt Retracting Device.



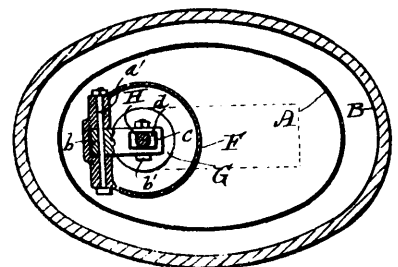
38760 Spencer's Plumb and Level.



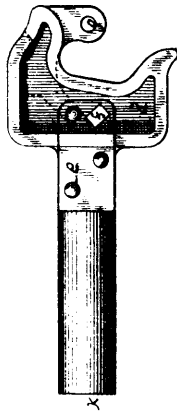
38761 Poulin's Pipe.



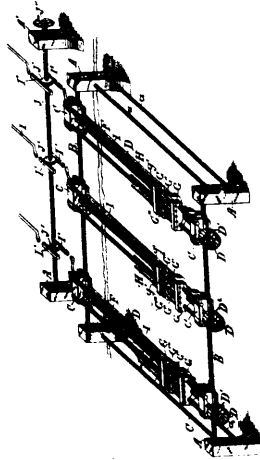
38762 Duperow's Gate.



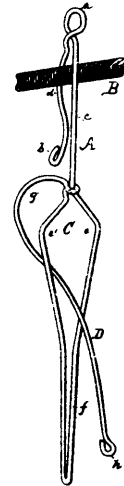
38763 Funke's Steam Trap.



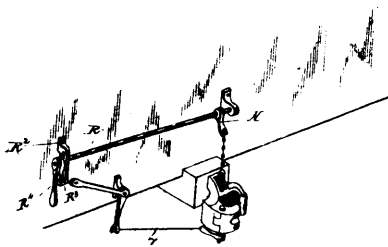
38765 Hughes' Car Coupler.



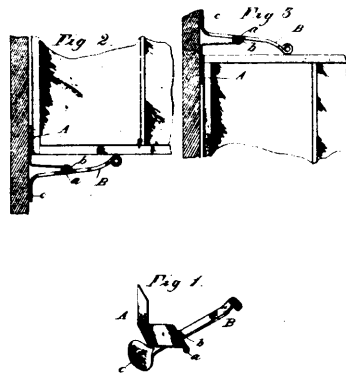
38767 McKay's Machine for Manufacturing Panel Doors.



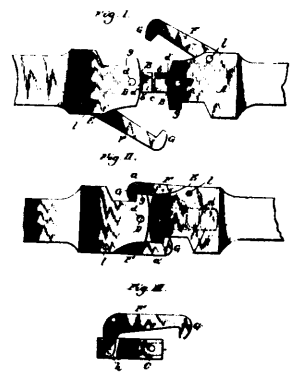
38768 Johnson's Clothes Pin.



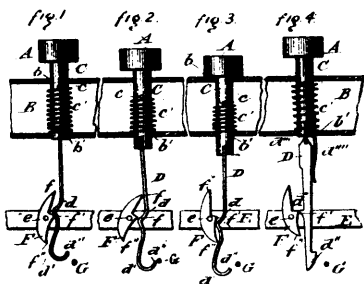
38769 Allen's Car Coupler.



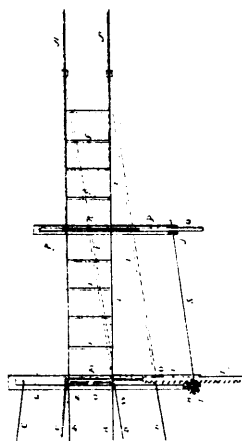
38770 Apple's Sash Fastener.



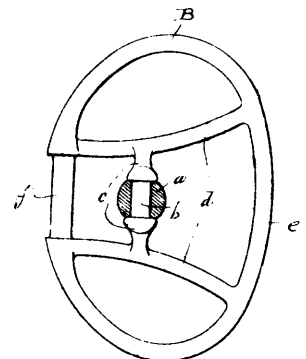
38771 Klinger's Car Coupler.



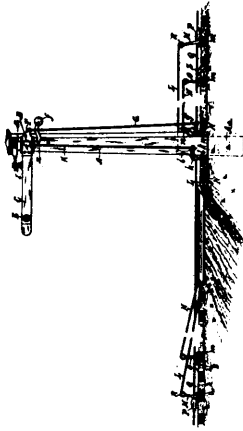
38772 Saroni's Musical Instrument.



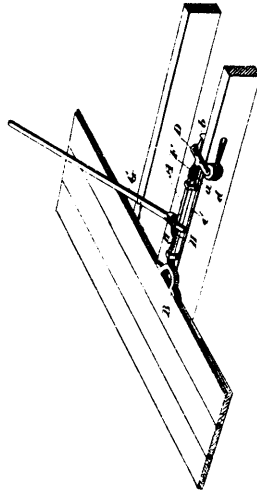
38773 Hynes' Switch for Railways.



38774 Van Arsdale's Bridle Bit.



38775 Read's Signal for Railway Crossings.



38776 Bowler's Floor Jack.

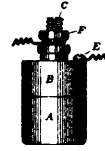


Fig. 1.

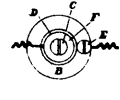
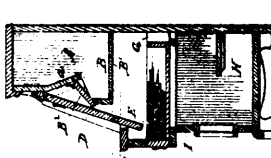


Fig. 2.

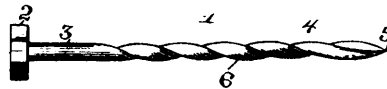
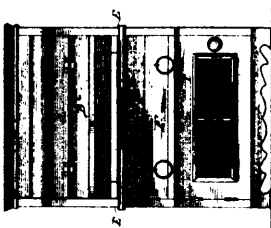


Fig. 3.

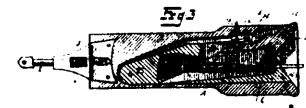
38777 Pierce, Desjais and Oliver's Electric Heat Alarm.



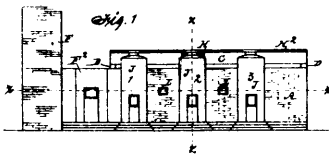
38778 Tinker's Flour Cabinet.



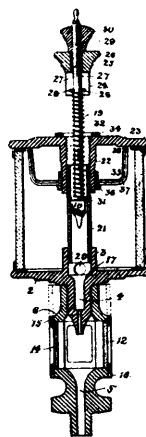
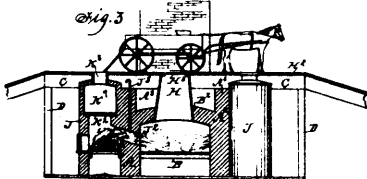
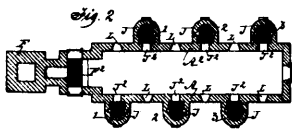
38780 Holt's Screw.



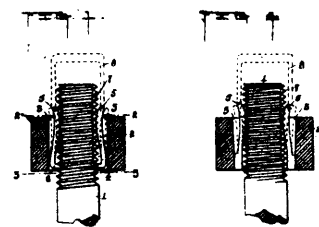
38782 Callantine and Baer's Car Coupler.



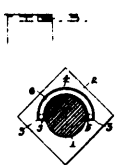
38783 Engle and Thompson's Apparatus for Destroying Garbage, Night Soil, &c.

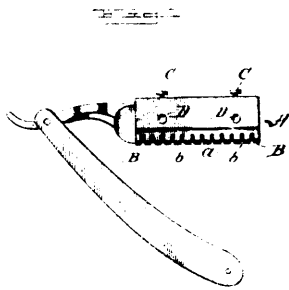


38784 Mieding's Lubricator.

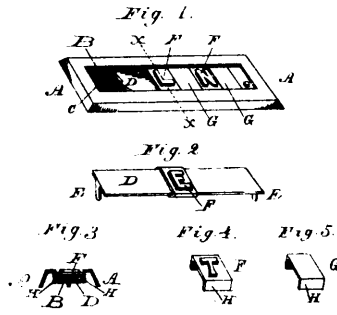


38785 Grimes' Nut Lock.

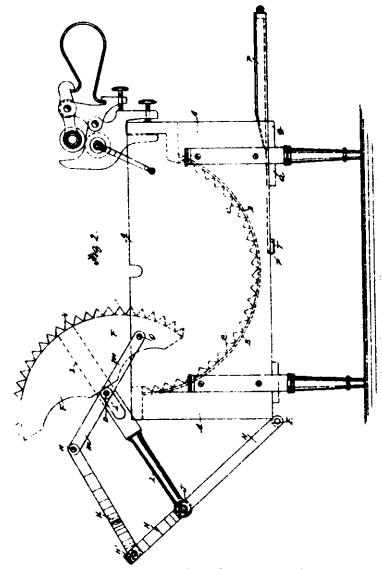




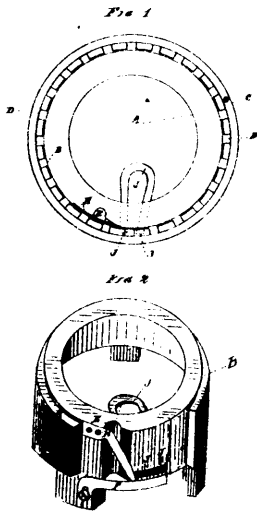
38786 Murphy and Chaplin's Guard for Razors.



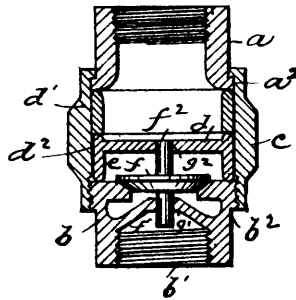
38787 Underwood's Inscription and Motto Plate.



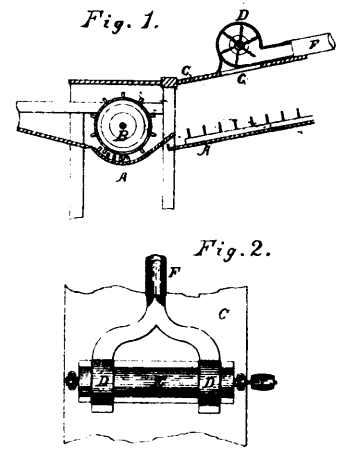
38788 Burke's Washing Machine.



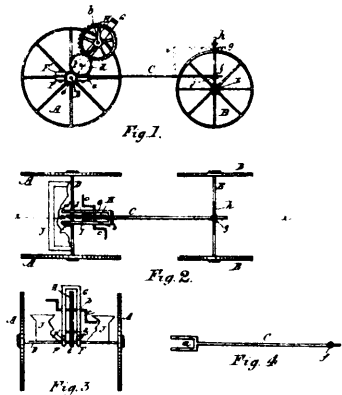
38789 Stone's Apparatus for Sorting Nails.



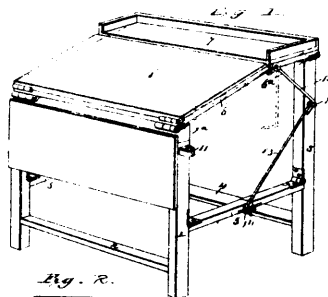
38790 Messinger's Coupling and Valve for Pipes.



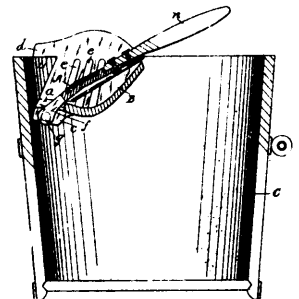
38791 Spaetzels Attachment for Threshing Machines.



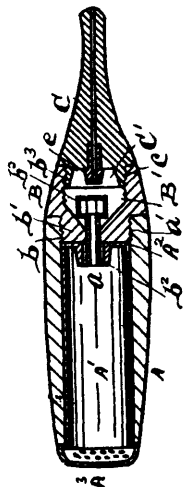
38792 Thompson's Vehicle Motor.



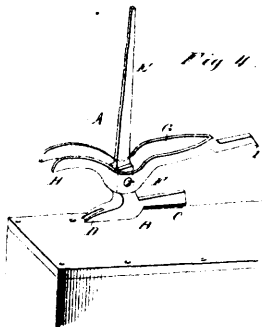
38793 Richmond's Desk and Easel.



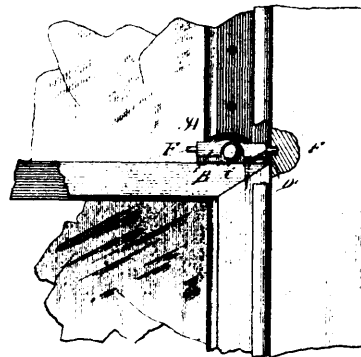
38794 Keane's Squeezer for Floor Cloths.



38795 Leuhoff's Pipe.



38796 Laufin's Nail Puller.



38797 De Mars' Sash Lock.

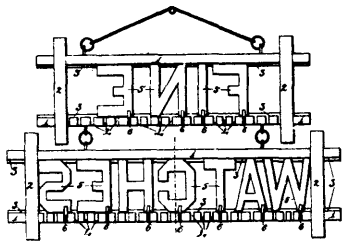
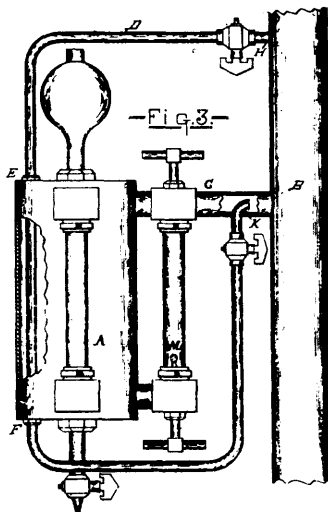


Fig. 2.

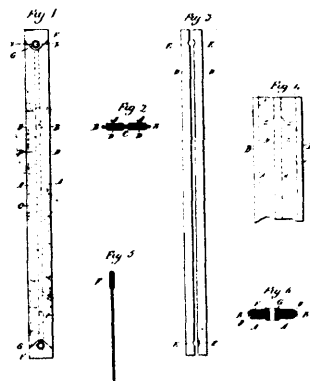


Fig. 3.

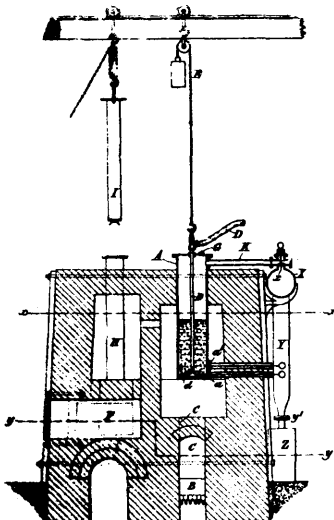
38798 Noble's Device for Interchangeably Arranging Characters.



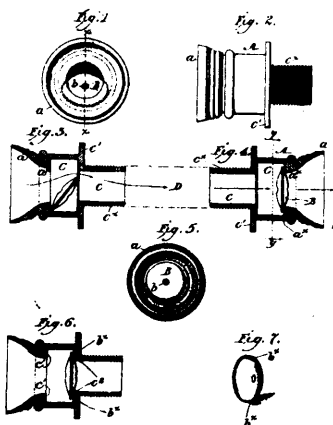
38799 Green's Lubricator.



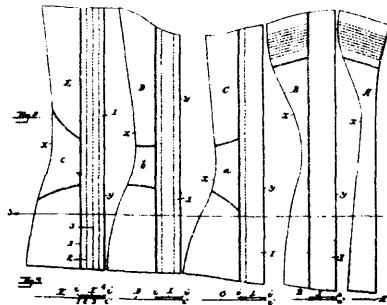
38800 Bray's Dress Stay.



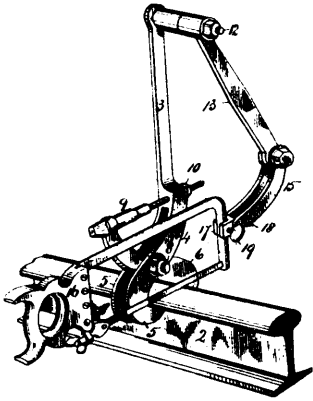
38801 Beilby's Apparatus for Manufacturing Cyanides.



38802 Ross' Mouthpiece for Speaking Tubes.



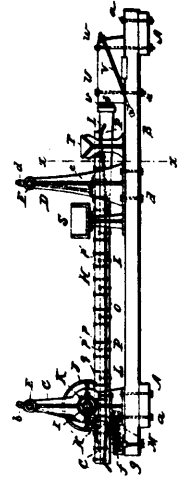
38803 Gould's Corset.



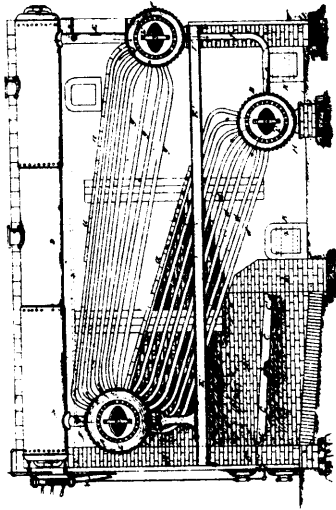
38804 Calef's Drag Saw Rail Cutting Machine.



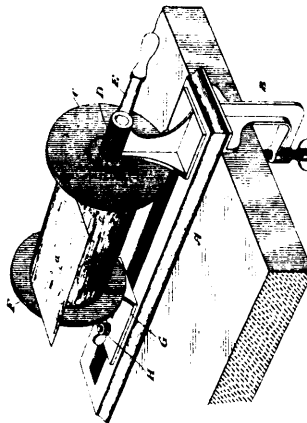
38805 Sanders and Wood's Revolving Hat Case.



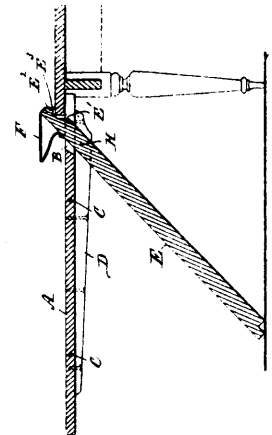
38806 Bowers' Ore Concentrator.



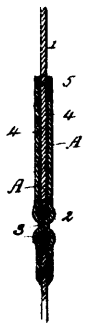
38807 Zell's Steam Boiler.



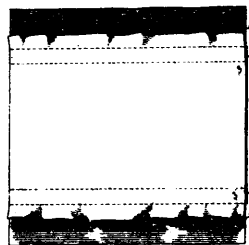
38808 Clarke's Ribbon Roller.



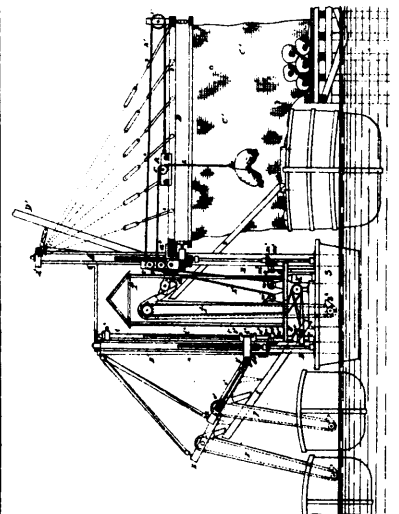
38809 Gates' Ironing Board.



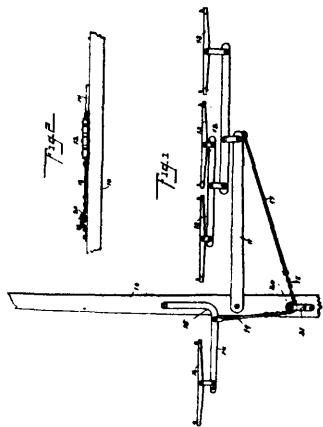
38810 Harris' Suspender.



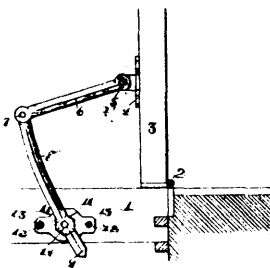
38811 Cudney's Wrapper for Butter.



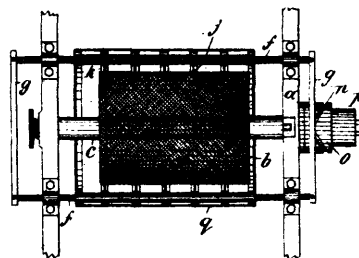
38812 Walsh's Floating Crane and Elevator.



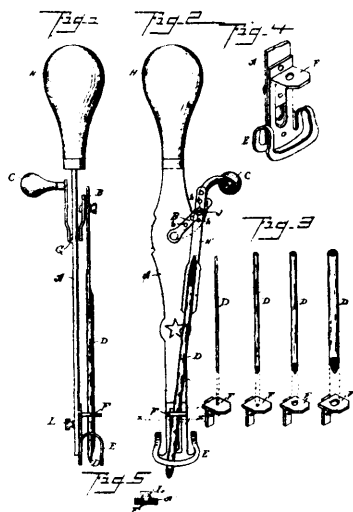
38813 Reisinger's Draft Equaliser.



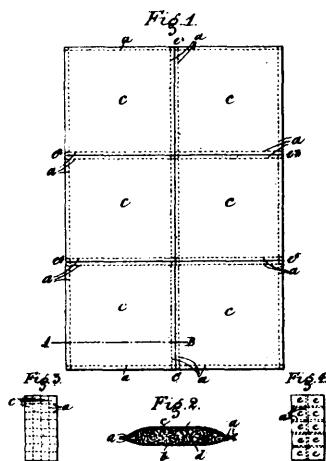
38814 Demarest's Shutter Bower.



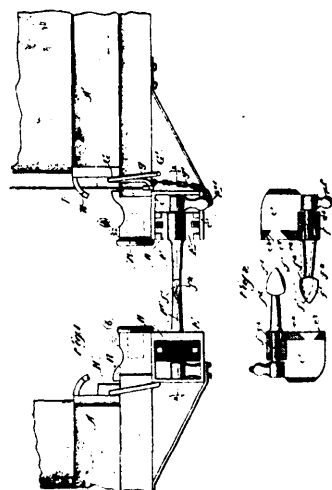
38815 Kidder's Method of Manufacturing Paper.



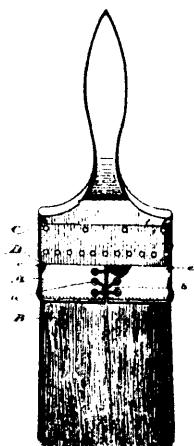
38816 Shipley's Tufting Machine.



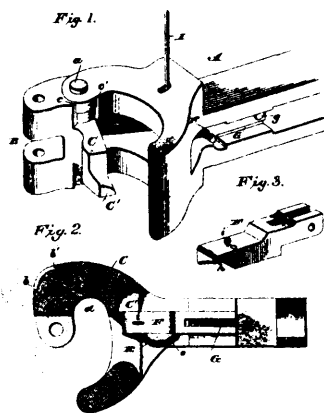
38817 Kent's Case for Poultice Materials.



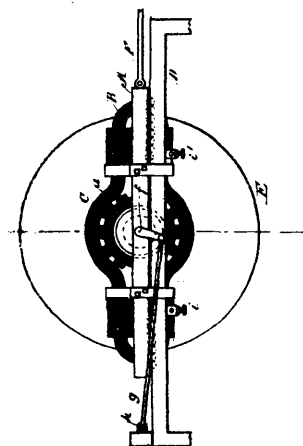
38818 Althouse's Car Coupler.



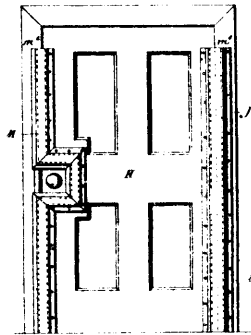
38819 Boeckle's Bridle for Paint Brushes.



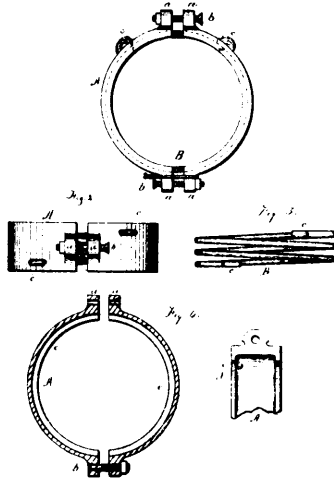
38820 Harvey and Kane's Car Coupler.



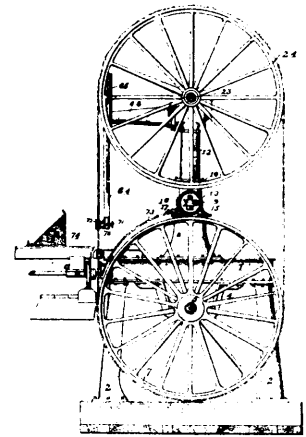
38821 Wilson's Electric Motor.



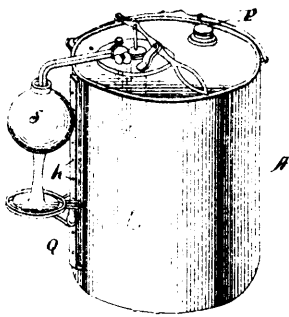
38823 Bishop's Method of Ventilating Rooms.



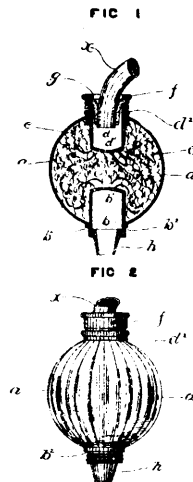
38824 Weidaw's Hose Clamp.



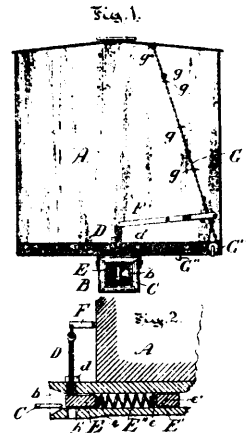
38825 Kendall's Band Saw Mill.



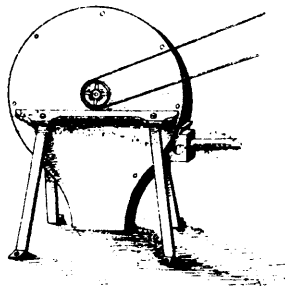
38826 Luce's Oil Can and Filler.



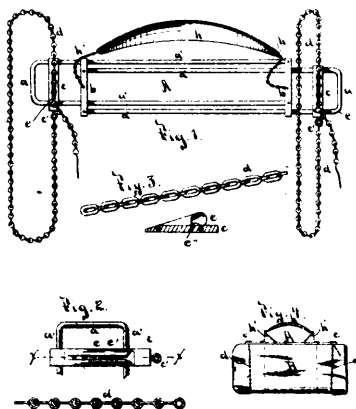
38827 Mortimer's Filter for Water Taps.



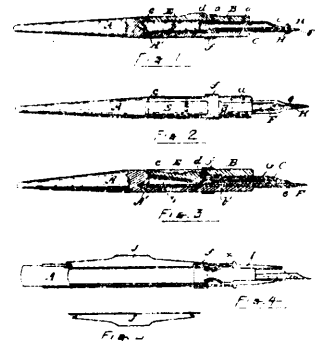
38828 Harris' Car Coupler.



38829 Kerr's Water Motor.



38830 Wheeler's Shawl Strap.



38831 Oliphant's Reservoir Penholder.