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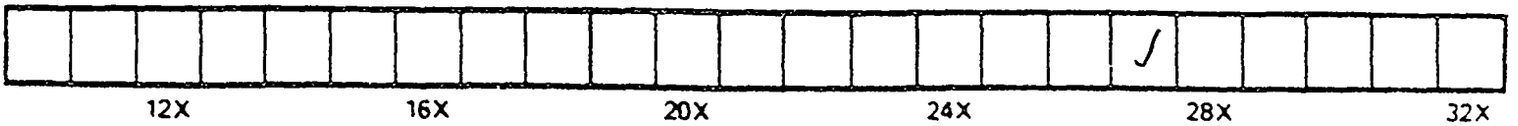

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INVENTIONS PATENTED.

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. 35,080. Car Coupling. (*Attelage de chars.*)

Charles Burpee, Rowena, New Brunswick, Canada, and Charles L. Tilley, Waterville, New Brunswick, Canada, 1st October, 1890: 5 years.

Claim.—1st. In a car coupling, the combination, with the draw-head, the weight block pivoted therein and having a notch in its front end registering with a notch in the draw-head, and the pin-supporting catch pivotally mounted within said weight-block, of a pin seated in said registering notches, and normally resting upon said catch, substantially as described. 2nd. In a car-coupling, the combination, with the draw-head, the weight block pivoted therein, and having a notch in its front end registering with a notch in the draw-head, the lower front corners of said weight-block being beveled, and the pin-supporting catch pivotally mounted within said weight-block and having its front end also beveled, of a pin seated in said registering notches, and normally resting upon the front end of the catch, the whole operating substantially as described.

No. 35,081. Hot Water Boiler.

(*Calorifère à eau.*)

David Lancaster Dwinnell, and Miller Brothers and Toms, all of Montreal, Quebec, Canada. 1st October, 1890; 5 years.

Claim.—1st. In a hot water boiler, or furnace, the combination, with the fire chamber, and a water jacket surrounding same and communicating with the supply or return pipes, of water sections in the form of hollow discs or chambers in communication with said water jacket and having flues for the passage of products of combustion, and central apertured hub portions, forming the point of contact between each section, one or more of such sections having a central diaphragm adapted to compel the passage of the water radially outward from the centre of such section or sections to its or their sides or peripheries, flow pipes leading from the uppermost of such sections, and a suitable shell or casing encircling such sections, as set forth. 2nd. In a hot water boiler, or furnace, the combination, with the fire chamber, and a water jacket surrounding same and communicating with the supply or return pipes, of water sections in communication with said water jacket, and the flow pipes, having flues for the products of combustion, and having central apertured portions of greater depth than their edges, so as to secure tapering sides, one or more of such sections being provided with a central diaphragm, adapted to compel the passage of the water radially outward from the centre of such section or sections to its or their sides or peripheries, a suitable shell or casing encircling such sections, and means for holding the whole together, as set forth. 3rd. In a hot water boiler or furnace, the combination, with the fire chamber, water jacket, inlets and outlets, of water sections, the ports of communication between which are located centrally or approximately so, of the entire area of the upper and lower sides of same, diaphragms located in one or more of such sections across the line of such ports of communication, and means for holding the whole together, as set forth. 4th. The combination, with the water sections in contact with each other at central portions only of their upper and lower sides, of a stay passing centrally through the uppermost sections, and having one end secured within the lowermost section, and the other end to the uppermost section, as set forth.

No. 35,082. Combined Bridle and Check.

(*Bride et rêne combinées.*)

John H. Rafferty, and Michael J. Connery, both of Worcester, Massachusetts, U.S.A., 1st October, 1890; 5 years.

Claim.—1st. A bridle, made with cheek, and face pieces, of each side formed in one continuous strap connected with the crown-strap, combined with bent or U-shaped divided clasps holding the straps at their lower bends or bights, substantially as herein set forth. 2nd. A bridle, made with the cheek, and face pieces of each side formed in one continuous strap, connected with the crown-strap, combined with U-shaped divided clasps holding the straps at their lower bends or bights, and a bit held to the clasps, substantially as herein set forth. 3rd. A bridle, made with the cheek and face pieces of each side formed in one continuous strap connected at one end to the crown-strap, and extending rearward at the other ends to form a check-rein, combined with clasps engaging the lower bends or bights of the straps, and a bit held to the clasps, substantially as herein set forth. 4th. A bridle, made with the cheek and face pieces of each side formed in one continuous strap connected at one end to the crown-strap, and extending rearward at the other ends to form a check-rein, combined with bent or U-shaped divided clasps holding the straps at their lower bends or bights, and a bit held to the clasps, substantially as herein set forth. 5th. In a combined bridle and check, the cheek and face pieces of each side formed as continuous straps connected at one end to the crown-strap, and extending rearward at the other ends to form a check-rein, clasp devices holding the two straps at their lower bends or bights, a bit held to the clasps, overdraw-check loops and side loops held to the crown-strap, and a detachable clip device adapted to the face straps, substantially as described, whereby the bridle may be adjusted with an overdraw-check or a side cheek, as set forth. 6th. In a combined bridle and check, the cheek and face pieces of each side formed as continuous straps connected at one end to the crown-strap, and extending rearward at the other ends to form a check-rein, bent or U-shaped divided clasps holding the straps at their lower bends or bights, a bit held to the clasps, overdraw-check loops and side loops held to the crown-strap, and a detachable clip device adapted to the face-straps, substantially as described, whereby the bridle may be adjusted with an overdraw-check or a side check, and the strap-bights may be re-adjusted in the divided clasps to prevent twisting of the straps when the overdraw-check is changed to a side check, as set forth. 7th. The combination, in a bridle and check, of a crown-strap A, throat-latch B, B^1, two continuous straps C, D, E, and C^1, D^1, E^1, connected to the crown-strap, a check-strap F, connected to the parts E, E^1, divided clasps H, H, clamping the bights *c*, *c*, of the straps C, D, C^1, D^1, a bit connected to the clasps, a brow-band G, and side loops adapted to receive the straps E, E^1, as a side-check-rein device, substantially as herein set forth. 8th. The combination, in a bridle and check, of a crown-strap A, throat-latch B, B^1, two continuous straps C, D, E, and C^1, D^1, E^1, connected to the crown-strap, loops K, K, on the crown-strap, receiving the strap E, E^1, a strap F, connected to the parts E, E^1, divided clasps H, H, clamping the bights *c*, *c*, of the straps C, D, C^1, D^1, a detachable clip J, held to the face-straps D, D^1, and a bit held to the clasps H, H, substantially as described, for the purposes set forth. 9th. In a bridle, the combination, with a crown-strap and connected continuous straps forming cheek, face, and check straps and doubled-in bights *c*, *c*, substantially as specified, of divided clasps of U-form, placed on said bights, and provided with nuts at their extremities, substantially as herein set forth. 10th. In a bridle, the combination, with a crown-strap and connected continuous straps forming cheek, face, and check straps and doubled-in bights *c*, *c*, substantially as specified, of two-part clasps at said bights, provided at their extremities with clamping nuts, and eyes connected to the clasp-bends to receive the bit, substantially as herein set forth. 11th. In a combined bridle and check, the combination, with a crown-strap and connected continuous straps C, D, E, C^1, D^1, E^1, forming cheek, face, and check-straps, and bent or U-shaped divided clasps inclosing the bights *c*, *c*, of the straps, of an adjustable and detachable clip on the face-straps, substantially as herein set forth. 12th. In a bridle, the combination, with a crown-strap and connected continuous straps forming cheek, face, and check-straps, and doubled-in bights *c*, *c*, substantially as specified, of bent or U-shaped clasps formed with two parts *h h*, each having an open ring h^1, a shoulder h^2, and a beveled extremity h^3, and detents holding the parts *h h* together, substantially as herein set forth. 13th. In a bridle, the combination, with a crown-strap and connected continuous straps forming cheek, face, and check straps, and doubled-in bights *c*, *c*, substantially as specified, of clasps H, formed with two parts *h*, h^1, each having an open ring h^1, an inclined shoulder h^2, a beveled extremity h^3, and screw-threads h^4, and nuts H^2, run upon said threads, substantially as herein set forth.

No. 35,083. Ware House Truck.

(Camion de magasin.)

George Wesley Walker, Burlington, Ontario, Canada, 1st October, 1890; 5 years.

Claim.—1st. In a warehouse truck, the combination, of the wheel standards, A, A, carrying the axle *b*, and the wheels *c*, *c*, or single wheel, the sills D, D, side pieces B, B, and handles E, all constructed, substantially as and for the purpose specified. 2nd. In a truck, the combination, of the wheel standards A, A, handles E, E, and clamping rod *j*, for the purpose specified. 3rd. In a truck, the combination, of the wheel standards A, A, handles E, E, and guide retaining frames *i*, *i*, attached to the standards or cross-bar of the same, substantially as and for the purpose specified. 4th. In a track, the combination, of the standards A, A, sills D, slotted slide bars B, ratchet-bar C, ratchet-rod F, axle *b*, and wheels *c*, *c*, or single wheel, all constructed substantially as and for the purpose specified.

No. 35,084. Low Water Alarm.

(Indicateur du niveau de l'eau.)

Henry Sims, Erie, Pennsylvania, U.S.A., 1st October, 1890; 5 years.

Claim.—1st. The combination, in a low water alarm, of a whistle I, having a downwardly projecting valve lever J, provided with a slot *j*, with the expansion pipe E, and adjustable rod L, extending from the slot *j*, in the whistle valve lever J, to the ear *f*, on the expansion pipe cap F, substantially as and for the purpose set forth. 2nd. The combination in a low water alarm, of the shell B, having the downwardly projecting pipe D, and the upwardly extending extension pipe E, secured therein, and having an elbow G, on the side thereof, supporting a whistle I, with the adjustable rod L, extending from the ear *f*, on the cap F, to and into the slot *j*, in the whistle valve lever J, substantially as and for the purpose set forth.

No. 35,085. Subsoiler and Bush Puller.

(Arrache-brouissailles, etc.)

Thomas J. Rogers, Searcy, Arkansas, U.S.A., 1st October, 1890; 5 years.

Claim.—1st. The combination, of the blades secured to the fellies of the front wheels, and the hoods or shields supported by the tongue, and passing rearward over the blades, as set forth. 2nd. The combination, of the band adapted to be clamped to the rear wheels and carrying blades, and the transversely-adjustable supporting arms having scrapers at their ends bearing on said bands, as set forth. 3rd. The combination of the wheels, the bands fitting around the same, the blades secured to said bands, the clip plates bearing against the inner side of the felly, and bolts passed through the band and the clip-plate, and provided with securing nuts turning up against said plates, as set forth. 4th. The improved subsoiler and bush puller, consisting of a running gear, a metallic strip secured to the front axle of said gear, and having a series of depending teeth along its lower edge, cutting bands removably secured to the wheels of the gear, the hood supported by the tongue of the gear and projecting rearward over the bands on the front wheels, and the transversely adjustable scrapers mounted on the gear and bearing on the rear wheels, as specified.

No. 35,086. Hitching Post. *(Enrénoire.)*

Edward A. Farish, St. Joseph, Missouri, U.S.A., 1st October, 1890; 5 years.

Claim.—1st. The combination, of the post, provided near its top, with a flange having an opening, the hitching strap provided with a return weight, and the automatic locking device arranged in the opening of said flange, substantially as described. 2nd. The combination of the post, provided with a flange having an opening, the weighted lever provided with the section 10, arranged in the said opening and completing the flange, and the hitching strap having a return weight, substantially as described. 3rd. The combination of the post, provided near its upper end with a flange, the weighted lever, and the hitching strap having its lower end secured to the bottom of the post and provided at a point about midway its length with a return weight rigidly secured to it, substantially as described. 4th. The combination of the tubular post, provided with a slot 12, and laterally, extending ears 13, and having an annular flange provided with an opening 9, and having its lower edge beveled, the lever arranged in said slot, and pivoted between the ears, and having the section 10, completing the flange, and provided with a beveled edge, the disk 6, secured at the lower end of the post, the hitching strap having its lower end secured centrally to the disk, and provided at a point intermediate of its length with a weight, and the cap, having a central opening, substantially as and for the purpose described. 5th. The combination of the tubular post provided near its upper end with an annular flange, having its lower edge beveled and provided with an opening 9, the weighted lever having the section 10, arranged in the said opening and completing the flange, and the hitching strap secured to the disk and provided with a return weight, substantially as described.

No. 35,087. Truss Hoop.

(Cercle de bandage herniaire.)

Lawrence Roth, Cincinnati, Ohio, U.S.A. 1st October, 1890; 5 years.

Claim.—A tapering truss-hoop, having the upper inner edge cut away or beveled off as shown, as and for the purpose set forth.

No. 35,088. Car Coupler. *(Attelage de chars.)*

William McRae, of Montreal, Quebec, Canada, 1st October, 1890; 5 years.

Claim.—1st. In a car coupler, the combination, with a draw bar, having a head proper substantially of U-form, and presenting a continuous curved face, one of the ends of the U being provided with a hook or bumper head, and the other end, together with the central portion of the head proper recessed, of a lever pivotted in such recess, and adapted to narrow the opening or mouth between the two ends of the U after the insertion of the bumper heads, and a device for locking such lever in place, as set forth. 2nd. In a car coupler, the combination, with the head of a draw bar, constructed with a recess as described, and with a lever pivoted in such recess, of a locking bolt carried by such lever and adapted to be pressed into a notch in such head, within the recess, for the purpose described, and a spring, supplementary lever, and connections, all carried by said lever, for operating such bolt, as set forth. 3rd. In a car coupler, the combination, with the heads of draw bars constructed with recesses as described, and with levers pivoted in such recesses, of locking devices carried by such levers, and so arranged as to be operated by the bumper heads when coming together to free said levers, as set forth.

No. 35,089. Clothes Dryer. *(Séchoir à linge.)*

Ephriam Abiger Foster, Port Clinton, Ohio, U. S. A., 1st October, 1890: 5 years.

Claim.—1st. A clothes frame or rack, consisting of the revolving standard, having a series of slots alternately arranged in different vertical planes, said slots having curved tops and straight backs and bottoms, and the weighted arms looped at one end and secured in said slots, by pins or bolts, substantially as described. 2nd. In a clothes frame or rack, the combination, with the standard 1, having pivoted arms 3, of the pin or journal 7, the hanger 9, having eye 8, the screw-eye 13 and the plate 14, having concavity or depression 15, substantially as described.

No. 35,090. Truck. *(Camion.)*

Peter Kiltz, Rich Hill, Missouri, U.S.A., 1st October, 1890; 5 years.

Claim.—1st. In a truck, a shaft mounted in suitable bearings and arranged to revolve to elevate the object to be transported, and to slide rearwardly to bring the latter inside the truck-frame, substantially as described. 2nd. In a truck, a track or way extending out in front of the frame, a carriage travelling on said track, and a shaft attached to said carriage and arranged to revolve to elevate the object to be transported, and to slide rearwardly to bring it inside the frame, substantially as described. 3rd. In a truck, the combination of a track projecting from the frame, a sliding shaft, a carriage arranged to travel on said track, and in which the forward end of said shaft has a bearing, and a cable arranged to be wound upon the shaft to elevate the weight, substantially as described. 4th. In a truck, the combination of a track projecting from the frame, a carriage travelling on said track, a shaft mounted at its forward end in said carriage, a ratchet-wheel on said shaft, and a pawl arranged to be automatically thrown in and out of engagement, substantially as described. 5th. In a truck, the combination of a track, a carriage travelling thereon, a shaft mounted at its forward end in said carriage, a ratchet-wheel on said shaft, a gravity-pawl engaging said ratchet and projections from said track for engaging said pawl to free the ratchet, substantially as described. 6th. In a truck, a counterbalancing device, consisting of a treadle, a pair of triangular brackets supporting it and pivoted at their corners to the truck-frame, hooks on the upper ends of said brackets, and projections from the inside of the truck arranged to be engaged by said hooks, substantially as and for the purpose described.

No. 35,091. Vermin Trap. *(Piège à vermine.)*

James Edmonds, Reed Court, Strood Rochester, Kent, England, 1st October, 1890; 5 years.

Claim.—An improved run or race, cut through an embankment, constructed for the purpose of carrying out the wholesale extermination of rabbits in a district, in combination with pits formed at suitable intervals in the run or race, and covered with trap doors or flaps b^1, b^1, etc., the said run or race being likewise covered with trap doors or flaps *b*, *b*, *b*, and enclosed within boards, substantially as and for the purpose described and shown.

No. 35,092. Steam Boiler. *(Chaudière à vapeur.)*

John Baird, New York, N.Y., U.S.A., 1st October, 1890; 15 years.

Claim.—1st. A fire-box, composed of front and rear water spaces, and tubes horizontal, or nearly so, forming the sides and top thereof, when said tubes pass through sleeves at one of said ends, and are connected to the front and rear water-spaces, all substantially as described. 2nd. In combination, with a fire-box, composed of front and rear ends and of sides, and a top formed of tubes, all made and connected as described, large tubes provided with flues, such as l^1, l^1, combined therewith, as described. 3rd. In combination, with the end of a fire-box, such as is described, and with water-tubes connected therewith, and a boiler, a pipe, such as *p*, with a floating valve therein, whereby a connection may be at times established between said tubes, and the boiler proper, in the manner and for the purposes set forth. 4th. In combination, with horizontal flues or tubes, enclosed in a shell as described, deflectors above the upper tier thereof, said deflectors being bars of angle-iron, supported as described. 5th. In combination with a shell inclosing horizontal tubes or flues, as described, plates of metal extending over the space between the outer flues and the shell of the boiler, and provided with depending tubes, which latter descend in the comparatively cool space between the shell and the flues, whereby circulation is improved, substantially as set forth.

No. 35,093. Extension Foot. (*Rallonge-pied.*)

Edward L. O'Connor, Cincinnati, Ohio, U.S.A., 1st October, 1890; 5 years.

Claim.—1st. Thn foot A, having spring-jointed toe-section a, in combination with the instep C, and heel support D, substantially as shown and described. 2nd. The combination of the extension foot A, having jointed spring toe section a, the metal instep C secured to the forward end of said foot, the metal heel piece secured to and projecting above the heel rest on top of foot A, and covering E, for encasing the foot. 3rd. The sheet metal blank C, for forming an artificial instep for an extension foot, as a new article of manufacture. 4th. The sheet metal support D, adapted to be secured to the artificial extension foot A, substantially as shown and described. 5th. The combination, substantially as hereinbefore set forth in an extension foot, of the foot, the toe section a, the hinge piece a^1 uniting the foot and toe section, the springs a^2 interposed between the foot and the toe section, the metal instep C, c, secured to the forward end of the foot section, the metal heel piece D, secured to the foot and projecting above the heel rest, and the upper E, secured to the foot A, and adapted to tightly encase the lame foot within the foot extension.

No. 35,094. Miners' Lamp.

(*Lampe de sûreté de mine.*)

Peter J. Miller, Upper Lehigh, Penn., U.S.A., 1st October, 1890; 5 years.

Claim.—1st. A miner's lamp, having a wick-tube provided with an annular groove 7, forming a receptacle for oil draining through the wick, and adapted to return the oil to the body of the lamp, substantially as and for the purpose described. 2nd. A miner's lamp, having its wick-tube provided with a flaring mouth 6, and an annular groove 7, arranged beneath the flaring mouth, substantially as and for the purpose described.

NO. 35,095. Wash Boiler.

(*Chaudière de buanderie.*)

Mary L. W. Martinot, New York, N.Y., U.S.A., 1st October, 1890; 5 years.

Claim.—1st. In a wash boiler, or similar device, the combination, with a vessel divided into a series of compartments, the walls of which compartments are corrugated, of receptacles, each containing a perforated bottom and fitted to the said compartments, substantially as shown and described. 2nd. In a wash boiler, or similar device, the combination, with a vessel divided into a series of compartments, the walls of which compartments are corrugated, and horizontal apertured false bottoms located in said compartments, of receptacles, each containing a perforated bottom and fitted to the said compartments, being adapted to rest upon the apertured false bottoms therein, substantially as shown and described. 3rd. In a wash boiler, or similar device, the combination, with a vessel divided into a series of compartments, the walls of which are corrugated, a water chamber at the bottom, beneath the said compartments, and spider-like false bottoms horizontally supported in the compartments, of interior flanges projecting over the outer walls of the compartments, and receptacles provided with a reticulated bottom fitted to the compartments, and adapted to rest upon the spider-like bottoms therein, substantially as shown and described. 4th. In a wash boiler or similar device, the combination, with a vessel divided into a series of compartments, the walls of which compartments are corrugated and provided below the said compartments with a water chamber having a faucetted outlet, spider-like false bottoms horizontally located in said compartments between their centers and lower ends, and a horizontal flange attached to the upper inner portion of the vessel, and extending over the outer walls of the compartments, of a detachable lid fitted to the vessel above the upper flanges, and bucket-like receptacles provided with a reticulated or perforated bottom and an attached bail, the said receptacles being removably fitted in the said compartments, and adapted to rest upon the spider like false bottoms thereof, as and for the purpose specified.

No. 35,096. Metal Lathing. (*Lattis métallique.*)

Walter W. Bostwick, Brooklyn, N.Y., U.S.A. (assignee of Ira S. Elkins, New York, N.Y.), 1st October, 1890; 5 years.

Claim.—1st. A metal lath, consisting of a piece of metal formed with a series of pairs of parallel slits arranged at suitable intervals, and having a body of the metal between the slits of each pair drawn forward or upward to form loops, all upon the same side of the sheet, and the edges of the slits adjacent to the loops, being provided with forwardly or upwardly turned flanges. 2nd. A sheet metal lath, having loops made in its face, arching over the opening thus formed, the edges of the openings having upward flanges, substantially as specified. 3rd. As a new article of manufacture, a sheet lath, having loops made at regular intervals over its entire surface on one side only, and upwardly and forwardly turned flanges along the edges of said openings, substantially as described. 4th. A metal lath, having expanded loops on one side only, the said loops covering or arching over the openings from which the loops are formed, substantially as described.

No. 35,097. Cord Holder for Knotters of Harvester Binders. (*Porte ficelle pour noueurs de lieuses à grain.*)

Thomas Henry Noxon, Ingersoll, Ont., Canada, 1st October, 1890; 5 years.

Claim.—1st. A tension wheel A, having a groove b made around it below the cord notches f, in combination with the clamp C, having a rib a formed on it to fit into the groove b, substantially as and for the purpose specified. 2nd. In a knotter, a knife F, having an offset made in it to clear the bill-hook G and bring its cutting edge close to the said bill-hook, substantially as and for the purpose specified. 3rd. A tension wheel A, having a groove b, made around it below the cord notches f, and provided with a clamp C, having a rib a, formed on it to fit into the groove b, in combination with a knife F, having an offset made in it to clear the bill-hook G, and bring its cutting edge close to the said bill-hook, substantially as and for the purpose specified,

No. 35,098. Cattle Guard. (*Garde-betail.*)

James Thomas Hall, Chicago, Ill., U.S.A., 1st October, 1890; 5 years.

Claim.—1st. In a cattle-guard, an inclined shield adapted to protect the cross-bars, substantially as described. 2nd. In a surface cattle-guard, composed of guard rails assembled together into gratings, of supplementary teeth or bars on the sides of the guard-rails, substantially as described. 3rd. In a surface cattle-guard, a double inclined shield secured over the connecting bar between the guard-rails, substantially as described. 4th. In a surface cattle-guard, composed of a series of bars, a bar having sections pressed out to present a supplementary series of upwardly projecting edges, substantially as described. 5th. In a surface cattle-guard, composed of guard-rails, assembled together into the form of gratings, by means of cross-bars, of a combined thimble and shield between said guard-rails, substantially as described. 6th. In a surface cattle-guard, composed of a series of bars collected together into gratings of inverted V-shaped sections, pressed out of each bar alternately upon opposite sides, to present a supplementary series of upwardly projecting teeth, substantially as described. 7th. As a new article of manufacture, a shield for cattle-guards, struck out by dies consisting of an inverted V-shaped piece of metal, having a depressed stirrup, such as c, substantially as described.

No. 35,099. Cattle Guard. (*Garde-bétail.*)

James Thomas Hall, Chicago, Illinois, U.S.A., 1st October, 1890; 5 years.

Claim.—1st. In a railway surface cattle guard, an inner section A, consisting of two parts detachably secured together, and the outer sections B, C, substantially as described. 2nd. In a railway surface cattle guard, the inner section A, consisting of two parts hinged together centrally, and adapted to be secured to the rail at their edges and of outer sections B, C, substantially as described. 3rd. In a railway surface cattle guard, the combination of sections composed of bars set up on edge, and secured to the cross bars having shouldered ends adapted to engage under the foot of the rails, substantially as described. 4th. In a railway surface cattle guard, the combination of the sections B, C, D, and E, consisting of bars set up on edge and secured to cross bars, having shouldered ends adapted to engage under the foot of the rails between the ties and the aperture H of the hooks I, the meeting ends of the sections D, E, the parts being adapted to operate, substantially as and for the purpose described.

No. 35,100. Mechanical Fire Starter and Lighter. (*Allumoir.*)

Marvin McOmber, Ottawa, Kansas, U.S.A., 1st October, 1890; 5 years.

Claim.—1st. In an automatic fire starter, the combination, with a base, of a match arm pivotally secured thereto at one end, and adapted to receive a match at the other end, a spring for operating the arm, and a thin flexible ignition plate, having one end secured to the base, and its other end raised or elevated, and in the path of the free end of the match arm, substantially as described. 2nd. The combination, with a supporting base, of the pivot post 8, thereon, the match holder arm 7, pivoted at one end on said post, and having the match groove 11, and keeper spring 12, at its opposite end, the ignition plate 4, the latch post 15, recessed at its upper end, the pivoted latch lever, the lanyard 2, 2, connected with one end of said lever, the bell crank levers and connections, and the notched peg on the match holder arm, all adapted to operate, substantially as specified. 3rd. In an automatic fire starter, the combination, with the pivoted spring actuated match holder arm, having its outer end provided with a match receiving notch, of a spring keeper secured over said notch, the latch post notched at its upper end, the latch lever pivoted thereto, and the stop post 30, all substantially as specified.

No. 35,101. Grain and Seed Separator and Grader. (*Séparateur des grains, etc.*)

Walter S. Wood, Kalamazoo, Michigan, U.S.A., and Buckner F. Freeland, Vistula, Indiana, U.S.A., 1st October, 1890; 5 years.

Claim.—1st. In a grain and seed separator, of the character herein described, the combination of the hopper-bottom a^1, the slide or gate c, the arms e, e, pivotally attached thereto, the caps d, and d^1, having pivotal projections P, the screw g, with a threaded portion to engage in end of strap, f, journal box h, spring k, and hand wheel i, all substantially as shown and for the purpose as set forth. 2nd. In a grain and seed separator, of the character herein described, the combination of hopper-bottom a^1, the slide or gate c, having hooks or stirrups s, s, s, and the agitator n, having teeth n^1, the slotted arm x, the elbow-crank m, pivotally adapted to work in slot of arm x, cap d, and connecting rod r, all for the purpose as shown and described. 3rd. In a grain and seed separator, the shoe D, constructed with a hopper-bottom provided with the opening l, and wind-board w, the chessing-shoe C, also constructed with a hopper-bottom, and provided with the opening z, in combination, substantially as shown and described. 4th. In a grain and seed separator, the crank-wheel I, provided with the projecting rim G, and openings or recesses M, and M^1, the crank-pin disk L, having a pivotal bearing at j, and the

set-screw j^1, in combination, as shown and described. 5th. In a grain and seed separator, the combination of shoe E, having the grain board N, pivotally attached at T, and held in one of its positions by button a^2, the rock-shaft H, having pivotal bearings at each end and provided with the centrally located arm r, socket r^1, the boxes t, t, and arm y, all substantially as shown and specified. 6th. In a grain and seed separator, the combination of shoe D, spring supports F, rock-shaft H, arms u, u, pivotally connected to said shoe, arm y, connecting rod q, and crank-wheel I, as shown and described.

No. 35,102. Combined Revolving Grate and Hot Air Distributer. (*Grille tournante et distributeur d'air chaud combinés.*)

Walter Moberly, Archibald and Arthur F. Eden, all of Winnipeg, Manitoba, Canada, 1st October, 1890; 5 years.

Claim.—1st. The revolving grate D, secured to standard A, and working on centre B, on hearthstone K, and in bar C, at top, substantially as set forth. 2nd. The revolving grate D, secured to standard A, and working on centre B, on hearthstone K, and in bar C, at top, substantially as set forth, in combination, with movable hot air chamber or distributer R, having cold air ingress at a, a, and hot air egress at H, H.

No. 35,103. Knitting Machine. (*Machine à tricoter.*)

Kay & Co., (assignees of Adam Kay), all of Georgetown, Ontario, Canada, 1st October, 1890; 5 years.

Claim.—1st. The rings B, and D, fitted loosely around the cylinder A, on either side of the driving pinion C, to which the said rings are geared, in combination with a movable bolt F, arranged to connect the cylinder A, to either one of the rings B, or D, substantially as specified. 2nd. The rings B, and D, fitted loosely around the cylinder A, on either side of the driving pinion C, to which the said rings are geared, a movable bolt F, being arranged to connect the cylinder A, to either one of the rings B, or D, *in combination with* automatically operating mechanism designed to act on the gate H, substantially as specified. 3rd. The rings B, and D, fitted loosely around the cylinder A, on either side of the driving pinion C, to which the said rings are geared, a movable bolt F, being arranged to connect the cylinder A, to either one of the rings B, or D, in combination with the gate H, connected to the shank J, and the slide K, having a diagonal slot L in it, through which the pin M passes, the pivoted lever N, revolving sprocket wheel Q, and chain R, substantially as specified.

No. 35,104. Seeding Machine. (*Sémoir.*)

Thomas Henry Noxon, Ingersoll, Ontario, Canada, 1st October, 1890; 5 years.

Claim.—1st. The drag-bar shaft A, supported at its centre in a bracket fixed to the bottom of the tongue S, and supported at each end by a horizontal bar B, fixed to and projecting from the axle-bracket D, and diagonally braced by the bar C, extending from the end of the shaft A, to an arm E, projecting from the bracket D, substantially as and for the purpose specified. 2nd. A drag-bar shaft A, having a longitudinal groove a, or its equivalent, in combination, with the drag-bar clips G, held on the shaft A, so that they may be adjusted thereon without being permitted to revolve, substantially as and for the purpose specified. 3rd. The drag-bar head L, having a notched projection N, extending from it, substantially as and for the purpose specified. 4th. The drag-bar head L, having a notched projection N, extending from it, with a lip or lips d, formed on one or both sides of the said projection, substantially as and for the purpose specified. 5th. The drag-bar head L, having a notched projection N, extending from it, in combination with the upwardly extending projection O, formed upon the head of the cultivator tooth or hoe, substantially as and for the purpose specified. 6th. The drag-bar head L, having a notched projection N, extending from it, with a lip or lips d, formed on one or both sides of the said projection, in combination with the upwardly extending projection O, formed upon the head of the cultivator-tooth or hoe, substantially as and for the purpose specified. 7th. The drag-bar head L, having a notched projection N, extending from it, in combination with the upwardly extending projection O, formed upon the head of the cultivator tooth or hoe, and with the headed bolt Q, extending from the face of the projection P, and designed to fit into the elongated slot U, substantially as and for the purpose specified. 8th. The drag-bar head L, having a notched projection N, extending from it, in combination with the upwardly extending projection O, formed upon the head of the cultivator tooth or hoe, and with the headed bolt Q, extending from the face of the projection P, and fitting into the elongated slot U, a spring bolt V, designed to support the hoe or tooth, substantially as and for the purpose specified. 9th. The arm W, extending from the drag bar head L, and having a fork K, formed on it to receive the chain Y, in combination with the flange Z, extending from the side of the head of the cultivator tooth or hoe, substantially as and for the purpose specified.

No. 35,105. Clothes Dryer. (*Séchoir à linge.*)

Martin Sears, Ashburn, Ontario, Canada, 1st October, 1890; 5 years.

Claim.—In a clothes dryer, the combination of the angular post A, having feet a, the arms B, pivotally secured thereon, the slats C, and the legs D, pivotally secured at the ends of the arms, substantially as set forth.

No. 35,106. Railway Car. (*Char de chemin de fer.*)

Joel Bacon Low, San Francisco, California, U.S.A., 1st October, 1890; 5 years.

Claim.—1st. A convertible open and closed railway car, having seats with reversible backs, which when turned outwardly, close the lower portion of the car sides, and when turned inwardly, open said lower portion, and sashes so arranged as to close and to open the upper portion of the car sides, substantially as herein described. 2nd. A convertible open and closed railway car, having reversible seats with reversible backs, the latter of which by their own turning, and the turning of their seats, are adapted to be adjusted easily and accurately to close or to open the lower portion of the car sides, and sashes so arranged as to close and to open the upper portion of the car sides, substantially as described. 3rd. A convertible open and closed railway car, having sides of open frame work, reversible seats, and reversible seat backs, which when turned outwardly, close the lower portion of open frame work sides, and when turned inwardly, open said sides, and sashes housed in the reversible backs when said backs are turned inwardly, and adapted, when said backs are turned outwardly, to be raised therefrom, and to close the upper portion of the open frame work sides of the car, substantially as described.

No. 35,107. Curling Iron Heater. (*Réchaud pour fers à friser.*)

Robert Nicol, Jr., Chicago, Illinois, U.S.A., 1st October, 1890; 5 years.

Claim.—1st. A curling iron shield 1, having a support 2, located thereon. 2nd. The combination of a bracket composed of two arms 12, formed with loops, and a shield 1, supported thereby. 3rd. A shield for a curling iron, composed of a body portion 1, and radial ribs 3, projecting therefrom. 4th. A shield for a curling iron, composed of a body portion 1, a support composed of flange 2, and radial arms 3.

No. 35,108. Combined Clamp and Miter-Box. (*Serre joint et boîte à onglet combinés.*)

Horace Clarence Marsh, Rockford, Illinois, U.S.A., 1st October, 1890; 5 years.

Claim.—1st. In combination, a standard, a horizontal bracket jointed thereto, as shown, and capable of being turned perpendicularly downward, a turn-table pivotally mounted upon said bracket, and a miter-box secured to said turn-table, substantially as described, and for the purpose specified. 2nd. The herein-described combination miter-box and picture frame clamp, consisting essentially of a standard, a horizontal bracket jointed thereto, and capable of being turned perpendicularly downward, a turn-table pivotally mounted upon said bracket, as shown, and a miter-box secured to said turn-table, and provided with saw-guide pins and clamps, substantially as described and for the purpose set forth.

No. 35,109. Seat for Road Vehicles. (*Siège de voiture.*)

John Robert Kaufman, Waterloo, Ontario, Canada, 1st October, 1890; 5 years.

Claim.—A vehicle seat, having a back hinged to the body, and held by tension springs provided with means for adjusting their strength, substantially as and for the purpose specified.

No. 35,110. Cut-Off for Telephones. (*Interrupteur de téléphone.*)

Edwin Caun, Winnipeg, Manitoba, Canada, 1st October, 1890; 5 years.

Claim.—1st. A three-wire system of telephone communication, substantially as and for the purpose above set forth. 2nd. A three-wire system of telephone communication, having a non-electric conductor beam $7a$, working on centre pin $7b$, lever $7c$, with audophone holder $7e$, spring metal plates $7d$, $7d$, nut $7f$, studs $16a$, $16b$, $16c$, $16d$, $16e$, $16f$, $16g$ and $16h$, with wires, substantially as and for the purpose above set forth. 3rd. A three-wire system of telephone communication having a non-electric conductor beam $7a$, working on centre pin lever $7c$, with audophone holder $7e$, spring metal plates $7d$, $7d$, nut $7f$, stud $16a$, $16b$, $16c$, $16d$, $16e$, $16f$, $16g$ and $16h$, with wires in combination with electro-magnet 1, support 2, armature 3, support 4, point supporters 5 and 6, with points 17, 17, and wires, substantially as and for the purpose above set forth. 4th. The combination of non-electric conductor beam $7a$, working on centre pin $7b$, with lever $7c$, audophone holder $7e$, spring metal plates $7d$, $7d$, nut $7f$, studs $16a$, $16b$, $16c$, $16d$, $16e$, $16f$, $16g$ and $16h$, with wires, substantially as and for the purpose above set forth.

No. 35,111. Machine for Cutting Meat, etc. (*Machine à hacher la viandes, etc.*)

Hermann Albrecht, Philadelphia, Pennsylvania, U.S.A., 1st October, 1890; 5 years.

Claim.—1st. The combination to form the casing for a machine for cutting up meat, of a main casting, embodying a neck, a conical shell fitted to said neck and provided with a latch stud and a latch, the shank of which is mounted upon and capable of adjustment with reference to the main casting, substantially as set forth. 2nd. The combination to form the casing for a machine for cutting up meat, of a main casting embodying a neck provided with studs, a conical

shell fitted to said neck, embodying oblique channels in which said studs are entered, and means for locking said conical shell in desired positions of adjustment, substantially as set forth. 3rd. The combination, in a machine for cutting meat, of a screw, a main casting, embodying a hopper, a hopper outlet, and a stud-provided neck, a conical shell, embodying devices which co-operate with the screw to cut up meat fed thereinto, and also embodying oblique channels which are adapted to the studs of the neck of the casting, and an adjustable latch adapted to bind said conical shell to the main casting, substantially as set forth. 4th. The combination, in a machine for cutting up meat, of a screw, a main casting embodying a hopper, a hopper outlet and a stud provided neck, a conical shell embodying devices which co-operate with the screw to cut up meat fed thereinto, which shell is provided with a side lug, and also embodies oblique channels which are adapted to the studs of the neck of the casting, and a latch adapted to hook over the shell lug, and provided with a slot through which a locking screw passes to secure said latch to the main casting, substantially as set forth. 5th. The combination, in a machine for cutting up meat, of a main casting embodying a hopper, and a hopper outlet, a conical shell embodying devices which co-operate with the screw to cut up meat fed thereinto, and which shell is adjustably secured to the casting, and a screw extending across the bottom of the hopper and through the hopper outlet and conical shell, and which screw both feeds the meat forward from the hopper to the conical shell, and at the same time cuts it up, substantially as described. 6th. The combination, in a machine for cutting up meat, of a main casting embodying a hopper, a hopper outlet and a rib extending along its interior, a conical shell embodying devices which co-operate with the screw to cut up meat fed thereto, and which shell is adjustably secured to the casting, and a screw extending across the bottom of the hopper and through the hopper outlet and conical shell, and which screw, as to the part which lies within the conical shell is conical to conform to said shell, and as to the part within the hopper is of such size that its periphery is in contact with the above mentioned rib, substantially as set forth. 7th. The combination, in a machine for cutting up meat, of a main casting embodying a hopper, and a hopper outlet having marginal notches, a conical shell embodying devices which co-operate with the screw to cut up meat fed thereto, and which shell is adjustably secured to the casting, and a screw extending across the bottom of the hopper, and through the hopper outlet and conical shell, which screw, as to the part which lies within the conical shell is conical to conform to said shell, and as to the part which lies within the hopper outlet is of such size that its periphery is in contact with the edge of said outlet, substantially as set forth. 8th. In a meat cutter, in combination, the casting having the hopper with bottom rib and outlet, and having studded neck and adjustable latch, the conical shell having ribs, perforations, lugs and oblique channels, and the screw, conical within the conical shell and within the hoppur, making contact with the bottom rib and edge of outlet, substantially as set forth.

No. 35,112. Milk Aerator. (*Aérateur à lait.*)

Goodson Jeremiah Alford, Township of Bastard, Leeds, Ontario, Canada, 2nd October, 1890; 5 years.

Claim.—1st. In a milk aerator, the combination, with a perforated pail, of the weight E attached to one side of the top rim of the said pail, substantially as and for the purpose set forth. 2nd. In a milk aerator, a perforated pail, having a detachable bail to which a pulley is permanently secured, substantially as and for the purpose set forth. 3rd. In a milk aerator, the combination of the pail C, having a concave bottom D, perforations *d*, with the weight E, rim F, lugs *f*, engaged by the detachable spring bail G, having pulley H, the cord J and pulley K, substantially as and for the purpose set forth.

No. 35,113. Rotary Engine. (*Machine rotative.*)

Robert Charles Fisher, Toronto (assignee of Walter Herbert Avis, Dovercourt), Ontario, Canada, 2nd October, 1890; 5 years.

Claim—1st. In a rotary engine, the combination of an outer cylinder, provided with a steam inlet opening, and an exhaust opening, situate at about one-quarter of the circumferential distance from each other, cylinders attached to a bed piece formed on a central shaft, each cylinder being provided with piston heads, and piston adapted to work in a sleeve, and a helical spring attached to piston head and base of cylinder, the cylinders being built in or forming part of an inner casing with undulations or concavities formed on its surface, the convex portions of said inner casing being designed to fix close against the inner surface of the outer cylinder, and having openings therein to admit steam to the cylinder piston heads, a plunger or hollow inlet valve designed to be forced down when steam is admitted thereto by the sliding valve attached to the bent rod operated by a cam on the central shaft, which sliding valve is adapted to cut off or admit steam to the hollow inlet valve or plunger, the curved bottom of which impinges on the undulating surface of the inner casing, as it is caused to rotate, the steam, and rotating inner casing giving a reciprocating motion to the hollow inlet valve or plunger, substantially as described and specified. 2nd. In a rotary engine, the combination of valve chest R, steam inlet S, sliding valve *h*, head T, and curved rod *v* passing through outer casing G, and operated by cam W, in central shaft A, plunger or hollow inlet valve Q, with opening *b*, adapted to reciprocate in casing P, inner casing F, opening J and cylinders C, D and E, provided with pistons and piston heads K, helical springs N, and outer casing provided with inlet and exhaust ports, and drain outlet O, substantially as described and specified. 3rd. In a rotary engine, the combination of an inner casing F, having an undulating surface forming concavities and convexities, as shown, openings J, outer casing G and cylinders C, D, E, provided with piston heads K, pistons L, helical springs N, and sleeve M, and means for admitting steam to the piston heads and exhausting it therefrom through ports in the outer casing G, the bed B, central shaft A and cam W, which operates the curved rod U, connected with the valve *h*, which opens and closes the steam opening *g* in cylinder P, substantially as described and for the purpose specified. 4th. In a rotary engine, the combination of cylinder P and outer cylinder G, provided with inlet and exhaust ports, the hollow inlet valve or plunger Q, opening *g*, valve *h*, adapted to reciprocate through motion derived from central shaft A, valve chest R, and steam inlet S, substantially as described and specified.

No. 35,114. Water Heater.

(*Calorifère à eau.*)

The Consolidated Car Heating Co., Wheeling, West Virginia, U.S.A. (assignee of James Finney McElroy, Albany, N.Y., U.S.A.), 2nd October, 1890; 5 years.

Claim.—1st. In a water heater, consisting of a drum, provided with inlet and exit openings, substantially in line, a steam supply pipe connecting with a nozzle, having perforations on one side only, said nozzle being arranged in the line of water circulation, substantially as described. 2nd. In a water heater, consisting of a drum provided with inlet and exit openings substantially in line, a steam supply pipe entering said drum, connecting with a steam nozzle, provided with perforations on one side only, and arranged in the line of water circulation of a porous medium around said nozzle and the screens *k* and *l*, substantially as described. 3rd. In a water heater, the combination, with the casing, of semi-globular screens enclosing a porous medium, an open-figured steam nozzle, perforated on one side only, and located in the line of circulation between said screen, substantially as described. 4th. In a water heater, the combination, with the casing, semi-globular screens arranged with their convex faces towards each other, whereby they approach most nearly in the line of water circulation of the steam-supply pipe and nozzle perforated on one side only between the screens and surrounded by a porous medium, the parts being arranged to operate substantially as described. 5th. In a water heater, the combination of the casing with the semi-globular screens arranged with their convex faces towards each other, whereby they approach most nearly in the line of water circulation of the steam supply pipe and nozzle perforated on one side only, arranged between said screen, substantially as described.

No. 35,115. Water Heater.

(*Calorifère à eau.*)

The Consolidated Car Heating Co., Wheeling, West Virginia, U.S.A. (assignee of James Finney McEvoy, Albany, N.Y., U.S.A., 2nd October, 1890; 5 years.

Claim.—1st. In combination, with a hot-water circulating apparatus, a water heater, consisting of a series of flat hollow discs axially arranged, having central apertures arranged in the line of circulation of any outer casing, a steam space between and a suitable steam inlet and exit connection to said steam space, substantially as described. 2nd. A water heater, adapted to be used with a hot water circulating apparatus, consisting of an outer casing, having caps, steam inlet and outlet openings in said caps, of an inner water chamber having nipples at the ends secured in aperture in the said caps, said water chambers consisting of a series of wedge-shaped hollow discs centrally apertured and secured together, with the apertures in line, having the water spaces *a* connecting with said central apertures, substantially as described.

No. 35,116. Post Hole Auger.

(*Tarière à trou de pieu.*)

William Robert Baskitt (assignee of William Broadus Beagle,) both of Paris, Missouri, U.S.A., 2nd October, 1890; 5 years.

Claim.—1st. In a machine for boring post-holes, the combination, with a standard, and a rotatable sleeve mounted thereon, and having lateral arms *n*, *n*, one of which is provided with a screw-threaded opening, of an auger-bar mounted in said arms, and having its upper portion externally screw-threaded, and provided with a longitudinal key-seat, two horizontal cog-wheels loosely mounted on the auger-bar, two vertical cog-wheels or gears meshing with the horizontal cog-wheels and provided with a crank, a coupling engaged with the key-seat in the auger-bar, two vertical cog-wheels or gears meshing with the horizontal cog-wheels and provided with a crank, a coupling engaged with the key-seat in the auger-bar, and adapted to engage either of the horizontal cog-wheels, and an auger-bit on the lower end of the auger-bar, substantially as described. 2nd. In a machine for boring post-holes, the combination, with a hollow auger bar, having a number of air-openings near its lower end, of a washer or collar surrounding said openings and a key to hold said collar in place, substantially as described. 3rd. In a machine for boring post-holes, the combination, with the auger-bar and auger-bit, of a vertically-movable casing, having a closed top and surrounding the lower portion of the auger-bar, and a lever for raising and lowering said casing, substantially as described. 4th. In a machine for boring post-holes, the combination of the standard A, the rotatable sleeve J mounted on said standard and provided with a lock M, and lateral arms *n*, *n*, the auger-bar F, having a longitudinal key-seat *f*, and externally screw-threaded to engage screw-threads in one of the arms *n*, the cog-wheels *s*, *s*, *s*, *s*, crank T, the coupling V, engaged with the key-seat *f*, the bolt H, to engage said coupling with one of the horizontal cog-wheels, and the auger-bit G on the lower part of the auger-bar, substantially as described. 5th. In a machine for boring post-holes, the combination of the standard A, the platform C, having an opening E, the rotatable sleeve J, having arms *n*, *n*, the auger-bar F, bit G and the vertically-movable casing O, substantially as described.

No. 35,117. Process for Separating or Driving Out Refuse or Tar, resulting from the Manufacture of Illuminating Gas from Petroleum Oil. (*Procédé pour séparer, et exclure les rebuts ou goudron, résultant de la fabrication du gaz d'éclairage de l'huile de pétrole.*)

John M. Sparrow and Joseph H. Farr, both of Toronto, Ontario, Canada, 2nd October, 1890; 5 years.

Claim.—The principle or plan of reducing or evaporating the tar or refuse resulting from the manufacture of illuminating gas from petroleum oil, to consistencies suitable for the various purposes of roofing paint, roofing and paving pitches, or other purposes, by blowing or forcing heated air through said tar or refuse, as above described, or as it may be in various other ways done.

No. 35,118. Wrench. (*Clé à écrou.*)

George Henry French and William Clendinning, jr., both of Montreal, Quebec, Canada, assignees of Oramel Charles Stanley, Essex Junction, Vermont, U.S.A., 2nd October, 1890; 5 years.

Claim.—1st. In a wrench, the combination with the shank having a rigid jaw, and with the slide on such shank having a cavity, of a jaw inserted and held loosely in such cavity, and adapted to operate in connectinn with the rigid jaw on the shank, as set forth. 2nd. In a wrench, the combination, with the shank having a rigid jaw, and with the slide on such shank, having a cavity with a transverse guard or bar, of a jaw having a shank for insertion in such cavity, and cut away to receive such guard or bar, for the purpose set forth. 3rd. In a wrench, the combination, with the shank, ratchet-cut on one side and having rigid end jaws, and with the slide, one side of which has a rigid jaw formed in one with it, while the opposite side contains a recess and a cavity, of a ratchet-cut thumb trig pivoted in such recess, and a spring for operating same, and a loose jaw inserted and held loosely in such cavity, as set forth.

No. 35,119. Lumber Measure.

(*Mesure pour bois.*)

Alexander Cruickshank, Weston, Ontario, Canada, 2nd October, 1890; 5 years.

Claim.—1st. A ribbon of steel, or other suitable material, having stamped, or otherwise formed on its surface a series of divisions, substantially similar to the divisions on an ordinary lumber rule, each division representing one foot board measure or other fixed proportion in a board of a given length, for which the particular divisions may be marked, in combination with mechanism by which the movement of the ribbon, while measuring the width of a board shall act upon a counter, by which the board measure of all the pieces measured shall be automatically summed up and recorded, substantially as and for the purpose specified. 2nd. A ribbon A, having stamped or otherwise formed on its surface a series of divisions, substantially similar to the divisions on an ordinary lumber rule, each division representing one foot board measure or other fixed proportion in a board of a given length, for which the particular division may be marked, in combination with a disc arranged to engage with holes or projections made in the ribbon A, and so connected to a counter, that the movement of the ribbon shall cause the counter to move and record the quantity of lumber measured, substantially as and for the purpose specified. 3rd. A ribbon A, marked substantially as described, and wound upon the spring drum D, the said ribbon extending past and held against the roller E, in combination, with the disc C, having spokes B, radiating from it to engage with the elongated holes made in the ribbon A, and with counting mechanism, connected, as described, to the spindle of the disc C, substantially as and for the purpose specified. 4th. A ribbon A, marked substantially as described, and wound upon the spring drum D, the said ribbon extending past and held against the roller E, which is supported in suitable journals made in the adjustable plate H, in combination, with the disc C, having spokes B, radiating from it to engage with the elongated holes made in the ribbon A, and with counting mechanism, connected, as described, to the spindle of the disc C, substantially as and for the purpose specified. 5th. A ribbon A, marked substantially as described and wound upon the spring drum D, the said ribbon extending past and engaging with the disc C, which is journaled on a sleeve F, longitudinally adjustable upon the spindle G, in combination with the bracket N, and screw P, substantially as and for the purpose specified. 6th. A ribbon A, marked substantially as described and wound upon the spring drum D, the said ribbon extending past and engaging with the disc C, which is journaled on a sleeve F, longitudinally adjustable upon the spindle G, in combination with a bracket N, pointer Q, and adjustable screw P, substantially as and for the purpose specified.

No. 35,120. Cough Syrup. (*Sirop pour la toux.*)

Adéline Lucier, Winnipeg, Manitoba, Canada, 2nd October, 1890; 5 years.

Claim—A medical compound, or composition of matters, composed of any of the ordinary cucumbers, and granulated white sugar used for culinary purposes, and of alchol, number fifty, used for medical purposes, substantially in the proportion and purposes set forth.

No. 35,121. Fire Escape. (*Sauveteur d'incendie.*)

Henry Vieregg, Grand Island, Nebraska, U.S.A., 2nd October, 1890; 5 years.

Claim.—1st. In a fire escape, the combination, with a post or beam adapted to be set on the ground, of brackets secured to the upper end of the said post or beam, and a transverse bar held on the said brackets, and adapted to rest against the side of the building, substantially as shown and described. 2nd. In a fire escape, the combination, with a post or beam adapted to be set on the ground, of brackets secured to the upper end of the said post or beam, a transverse bar held on the said brackets, and adapted to rest against the side of the building, a pulley journaled in the upper end of the said post, and an endless rope or chain passing over the said pulley and extending downward, substantially as shown and described. 3rd. In a fire escape, the combination, with a post or beam adapted to be set on the ground, of brackets secured to the upper end of the said post or beam, a transverse bar held on the said brackets and adapted to rest against the side of the building, a pulley journaled in the upper end of the said post, an endless rope or chain passing over the said pulley and extending downward, and a drum mounted to turn in the lower part of the said post and over which passes the said rope or chain, substantially as shown and described. 4th. In a fire escape, the combination, of a post or beam, with brackets extending downward, and outward from the lower end of the said post, and extension legs held adjustably on the said brackets, substantially as shown and described. 5th. In a fire escape, the combination, with a post or beam, of brackets extending downward and outward from the lower end of the said post, extension legs held adjustably on the said brackets, a second set of brackets secured to the upper end of the said posts, and a transverse bar fastened to the said upper brackets and adapted to rest against the side of the building, substantially as shown and described. 6th. In a fire escape, the combination, with a post or beam, of brackets extending downward and outward from the lower end of the said post, extension legs held adjustably on the said brackets, a second set of brackets secured to the upper end of the said post, a transverse bar fastened to the said upper upper end of the said post, a transverse bar fastened to the said upper brackets, and adapted to rest against the side of the building, and suitable guy ropes and braces to strengthen the said beam, substantially as shown and described. 7th. In a fire escape, the combination, with a post, of a pulley journaled in the said post, a rope or chain passing over the said pulley and extending downward in the front and rear of the said post, and a brake mechanism held on the said post and adapted to brake the said rope or chain, substantially as shown and described. 8th. In a fire escape, the combination, with a post, of a pulley journaled in the said post, a rope or chain passing over the said pulley and extending downward in the front and rear of the said post, a brake mechanism held on the said post and adapted to brake the said rope or chain, and a drum journaled in the lower end of the said post and over and around which passes the said rope, substantially as shown and described.

No. 35,122. Clothes Line Prop and Stretcher. (*Tendeur et étai pour cordes à linge.*)

Charles C. McClaughry, Joliet, Illinois, U.S.A., 2nd October, 1890; 5 years.

Claim.—1st. A clothes line prop and stretcher, having a bracket plate, and a rocking plate attached thereto, which together are adapted to engage a clothes line at three points, and take up slackness in the line, substantially as set forth. 2nd. A clothes line prop and stretcher, comprised of a pole, a bracket plate fastened on the upper portion of the pole, having depending hooks projected from it, and a rocking plate pivoted near its center above the hooks on the bracket plate, and furnished with hooks near its ends, substantially as set forth. 3rd. A clothes line prop and stretcher, comprised of a pole, a bracket plate secured thereon, near its upper end, and aligning with the body of the pole, said bracket plate having downwardly projecting hooks from its lower end portion, and a rocking plate which has an inwardly-curved hook on the same side near each end, and is pivoted on the upper end of the bracket plate at the longitudinal center of the rocking plate, substantially as set forth.

No. 35,123. Corset Steel and Dress Stay.

(*Tige et busc de corset.*)

J. Bint, C. A. Crawford and J. H. Nelson, all of Toronto, Ontario, Canada, 2nd October, 1890; 5 years.

Claim.—A perspiration-proof corset-steel and dress stay, consisting of a strip of steel, coated with an elastic preparation, composed of powdered pumice stone, charcoal, oil, varnish, alcohol and turpentine, substantially as and for the purpose specified, and in the proportions hereinbefore set forth.

No. 35,124. Furnace for Metallurgical Operations. (*Fourneau à opération métallurgique.*)

Bernard Charles Lauth, Philadelphia, Pannsylvania, U.S.A., 3rd October, 1890: 15 years.

Claim.—A furnace for metallurgical operations, consisting of a heating or working chamber, having a fire-box, at each end thereof, supplemental chambers located outside the fire-boxes, flues in the walls of each fire-box, communicating with the supplemental chambers and with the heating chamber at the bridge-wall thereof, openings in the end walls of the fire-boxes forming communications between them and the supplemental chambers, and gas supply pipes located in the supplemental chambers and opening into the side flues, substantially as described, whereby a portion of the products of combustion from the fire-box is caused to pass into the supplemental chamber to heat the gas in the pipes therein, and to mingle with the gas delivered from the pipes in the flues, and the mingled products passed to the working chamber, as set forth.

No. 35,125. Scoop. (*Ecope.*)

Charles Noah Shaw, Petoskey, Michigan, U.S.A., 3rd October, 1890; 5 years.

Claim.—1st. The combination, with a cylindrical scoop, having a hollow handle, of a plunger and rod connected therewith, a cutter

secured so as to move over the face of the plunger, and means of turning said cutter, substantially as set forth. 2nd. The combination, with a cylindrical scoop, having a hollow handle, of a plunger, a rod connected to said plunger, a bar passing through the plunger, and rod, a blade attached to the rod to operate over the face of the plunger, and a knob for turning the rod and blade, substantially as set forth.

No. 35,126. Propeller Wheel.

(*Helice de propulsion.*)

Edwin Francis Pond, Holliston, Massachusetts, U.S.A., 3rd October, 1890; 5 years.

Claim.—The combination of the corrugations *c*, *c*, *c*, *c*, with propeller blades, substantially as and for the purpose hereinbefore set forth.

No. 35,127. Sharpener for Edge Tools.

(*Appareil pour aiguiser les outils tranchants.*)

Henry Leinbach Johnson, Reading, Pennsylvania. U.S.A., 3rd October, 1890; 5 years.

Claim.—1st. A sharpener for edge tools, consisting of a jaw A, provided with a sharpening medium, and pivoted to a fixed jaw B, the said jaw A, being adapted to swing through an opening in the fixed jaw, substantially as set forth. 2nd. In a sharpener for edge tools, the combination with a jaw B, of a jaw A, pivoted thereto, and provided with a sharpening medium, having a curved face *c*, substantially as set forth. 3rd. In a sharpener for edge tools, the combination with a part G, provided with a clamping mechanism, and having a fixed jaw B, with opening b^2, and vertical faces *b*, and b^1, of a jaw A, pivoted to the part G, and provided with a sharpening medium C, adapted to be swung through said opening b^2, substantially as set forth.

No. 35,128. Wall Pocket or Paper Holder.

(*Accroche sac ou porte-papier.*)

Charles Mee, Cortland, New York, U.S.A., 3rd October, 1890; 5 years.

Claim.—1st. The combination, with a back piece, a cross-piece secured thereto, and side pieces secured to said back piece and the cross-piece, of a front piece pivoted to the side pieces, and a spring attached to said cross-piece, and having an arm engaged with said front piece, substantially as set forth. 2nd. In combination, a back piece, a front piece hinged thereto, a spring for clamping the front piece to the back piece, and a device for locking the front piece in open position, substantially as set forth. 3rd. In combination, a back piece, a front piece hinged thereto, a spring for clamping the front piece to the back piece, and a device for automatically locking the front piece in open position, substantially as set forth. 4th. In combination, a back piece, a front piece hinged thereto, a spring secured to the back piece, and provided with an arm engaged with the front piece, a spring-actuated tooth for engaging said arm and locking the front piece in open position, and a push-pin for disengaging said spring-actuating tooth from the said arm, substantially as set forth.

No. 35,129. Watch Case Spring.

(*Ressort pour boîtes de montre.*)

James Harvey Fleming, Newark, New Jersey, U.S.A., 3rd October, 1890; 5 years.

Claim.—1st. The improved watch case spring, herein described, consisting of a sheet of spring metal, doubled, as described, one end being soldered to the face of said spring, and the other being provided with a laterally-projecting lip or spur, substantially as and for the purposes set forth. 2nd. The improved watch-case spring, herein described, consisting of a strap of sheet metal, doubled on itself, and forming a longitudinal slot to receive the holding pin, one end of said spring being provided with a lip or spur, and the opposite end being soldered to the face of said spring, substantially as and for the purposes set forth. 3rd. The improved watch-case spring herein described, consisting of a spring metal strap, bent on itself, one end being corrugated and soldered to the face of said strap, and the other end being provided with a lip or spur, substantially as and for the purposes set forth. 4th. The improved watch-case spring, herein described, consisting of parts *d*, *f*, forming a longitudinal slot, the part *d* having a series of corrugations, forming with the part *f*, pin-receptacles, substantially as and for the purposes set forth. 5th. The improved watch-case spring, herein described, consisting of parts *d*, *f*, one of which is provided with a lip *b*, and the other of which is bent, as at *o*, and soldered to the first, substantially as and for the purposes set forth.

No. 35,130. System of Loop-Fastening for Fences, etc. (*Système de lien pour clotures, etc.*)

Samuel Kilgore, Glen Allen, Ontario, Canada, 3rd October, 1890; 5 years.

Claim.—A system or method of loop-fastening for fences, or other purposes, consisting in the formation of a loop of suitable material, such as wire, by passing it over the end of a lever or brace, then passing the double wire around one post or upright, from front to back, then between the posts, and around the other post from back to front, the wires then separating and passing around the brace or lever, and having their ends twisted or knotted together, the tie thus formed being reinforced and made more rigid by the lowering and subsequent fastening of the external or free end of the lever, substantially as hereinbefore shown and described and as and for the purposes set forth.

No. 35,131. Gas and Air Mixer.

(*Appareil pour le mélange du gaz et de l'air.*)

John Williston Danforth and Robert William Clark, both of Buffalo, New York, U.S.A., 3rd October, 1890; 5 years.

Claim.—1st. In a gas and air mixer, the combination with a flaring open-mouthed case, having a cross brace f^1, f^1, across the mouth of the same, and a central collar or hub *f*, of a tubular portion *a*, rigidly secured to the collar *f*, and provided with a cap C, covering the gas adjusting device, a disk *g* mounted on the tube *a*, so as to be adjustable to or from the flaring mouth-piece, and a set-screw for securing it at any point when adjusted, a rod b^1, provided with a tapering point b^2, and with a screw-threaded head *b*, adapted to screw into the top of the opening, through the tube *a*, for adjusting the bar b^1, the tapering point b^2, of which projects through the opening in the portion a^2, substantially as and for the purposes described. 2nd. In a gas and air mixer, a flaring-mouthed case, having a cross-brace extending across the mouth of the same, and provided with a central supporting collar, in combination with a tubular portion *a*, rigidly secured to the cross-brace, so that its tapering end projects into the chamber *d*, the opening through said tube extending through to near the portion a^2, of the same diameter, and then tapering to a smaller opening at the outlet, an adjusting disk *g*, mounted on a portion *a*, a screw-cap C at its opposite end, and a gas-adjusting bar b^1, provided with a screw-head *b*, engaging with a screw in the opening in the tubular portion *a*, and provided with a tapering end b^2, having a finer taper than the opening in which it passes, substantially as described.

No, 35,132. Signal Light for Vessels.

(*Feu de signal pour vaisseaux.*)

Charles Herschel Koyl, Easton, Pennsylvania, and Frank Arthur Douglas Hancock, Savannah, both in the United States of America, 3rd October, 1890; 5 years.

Claim.—1st. In signal lights for vessels, the combination, with the usual colored port and starboard lights, of coloured supplementary side lights, visible only through a range including a predetermined number of points, to port or starboard respectively, and consisting of reflectors having the contour, or approximately the contour, of the segment, of a paraboloid fixed in the positions in which they will be visible throughout the range prescribed, and lamps located at points corresponding to the foci of the paraboloids, of which the said reflectors are segments, substantially as and for the purposes hereinbefore set forth. 2nd. In signal lights for vessels, two or more reflectors, formed as paraboloidal segments, placed on the side of the vessel at an angle to each other, so that the band of light reflected by one shall be at an angle to the band of light reflected by the other, and located and formed so that each shall be visible through a range of points different from that through which the other is visible, in combination with a lamp or lamps located at focal distances from said reflectors, substantially as and for the purposes hereinbefore set forth. 3rd. In signal lights for vessels, the combination of crossed or intersecting paraboloidal reflecting segments, formed and located on the vessel, so that each shall be visible through a range of points different from that through which the other is visible, with a lamp located in the common focus of the paraboloids of said reflectors or segments. 4th. The combination, with the two crossed or intersecting paraboloidal reflecting segments, of a lamp located in their common focus, serving at once both to illuminate the said reflecting sections, and also as the ordinary conventional port or starboard colored signal lights, as the case may be, substantially as and for the purposes hereinbefore set forth. 5th. In signal lights for vessels, a direction indicator, consisting of a paraboloidal reflecting segment formed and located or fixed on the vessel, as described, so as to be visible from the side as a band of light through a range including a predetermined number of points only, and a lamp located at a point corresponding to the focus of the paraboloid, of which the reflector is a segment, substantially as and for the purposes hereinbefore set forth.

No. 35,133. Chain Link. (*Chainon de chaine.*)

John W. Garland, Pittsburg, Pennsylvania, U.S.A., 3rd October, 1890; 5 years.

Claim.—As an improved article of manufacture, a chain link formed of a single piece of metal of uniform cross-section, one end portion of the piece being formed into a loop, and the free end twisted around its central portion only, and the other end portion of the piece formed into a loop, and the free end twisted about the first end portion, near the point where it is bent to form the cross-bar which surrounds the central portion, but said second end portion not engaging said central portion, substantially as described.

No. 35,134. Screw Cutting Device.

(*Machine à fileter les vis.*)

Henry Westbrook and Robert Burns, both of Woodstock, Ontario, Canada, 3rd October, 1890; 5 years.

Claim.—1st. In a screw-cutting device, the combination, with a series of die-holders pivotally connected to a divided face plate and held adjustably thereon, of a die held in each of the said die-holders substantially as described. 2nd. In a screw-cutting device, the combination, with a head mounted to turn, of a divided face plate fitted to slide on the said head, and a series of die-holders pivotally connected to the said divided face plate and held adjustably thereon, substantially as shown and described. 3rd. In a screw-cutting device, the combination, with a head mounted to turn, of a divided face plate fitted to slide on the said head, a series of die-holders pivotally connected to the said divided face plate and held adjustably thereon, and means, substantially as described, for opening and closing the

said divided face plate, as set forth. 4th. In a screw-cutting device, the combination, with a face plate, of a holder pivoted thereon and adapted to support the screw-cutting die, a slotted, segmental arm formed on the said holder, a screw screwing in the said face plate and passing through the slot in the said arm, and a set screw arranged in a post in the said face plate and adapted to engage the holder opposite the segmental arm, substantially as shown and described. 5th. In a screw-cutting device, the combination, with a pivoted holder, of a die fitted to slide in the said holder and provided with a transverse slot, a pin held in the said holder and passing through the said slot, and a set-screw screwing in the said holder against the outer end of the said die, substantially as shown and described. 6th. In a screw-cutting device, the combination, with a spindle and a head held thereon, of a divided face plate fitted to slide on the said head, die-holders pivoted on the said divided face plate and supporting the screw-cutting dies, levers engaging the said divided face plate and fulcrumed on the said spindle, and a cone-shaped collar fitted to slide loosely on the said spindle and adapted to engage the said levers, substantially as shown and described. 7th. In a screw-cutting device, the combination, with a spindle and a head held thereon, of a divided face plate fitted to slide on the said head, die-holders pivoted on the said divided face plate, and supporting the screw-cutting dies, levers engaging the said divided face plate and fulcrumed on the said spindle, a cone-shaped collar fitted to slide loosely on the said spindle and adapted to engage the said levers, and springs for moving the parts of the said divided face plate from each other, substantially as shown and described.

No. 35,135. Duplex Safety Envelope.

(Envelope de sûreté duplexe.)

Albert K. Minton, Denver, Colorado, U.S.A., 3rd October, 1890; 5 years.

Claim.—1st. A duplex safety envelope, having a contents receiving pocket, a sealing and enclosing flap therefor, a second pocket for receiving and guarding such flap, and a flap for such second pocket for sealing over both pockets and such first flap, substantially as described. 2nd. A duplex safety envelope, having outer sides or faces 1, 2, a central dividing wall or partition between such faces or sides, and flaps 3, 4, substantially as described.

No. 35,136. Nut Wrench. *(Clé à écrou.)*

George E. Clow, Pittsfield, Massachusetts, U.S.A., 3rd October, 1890; 5 years.

Claim.—1st. In a nut wrench, such as hereinbefore shown and described, a friction spring attached to the end of the shank within the handle, provided with an adjusting screw in said spring, which bears against the interior surface of said handle, as set forth. 2nd. The combination, in a nut wrench, having hollow handle 8, jaw 5, collar 6, depending lug 7, threaded portion 3 and shank 2, of the friction spring 10, set screw 11, head 12, substantially as hereinbefore shown and described, and as and for the purposes set forth.

No. 35,137. Horse Collar Pad.

(Coussinet pour colliers de cheval.)

Daniel Dean Buckles, Jamestown, Ohio, U.S.A., 3rd October, 1890: 5 years.

Claim.—1st. The combination of the metallic plate, and the lining or pad applied thereto, both of them being cut away at their centres, in combination with the arch which extends across the opening in the plate, and which is provided with the loop D, substantially as shown and described.

No. 35,138. Drying Kiln. *(Touraille.)*

Warren Spear Mayo and George Robertson, both of Ottawa, Ontario, Canada, 3rd October, 1890; 5 years.

Claim.—1st. In a kiln, for drying lumber, endless toothed conveyer-chains, having an upward inclination from their receiving to their delivery ends, in combination, with rails closely under-lying said chains, and carried upward around the delivery end of the chains, whereby the boards or strips under treatment are inverted in passing from the upper to the lower side of the chains, their constant separation maintained, and their easy delivery over the rails effected. 2nd. In a kiln for drying lumber, a pair of endless toothed chains arranged side by side, in combination with rails closely underlying said chains, and carried upward closely around the delivery ends of the chains, whereby the separation of the boards or strips is maintained during their movement along the top of the chains, their inversion effected during their delivery to the underlying rails, and their movement along the rails secured, while their separation is maintained.

No. 35,139. Wheel for Carriages.

(Roue de voitures.)

Julius Alphous Seyfert, (assignee of August Butscher and Max Finzel), all of Chemnitz, Empire of Germany, 3rd October, 1890; 5 years.

Claim.—Elastic wheels for carriages, perambulators, bicycles, tricycles, and such like, consisting of a hub, a suitable number, of curved steel spring-wires and a tyre, each of said curved wires or spokes being rigidly connected with one extremity to the hub, and with the other extremity to the tyre, substantially as and for the purpose set forth.

No. 35,140. Post, Rail-Tie, Beam, etc.

(Poteau, enrayoir, poutre, etc.)

Omar Alwin Stempel and Ferdinand Meyrose, both of St. Louis, Missouri, U.S.A., 3rd October, 1890; 5 years.

Claim.—1st. The combination of the metal frame, the filling and inclosure of imperishable material 5, that protects said frame from the inroads of moisture and rust, and said frame arranged to protect said structure from breakage, the said structure provided with holes for seating staples, and the staples that hold the wires to said posts, seated in said holes, substantially as and for the purpose set forth. 2nd. The combination of longitudinal metal rods, and girding wires connecting said rods, and a filling and inclosure of indestructible material 5, arranged to protect said frame from the inroads of moisture and rust, and said frame arranged to bind and hold said material from breakage, and hooks on the ends of said rods for preventing said wires from slipping off, substantially as set forth. 3rd. The combination of longitudinal metal rods and girding wires, having tie-coils embracing said rods, a filling and inclosure of indestructible material 5, arranged to protect said frame from the inroads of rust, and said frame arranged to bind and hold said material from breakage, and hooks on both ends of said rods projecting inwardly for preventing said wires from slipping off, substantially as set forth.

No. 35,141. Step for Vehicles.

(Marche-pied de voiture.)

George D. Lewis, Newport, Rhode Island, U.S.A., 3rd October, 1890; 5 years.

Claim.—1st. The herein-described step, the same consisting of a clip, having opposite aligning openings and opposite depending threaded ends, an arm having a reduced cylindrical portion threaded and passed through the aligning openings, and a nut for the arm, a curved truss terminating at its rear end in a tie-plate, having perforations for the reception of the terminals of the clip, nuts applied to said terminals under the plate, and a step-plate mounted upon the opposite end of the arm, and secured to the ends of the arms and truss, substantially as specified. 2nd. The combination, with an axle, of a clip of inverted U-shape mounted upon, embracing, and having its opposite terminals depending below the same, aligning openings formed in the clip and the axle, an arm terminating at its rear end in a threaded cylindrical portion passing through and beyond the openings, a nut upon the arm, a curved truss having its rear end terminating in a tie-plate, having openings for the reception of the terminals of the clip, nuts upon the terminals under the plate, which takes under the axle, a circular step, and a pair of bolts passing through the step, arm, and truss at the outer ends of the latter, said step having its periphery upwardly bent to form guards at diametrically opposite sides, substantially as specified.

No. 35,142. Clasp and Tag for Envelopes.

(Agrafe et étiquette pour enveloppes.)

Alfred L. Sewell, Evanston, Illinois, U.S.A., 6th October, 1890; 5 years.

Claim.—1st. A clasp for closing envelopes, comprising an adhesive tag, carrying a wire loop, and adapted to be cemented to an ordinary envelope, and an adhesive attaching-tag carrying a thin sheet-metal clasp-plate folded longitudinally upon itself, and having one folded part adapted to enter the loop of the adhesive tag, and be compressed, substantially as described. 2nd. A clasp for closing envelopes, consisting of two adhesive tags adapted to be cemented to an ordinary envelope, and each having at one edge, a wire loop, and a thin metal clasp-plate pivoted to one of said loops, and folded longitudinally upon itself, engaging both wire loops, and having one folded part adapted to be turned up and down, substantially as described.

No. 35,143. Adjustable Sick-bed Appliance.

(Appareil pour lits de malade.)

Thomas Erlin Kaiser and Jonathan Wilkinson, both of Oshawa, Ontario, Canada, 6th October, 1890; 5 years.

Claim.—The combination, of the frame A, cross beam B, and the lifting apparatus, consisting of the roller D, the pulleys, and the arrangement of ropes working in the adjustable apparatus entirely independent of the bed, except the connections mentioned in the foregoing specifications, substantially as and for the purpose hereinbefore set forth.

No. 35,144. Barrel, or Keg. *(Baril ou caque.)*

John J. Magee, London, Ontario, Canada, 6th October, 1890; 5 years.

Claim.—1st. As a new article of manufacture, a barrel or keg formed with the stays or strengthening bars S, S, substantially as shown and described, and for the purpose specified. 2nd. A barrel or keg, consisting of the rings B, B, hoops H, H, and the ends or end covers E, E, in combination, with the stays or strengthening bars S, S, substantially as shown and described, and for the purpose specified.

No. 35,145. Washing Machine.

(Machine à blanchir.)

Fred D. Harding, Baldwin, Maine, U.S.A., 6th October, 1890; 5 years.

Claim.—1st. In a washing machine, a pumping mechanism operated by the bars on which the washing-roll is carried, a corrugated bottom centrally located, and having an opening at the front and

rear, and stops near the front end to limit the forward movement of the roll, whereby an open space or chamber is formed at the front of the machine, all combined, substantially as and for the purposes set forth. 2nd. A washing machine in which are combined the following elements, the frame forming the support for the operative parts, a bottom centrally located and having an opening at the front and rear, a rubbing-roll movable over said bottom, and connected with and operating a pumping mechanism to throw a jet of water as described, and an open top chamber or recess at the front of the machine, having the detached inclined bottom G, all substantially as set forth. 3rd. In a washing machine, as described, the combination of the following elements, a corrugated bottom C, placed so as to leave a narrow transverse opening between it and the front rail, a rubber limited in its forward movement by suitable stops at the side of the casing so that it comes no farther than the front edge of said bottom, and a second bottom G, extending slightly under the forward edge of said bottom, substantially as and for the purpose set forth. 4th. In a washing machine casing or frame work A, the standard H, and bars M, swinging therein, the bottom C, centrally placed, and having at the front and rear an open space, between the rails, a stop to limit the forward movement of the bars, and a second bottom under the bottom C, whereby an escape passage is afforded, all substantially as set forth. 5th. In a washing machine, as set forth, a corrugated bottom not extending to the front rail, a rubbing roller limited in its forward movement over the forward edge of said bottom, a second bottom below the said bottom, so placed as to leave a water passage between the two, whereby an open space is left over the second bottom at the front of the machine, substantially as and for the purpose set forth.

No. 35,146. Cinder Shaker. (*Crible à cendres.*)

James Newton, Ottawa, Ontario, Canada, 6th October, 1890: 5 years.

Claim.—1st. A cinder sifter or shaker, made up of a box suspended on an axis, such as described, a cover, a grate, and two end slides, the former to remove the coal after being sifted, the latter to remove the cinders from the box when sifted away from the coal, substantially as set forth. 2nd. The combination in a cinder sifter, of the grate A, lying under and at right angles to the axis B, enclosed in a suitable receptacle, with slides E, and F, attached to such receptacle in the relative position to it, such as hereinbefore described, and substantially as and for the purposes set forth.

No. 35,147. Secondary Battery Plate.

(*Plaque de pile secondaire.*)

Thomas Palmer Whittier, Saginaw, Michigan, U.S.A., 6th October, 1890; 5 years.

Claim.—1st. A secondary battery element, or plate, composed of wires or strips intermeshed or interwoven in the form of a series of connected boxes or tubes, which constitute receptacles for the active material, substantially as and for the purpose hereinbefore set forth. 2nd. A secondary battery element, or plate, composed of wires or strips intermeshed or interwoven in the form of a series of connected boxes or tubes, for receiving the active material, and lining and stiffening strips for said tubes, substantially as and for the purposes hereinbefore set forth. 3rd. A secondary battery plate, or element, the body or framework, of which is composed of separately formed coils intermeshed or interwoven to form a series of connected tubes or boxes, substantially as and for the purposes hereinbefore set forth.

No. 35,148. Expanding Mandrel.

(*Mandrin d'expantion.*)

Joseph Daniel Ovide Dubrule, Montreal, Quebec, Canada, 6th October, 1890; 5 years.

Résumé.—Dans un mandrin d'expantion, la combinaison de l'essieu A, le cone stationaire F, le cone ajustable F^1, le segment ou coin B, les rondelles E et l'ecrou C, convenablement arrangé tel que decrit ci-dessus et pour les fins indiquées.

No. 35,149. Fuse Cap Fastener.

(*Attache pour bonnets de fusée.*)

Nathan W. Moodey, Fresno City, California, U. S. A., 6th October, 1890; 5 years.

Claim—As an improvement in means for fastening caps on giant powder fuses, the implement made, essentially, in the form of pliers the same having jaws F, and G, which are semi-circular, and beveled, and also provided, respectively, with a tongue and groove arranged in the transverse middle of their free ends and adapted to engage, as shown and described.

No. 35,150. Tree Pruner Head. (*Sécateur.*)

Augustus Richard Woodyatt, Guelph, Ontario, Canada, 6th October, 1890; 5 years.

Claim.—The improvement in tree pruner heads, consisting of a socket of malleable or annealed iron or other suitable metal, provided with slots which allow of its being expanded or contracted, so as to clasp tightly the rod to which it is attached, as hereinbefore described and illustrated in the drawings.

No. 35,151. Portable Forge. (*Forge portative.*)

Albert Edwin Dain, Pittsburg, Pennsylvania, U.S.A., 6th October, 1890; 5 years.

Claim.—1st. A forge-bellows, formed of two separate compartments, either of which is adapted to be expanded, when the other is contracted, whereby a constant draught is had, substantially as and for the purpose herein set forth. 2nd. In a portable forge, provided with a suitable fire-hearth, the combination of the bellows, substantially as described, and means for contracting and expanding either section alternately, whereby a constant draught is had, the valves attached to the nozzle of either section respectively, and the air-chamber connected by a pipe or tube with the tuyere, substantially as and for the purpose set forth.

No. 35,152. Manufacture of Copper.

(*Traitement du cuivre.*)

Sir Henry Hussey Vivian, Baronet, Swansea, Wales, 6th October, 1890; 5 years.

Claim.—1st. The employment of tartaric acid in the manufacture of copper, substantially as herein described. 2nd. The purification of copper by the preparation from an impure metallic copper, or from matter or from a copper solution or precipitate of a finely divided oxide of copper, treating the said oxide with tartaric acid or other like organic acid or salt of an organic acid, in such manner as to dissolve out, and separate therefrom metallic impurities such as arsenic, antimony, gold and silver, and finally reducing the oxide of copper to the metallic state. 3rd. The process or combination of processes, consisting in calcining oxide of copper with common salt, and then treating the said oxide with tartaric acid or other like organic acid or salt, in such manner as to dissolve out and separate metallic impurities therefrom.

No. 35,153. Fluid Meter. (*Compteur à fluide.*)

Henry Herbert Sporton and Ernest White, both of London, England, 6th October, 1890; 5 years.

Claim.—1st. In a fluid meter, operated by the impingement of streams or jets of fluid upon the vanes of a fan, the employment of two series of openings *f*, and *g*, through the openings of one of which series the fluid is free to pass at all times, while the other series of openings is controlled by a valve *j*, which will open automatically by the pressure of the fluid itself when large quantities of fluid are passing, substantially as described. 2nd. In a fluid meter of the kind hereinbefore described, provided with two series of openings *f*, *g*, the employment of an automatic valve *j*, for controlling the passage of fluid through one set of the said openings, substantially as described. 3rd. In a fluid meter, provided with inlet *b*, and outlet *c*, the combination with a fan *d*, and removable plate *e*, having small openings *f*, and large openings *g*, of a valve *j*, having a spring *i*, for the purpose set forth.

No. 35,154. Manufacture of Portland Cement. (*Fabrication du ciment de Portland.*)

William Henry Eugene Bravender, Napanee Mills, Ontario, Canada, 6th October, 1890; 5 years.

Claim.—1st. A Portland cement, consisting of marl and clay of the description, and in the proportions set forth. 2nd. A Portland cement, composed of a natural marl, containing 90 to 98, per cent. of carbonate of lime, and a pure clay containing 50 to 65 per cent. of silica, and 20 to 30, per cent. of alumina mixed in the proportions of 20 to 30, per cent. of clay to 70 to 80, per cent. of marl, substantially as set forth.

No. 35,155. Process of Softening and Subduing Refractory Ores. (*Procedé pour ramollir et réduire les minerais refractaires.*)

John L. Hopper, Sarcoxie, Missouri, U.S.A., 7th October, 1890; 5 years.

Claim.—1st. The herein described composition of matter to be used for disintegrating or subduing refractory ore, consisting of water, salt, and saltpeter, in the proportions specified. 2nd. The process of softening and subduing refractory ores, consisting in fusing or bringing said ore to a red heat, and then subjecting it to a bath, composed of a solution of salt, saltpeter, and water, substantially as specified.

No. 35,156. Liniment. (*Liniment.*)

José Esquinaldo, Key West, Florida, U.S.A., 7th October, 1890; 5 years.

Claim.—The herein described medical compound, consisting of olive-oil, calomel, lime-water, and aguardiente, (or Spanish rum,) combined in the proportions, substantially as described.

No. 35,157. Ointment. (*Onguent.*)

Remi Destrampe, Parish of St. Cuthbert, Quebec, Canada, 7th October, 1890; 5 years.

Claim.—An ointment, composed of the gum of white pine bark, olive oil, turpentine, yolks of eggs, and starch, mixed together, substantially in the manner and proportions, and for the purposes set forth.

No. 35,158. Compound for Preventing Incrustation in Boilers. (*Préventif contre l'incrustation dans les chaudières à vapeur.*)

David Richardson Boogher, St. Louis, Missouri, U.S.A., 7th October, 1890: 5 years.

Claim.—A boiler compound, consisting of extract of hemlock, gambia, sumac, wormwood, eucalyptus, and salts of tartar, mixed together in about the proportions named.

No. 35,159. Band Securing Mechanism for Grain Binders. (*Appareil noueur pour lieuses à grain.*)

John S. Davis, Cleveland, Ohio, U. S. A., 7th October, 1890; 5 years.

Claim.—1st. The combination of the knotter, the reciprocating cord holder, and the laterally-moving guide-bracket in which it is mounted, a spring to press the bracket away from the knotter, an adjustable stop to limit its outward movement, and a fixed stop to limit its movement toward the knotter, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of the guiding horn I^1, the bar D, reciprocating across the recess under the horn, and the spring actuated bar E, which follows the bar D, partly across the recess holding the cord end until it is freshly gripped between the bar D, and the horn. 3rd. The combination of the guiding-horn I^1, the bar D, reciprocating across the recess under the horn, and inclined at its front end to ride under the cord, the hooks or clamping-abutment d^1, d^2, on the upper surface of the bar, and the spring actuated bar E, against the end of which the abutment bears to clamp the cord, substantially as set forth. 4th. The combination of the guideway and its fixed horn I, with the reciprocating bar D, inclined and rounded at its front end, and formed with projecting hooks or abutments on its upper side, and a recess or throat on its lower side, substantially as hereinbefore set forth. 5th. The combination of the bar D, inclined and formed with a clamping hooked projection on its front end, the clear grooved, dividing said hook into two separate parts, the spring actuated bar E, formed with a tongue E^1 on its front end, that slips into the groove, and having the shoulders at each side of the tongue shaped to fit into clamping-hooks on the bar D, substantially as hereinbefore set forth. 6th. The combination of the knotter, a laterally-moving guide-way, a cord-holder consisting of bars D, and E, mounted therein, the horn I, and shear i^2, mounted on the guide-way, which is adapted to be drawn toward the knotter by the cord held in the grasp of the holder, with a spring H, which urges the holder away from the knotter, and means by which its force may be adjusted, substantially as and for the purpose hereinbefore set forth.

No. 35,160. Heating Device.

(*Appareil de chauffage.*)

Matthew Evans, Toronto, Ontario, Canada, 8th October, 1890; 5 years.

Claim.—1st. The combination with a pipe or flue, supplied with air and extending into an apartment of one or more gas-jets located in the said pipe or flue to secure the direct heat of the gas-jet for the purpose of heating the air, substantially as and for the purpose specified. 2nd. A pipe or flue supplied with air and extending into an apartment, in combination with a gas supply pipe having a series of small perforated pipes projecting from it and extending across the air-pipe or flue, substantially as and for the purpose specified. 3rd. A pipe or flue supplied with air and extending into an apartment, a gas supply pipe having a series of small perforated pipes projecting from it and extending across the air-pipe or flue, in combination with a cut-off cock arranged to regulate the supply of gas for the perforated pipes, substantially as and for the purpose specified. 4th. A chamber formed in or connected to an air-pipe or flue supplied with air and extending into an apartment, a water-pan located in the said chamber, a series of perforated pipes extending across the mouth of the air-pipe or flue entering the said chamber, in combination with a gas supply pipe, connected to the perforated pipe and provided with a cut-off cock, substantially as and for the purpose specified. 5th. A chamber formed in or connected to an air-pipe or flue supplied with air extending into an apartment, a water-pan located in said chamber, a series of perforated pipes extending across the mouth of the air-pipe or flue entering the said chamber, in combination with a gas-supply pipe connected to the perforated pipes and provided with a cut-off cock, a damper located in the air-pipe or flue between the said damper and the apartment to which the air-pipe or flue extends, substantially as and for the purpose specified.

No. 35,161. Brush. (*Brosse.*)

Jerome Rich and Stephen A. Welling, both of Jackson, Michigan, U.S.A., 8th October, 1890; 5 years.

Claim.—A brush-body, having bristles projecting through two of its surfaces, and a series of water passages between the clusters of fibers, combined with an elastic back-band attached to the ends of the brush-body, said elastic band adapted to be stretched so as to receive between the brush-body, and said band, a bar of soap, and to contract thereon, as and for the purposes specified.

No. 35,162. Chemical Fire Extinguishing Apparatus. (*Appareil chimique pour extincteurs d'incendie.*)

The Worcester Fire Appliance Company, (assignees of Clarence Richmond Macomber), all of Worcester, Massachusetts, U.S.A., 8th October, 1890; 5 years.

Claim.—1st. As a new article of manufacture, a chemical fire-extinguishing apparatus or pail to contain chemical fire-extinguishing material, and provided with an easily perforated cover, and means for securing said cover in place to hermetically seal the contents of the pail, substantially as set forth. 2nd. In a chemical fire-extinguishing apparatus, the combination, with a glass or transparent receptacle, and a chemical fire-extinguishing liquid hermetically sealed within said receptacle by a tin-foil or easily perforated cover, of a metallic protecting case for inclosing said receptacle, and means for securing the receptacle within said case, substantially as set forth. 3rd. In a fire-extinguishing apparatus, the combination, with a receptacle for holding fire-extinguishing liquid, provided with a screw-thread upon its upper exterior surface, an inwardly projecting flange or shoulder, and an upward projection, and a tin-foil or easily perforated cover adapted to extend over the top of said receptacle, and a screw-ring to screw onto the top of the same, to secure the easily-perforated cover on the receptacle, and hermetically seal the contents thereof, of a metal case for inclosing said receptacle, and detachable therefrom, and provided with ears, and a wire handle with bent ends to move out and in said ears for the purpose stated, substantially as set forth. 4th. In a fire-extinguishing apparatus, the combination, with a receptacle for holding a fire-extinguishing liquid, having a screw-thread upon its upper exterior surface, and an inwardly projecting flange or shoulder, and a tin-foil or easily perforated cover, and a screw-ring for securing said cover to the receptacle to hermetically seal the contents thereof, of a metal case for inclosing said receptacle and detachable therefrom, and provided with a handle, and means for holding the receptacle in said case, and a slip-cover, adapted to extend over the easily-perforated cover, and means for automatically removing said slip-cover preparatory to using the apparatus, substantially as set forth. 5th. In a fire-extinguishing apparatus, the combination, with a receptacle and a fire-extinguishing liquid hermetically sealed within said receptacle, by a tin-foil or easily perforated cover, and means for securing said cover on the top of the receptacle, and a metallic slip-cover to fit over and protect the easily perforated cover, of a metallic protecting case for inclosing said receptacle, and provided with a handle, and means for securing said receptacle within said protecting case, substantially as set forth. 6th. In a fire-extinguishing apparatus, the combination, with a receptacle and a fire-extinguishing liquid hermetically sealed within said receptacle by a tin-foil or easily perforated cover, and means for securing said cover on the top of said receptacle, and a metallic slip-cover provided with a chain or cord for engagement with a hook or its equivalent to automatically remove said cover, of a metallic protecting-case for inclosing said receptacle and detachable therefrom, and provided with a handle and means for securing said receptacle within said protecting case, substantially as set forth.

No. 35,163. Gong Bell. (*Gong.*)

Charles Orland Clark, Cote St. Paul, Que., Canada, (assignee of Wilbur Fisk Starr, East Hampton, Conn., U.S.A., 8th October, 1890: 5 years.

Claim.—1st. In a gong-bell, the combination of the base A, and the actuating lever D hung thereon, and constructed with a toothed segment H, the hammer having its hub constructed with teeth *a*, *b*, adapted to engage and escape from the teeth of the segment, the pivot upon which the hammer is hung constructed as a part of the arm secured to the base distant from the pivot-point of the hammer, substantially as described. 2nd. In a gong-bell, the combination of the actuating lever D, the hammer having its hub I, constructed with teeth *a*, *b*, the hammer hung upon a pivot on the base, and the ductile wire stop *f* fixed to the base distant from the said hub, but extending into the path of the hub, substantially as and for the purpose described.

No. 35,164. Clinometer. (*Clinomètre.*)

William Brown Melick, Fred C. Exter, and Thomas J. Cheney, all of St. Louis, Missouri, U.S.A., 8th October, 1890; 5 years.

Claim.—1st. A clinometer, comprising a case 1, having an arbor bearing 12, the spring plate, having an arbor bearing 10, and a push-knob 21, the arbor 11, and the eccentrically weighted circular plate, having a scale, substantially as described. 2nd. A clinometer, comprising a case 1, having an arbor-bearing 12, the spring plate having an arbor-bearing 10, and a push-knob 21, the arbor 11, the pointers 17, and the eccentrically-weighted circular plate having a scale on the face thereof, substantially as described. 3rd. A clinometer, comprising a case 1, having an arbor bearing 12, the spring plate, having an arbor bearing 10 and a push-knob 21, the arbor 11, the pointers 17 and the eccentrically-weighted circular plate 14, having an inclination scale 16 and a grading scale 19 on the face thereof, and mounted on the arbor, substantially as described. 4th. A clinometer, comprising a case 1, having a bearing 12, the bar 6, the spring plate 9, having the bearing 10, and push knob 21, the arbor 11, and the eccentrically weighted circular plate 14, having a scale on the face thereof and mounted on the arbor, substantially as described. 5th. A clinometer, comprising a square case 1, having a circular recess 2, formed with annular steps 3, 4, the lining 5, the bearing 12, the diagonal bar 6, the spring plate 9, having the bearing 10, and the push knob 21, the arbor 11, the eccentrically weighted circular plate 14, having an inclination scale 16, and a grading scale 19, and the pointers 17, substantially as described.

No. 35,165. Back-Stay for Carriage Tops.

(*Renfort pour convertures de voiture.*)

Daniel Conboy, Toronto, Ontario, Canada, 9th October, 1890; 5 years.

Claim.—A short steel strip A, inserted into the back-stay C, in combination with a strap D, fixed to the back-stay A, to connect it to the lazy-back E, substantially as and for the purpose specified.

No. 35,166. Water Filter. (*Filtre.*)

Chester Birge Davis and Henry Riddell, both of Chicago, Illinois, U.S.A., 10th October, 1890; 5 years.

Claim.—1st. In a water filter, the filter tank, in combination with a series of vertically movable delivery pipes, arranged within the tank, and perforated, as described, and actuating devices, whereby said pipes may be moved up and down through the filter bed within the tank to wash the filter bed without removing it from the tank, substantially as and for the purposes specified. 2nd. In a water filter, the tank, in combination with the radial perforated arms, the hydraulic cylinder, the piston within the said cylinder, the inlet pipe and the hollow piston stem, to which said perforated arms are connected, substantially as and for the purposes specified. 3rd. In a water filter, the combination, with the filter tank, of vertically-

movable distributing pipes, arranged within the tank, a hydraulic cylinder or cylinders connected to said pipes to operate the same, and an automatic valve mechanism, controlling said cylinder or cylinders, substantially as and for the purposes specified. 4th. In a water filter, the filter tank, in combination with a vertically movable distributor, provided with radial distributing arms, perforated, as described, arranged within the tank, and actuating devices, whereby said distributor may be moved up and down through the filter bed, within the tank, and at the same time rotated or oscillated to wash the filter bed without removing the same from the tank, substantially as and for the purposes specified. 5th. In a water filter, the combination, with the filter tank, of the distributor G, H, the hydraulic cylinder and piston F, F^1, and the supplementary stationary wash pipes E^3, substantially as and for the purposes specified. 6th. In a water filter, the combination, with the filter tank A, of the inlet pipe E^1, provided with either a spiral or serpentine spline e^1, the hub G, having a groove *g* to receive said spline, the radial arms H connected to the hub, and a device to move the hub up and down on the inlet pipe, substantially as and for the purposes specified. 7th. In a water filter, the combination, with the filter tank A, of the hydraulic cylinder and piston F, F^1, the distributor G, H, connected to said piston, and an indicator *l* connected to the piston and arranged to show the position of the distributor in the tank, substantially as and for the purposes specified. 8th. In a water filter, the combination, with the filter tank A, of the vertically movable distributor, the hydraulic cylinder and piston F, F^1, the pipes F^3, F^4, the cylinder supply pipe F^2 and a valve J to turn the pressure fluid from the pipe F^2, into either of the pipes F^3, F^4, substantially as and for the purposes specified. 9th. In a water filter, the combination, with the valve case I, of the pipes F^2, F^3, F^4, connecting with said case, a valve J controlling the connections of the pipes F^3 and F^4, with the case, the vertically movable distributor G, H, within the tank, the hydraulic cylinder, and piston F, F^1, and a valve shifting device for the valve J, operated automatically by the movement of the piston F^1, substantially as and for the purposes specified. 10th. In a water filter, the combination, with the double walled valve case I, having the inner partitions i^2, i^3, and ports i^7, i^8, i^9 and i^{10}, of the sliding valve J, having the two valve disks j^1, j^2, the water pressure supply pipe F^2, the pipes F^3 and F^4, connecting the valve case with the respective ends of the hydraulic cylinder, the cylinder and piston F, F^1, the water distributor within the tank and connected to the piston F^1, and the waste pipe F^5, substantially as and for the purposes specified. 11th. In a water filter, the combination, with the hydraulic cylinder F, of the piston F^1, to which the water distributor within the tank is connected, the weight L, also connected to the said piston, the lever M, provided with the projections *m*, m^1, valve J connected to said lever valve case I, water pressure supply pipe F^2, and pipes F^3, F^4, connecting said case with the cylinder F, substantially as and for the purposes specified. 12th. In a water filter, the combination, with the collector C, of the strainers D, each consisting of a slotted tube or cage *d*, d^1, d^2, a spiral spring D^1 coiled around the exterior of said tube, an adjustable sleeve D^2, and a bearing cap D^3, substantially as and for the purposes specified. 13th. In a water filter, the combination, with the filter tank, of one or more vertically movable cylinders, provided with perforated delivery pipes within the tank, a beam or beams above the tank to which said cylinders are connected, and hydraulic actuating cylinders having their piston rods connected to said beam or beams to operate the same, substantially as and for the purposes specified. 14th. In a water filter, the combination, with the filter tank, of vertically movable cylinders arranged in pairs and provided with perforated delivery pipes within the tank, a beam to which the upper ends of each pair of cylinders are connected, and two hydraulic cylinders for each beam mounted on the side of the filter tank, and having their piston rods connected to the respective ends of the beam, substantially as and for the purposes specified. 15th. In a water filter, the combination with the distributing cylinders and the operating beam to which they are pivoted, of hydraulic cylinders for operating said beam, and equalizing mechanism, substantially as described, connected with the beam and adapted to regulate the action of the cylinders, substantially as and for the purposes specified.

No. 35,167. Game. (*Jeu.*)

Alfred Cousen, Detroit, Michigan, U.S.A., 10th October, 1890; 5 years.

Claim.—1st. A game, comprising a bat, consisting of the handle A, ring B and heads C, C^1, and darts comprising a body E, and feathers H, arranged at different angles to said body, substantially as described. 2nd. A game, comprising a bat, consisting of the handle A, ring B, heads C^1, C^1, bells D, and darts, consisting of the body E, having the rounded base, the flat top G, the feathers H, arranged in said top at different angles, whereby a gyrating motion is given to the dart, substantially as described.

No. 35,168. Curry Comb. (*Etrille.*)

John Henry Stapleton, Detroit, Michigan, U.S.A., 10th October, 1890; 5 years.

Claim.—1st. In a curry comb, composed of a back formed of sheet metal, with flanged edges, two central blades formed of a single piece of sheet metal, with a base extending under the flanges on the edge of the back and clamped thereby, and intermediately fastened to the back, and two curved outer blades of sheet metal secured to the back by having flanges formed at their base, which are clamped under the flanges on the edge of the back, and having their ends united to the ends of the inner blades, substantially as described. 2nd. A curry comb, composed of a sheet metal back A, having flanged edges C, two central blades B, B, formed of one piece of sheet metal, with a base H, clamped at the ends under the flanged edges of the back, and secured to the back by intermediate rivets E, and two outer curved blades B^1, B^1, of sheet metal provided with flanges I, at their base, secured by clamping under the flanged edges of the back, and riveted together at their ends with the ends of the central blades, and the apertures G in the ends of the pockets formed between the central and outer blades, substantially as described.

No. 35,169. Door Bell Mechanism. (*Mécanisme pour timbres de porte.*)

Albert F. Rockwell, Bristol, Connecticut, U. S. A., 10th October, 1890; 15 years.

Claim.—The combination, with a door, of a door-bell mechanism, provided with a lever for winding up the main spring of the door bell mechanism, and two springs O and R, each connected to the lever, and a pull-wire P, connected to the door, whereby the opening of the door will wind the main spring, and its closing will be caused by the recoil of the springs, all the parts being arranged and operating substantially as set forth.

No. 35,170. Method of Burning Gas Tar and other Liquid Fuels. (*Methode de brûler le gaz de goudron, et autres liquides combustibles.*

William Bliss and Enoch Bradbury, both of Chipping Norton, County of Oxford, and Arthur Henry Gibson, Birmingham, all in England, 10th October, 1890; 5 years.

Claim.—1st. The herein described improved method of burning gas, tar, or other liquid fuel in steam boiler and other furnaces, which consists in injecting the tar or other liquid fuel into the furnace in a fine stream, which is automatically moved about over the incandescent surface, so as to be evenly, or nearly evenly distributed thereon, substantially as set forth. 2nd. In apparatus for carrying out the method claimed by the preceding claim, the employment of a nozzle through which the gas, tar, or other liquid fuel issues, the said nozzle having an automatic compound motion, so as to deliver the liquid fuel over the different parts of the incandescent surface at regularly recurring intervals, for the purpose and substantially as hereinbefore set forth. 3rd. Mechanism, arranged to operate, substantially as described, so as to impart a combined lateral and angular, or circular, and up and down movement to the nozzle, through which the liquid fuel issues in a fine stream, for the purpose described.

No. 35,171. Perfume Holder. (*Porte-bouteille à parfum.*)

Herman Tappan, City of New York, N.Y., U.S.A., 10th October, 1890; 5 years.

Claim.—1st. A perfume holder, comprising a base, a glass bottle or flask supported on the said base, a collar fitted into the neck of the said bottle or flask, and rods connecting the said base with the said collar to hold the several parts together, substantially as shown and described. 2nd. A perfume holder, comprising a base, a bottle supported on the said base and provided with a threaded neck, a collar held on the said neck, bent rods connecting the said collar with the said base, and a cap screwing on the said threaded neck against the said collar, substantially as shown and described. 3rd. A perfume holder, comprising a base, a bottle supported on the said base and provided with a threaded neck, a collar held on the said neck, bent rods connecting the said collar with the said base, a cap screwing on the said threaded neck against the said collar, and a bail held on the said collar for conveniently holding the holder, substantially as shown and described. 4th. A perfume holder, comprising a base, a bottle supported on the said base and provided with a threaded neck, a collar held on the said neck, bent rods connecting the said collar with the said base, a cap screwing on the said threaded neck against the said collar, and a packing ring held in the said cap and adapted to pass over the cork in the neck of the bottle, substantially as shown and described.

No. 35,172. Car Coupling. (*Attelage de chars.*)

John W. Vaughan, Syracuse, N.Y., U.S.A., 10th October, 1890; 5 years.

Claim.—1st. The combination of a draw-head, provided with the raised boss *t*, and the recesses *s*, *s*, *h* and *i*, and pin-hole *j*, a pin provided with trunnions *f*, adapted to be journalled in the said recesses *s*, *s*, and having a head adapted to swing in front of the boss *t*, and a point to swing in the recesses *h* and *i*, and an uncoupling lever *k*, journalled to the car and adapted to engage the head of the pin, substantially as shown and described. 2nd. The combination of a draw-head, having the boss *t*, and recessed, as described, a pin having trunnions journalled in the said boss, and an uncoupling lever *k* journalled to the car at each side of the draw-head, below the level of the top thereof, and having an upward bend over the draw-head, and weighted arms at the sides of the car, substantially as shown and described.

No. 35,173. Combined Vaporizer and Inhaler. (*Evaporateur et inhalateur combinés.*)

Charles Lince Coulter, Lindsay, Ontario, Canada, 10th October, 1890; 5 years.

Claim.—1st. In a combined vaporizer and inhaler, the combination of the cylindrical stand A, with base *a*, handle A^1, aperture a^1, and perforations a^{11}, the boiler B, with flange *b*, and cylindrical wide mouthed neck b^1, the bent tube *D*, having the capsule mouth *d* and union mouthed bulb d^1, sponge D^1 in said bulb, tube E, having union to connect with said bulb, and having the mouth piece *e* and the lamp C, substantially as set forth. 2nd. In a combined vaporizer and inhaler, the combination of the cylindrical stand A, having a suitable base, and an aperture for the insertion of a heating lamp, the boiler B, having flange *b*, by which it is suspended into said stand, and having a cylindrical wide-mouthed neck b^1, the tube D,

provided with capsule end adapted to connect with the boiler mouth and having the bulb d^1 adapted to hold a sponge, and provided with a union, and the mouth piece e, at the end of a tube provided with a union adapted to connect with said bulb, substantially as set forth. 3rd. In a combined vaporizer and inhaler, the combination, with a boiler and mouth piece, of a bulb adapted to hold a removable sponge interposed in a tubular passage conducting the vapors from the boiler to the mouth-piece, substantially as set forth.

No. 35,174. Card Holder. (*Porte-carte.*)

William Eugene Thurber, Cleveland, Ohio, U.S.A., 10th October, 1890; 5 years.

Claim.—1st. In a card holder for cards, a holding frame having a flat edge to rest against the card, and a pair of cross bars above the plane of the holder frame, having spurs to engage the card, in combination, with the bracket 15, having integral therewith the bearings 14, open on their under side, and rests 16, for the card, the spindle 13, and the springs 17, in said bearings, substantially as described. 2nd. In a card holder for cars, a single supporting bracket, having bearings for the pivot spindle extending above the flat inner face of the bracket, and open on their inner sides, and closed at their ends, in combination, with a spindle in said bearings, a holder frame pivoted thereon, and springs on the spindle pressing on said frame, substantially as described. 3rd. In a holder for cards, on railway cars, a substantially rectangular frame, having a pair of cross-bars cast in the same piece with the frame, and extending beyond the edge of the same, and having openings for the pivot-spindle, in combination with the said spindle extending at each end beyond the cross-bars, a bracket formed in a single piece and provided with bearings 14, for said spindle, and rests 16, for the card, and stops to limit the movement of the holder-frame, substantially as described.

No. 35,175. Turnip Cutter. (*Coupe-racines.*)

John Burr, Chippawa Hill, Ontario, Canada, 10th October, 1890; 5 years.

Claim.—1st. In a turnip cutter, the combination of a rectangular box, a steep sloping bottom extending from near the upper edge at the rear to about the center near the lower edge, a rocking bottom pivoted under the lower edge of said sloping bottom, having its pivots or rocking shaft journaled in the sides of the box, and its front edge extending a little beyond the inner face of the front end, a handle secured to the rear of the rocking bottom, and extending through a slot in the rear end, a transverse slot in the front end extending upwards from about the level of the upper surface of the rocking bottom, a knife placed in said slot, flush with the inner face of said front, and with its cutting edge downward, and a concaved or thin-lipped bar forming a part of the front of the box below said slot, substantially as set forth. 2nd. In a turnip cutter, the combination of the corner pieces A, the box sides A^1, and ends A^{II}, A^{III}, and A^4 secured to said corner pieces, and forming a box therewith on legs, the slot a^{II}, in the front A^{II}, A^{III}, the vertical slot a^4, in the rear end A^4, the sloping bottom A^5, at the rear half of the box, the rocking bottom B, on shaft B^1, journaled in the box sides, and secured with washers b^{II}, and nuts b^{III}, the handle B^{II}, on said bottom, the knife C, secured in the slot a^{II}, by the bolt C^1, to the front corner pieces, and the lower front end part A^{III}, thin-lipped on the inner face at the upper edge under the knife to allow the edge of the rocking bottom to project past the knife edge, substantially as set forth.

No. 35,176. Combined Cane and Camp Stool. (*Canne et siège de camp combinés.*)

Henry Hendrickson, Breckenbridge, Missouri, U.S.A., 10th October, 1890; 5 years.

Claim.—1st. In a convertible cane and camp stool, the combination, with the stock A, extending upward to form the spindle B, the collar D, fixed to the stock, the sleeve C, rotatable upon the spindle, the radial arms E, pivoted to the sleeve C, the sliding collar G, surrounding the sleeve C, and limited in its downward movement by the collar D, and braces F, connecting the sliding collar G, and the radial arms E, substantially as set forth. 2nd. In a convertible cane and camp stool, the combination with the stock A, extending upward to form the spindle B, the collar D, fixed to the stock, the sleeve C, rotatable upon the spindle, the radial arms E, pivoted to the sleeve C, the sliding collar G, surrounding the sleeve C, and limited in its downward movement by the collar D, braces F, connecting the sliding collar G, and the radial arms E, and sliding cover H, adapted to enclose alternately, the upper and lower parts of the stock A, accordingly as the parts are adjusted for a cane or a camp stool, substantially as set forth. 3rd. In a combined or convertible cane and camp stool, the combination, with the stock A, of legs J, which, folded together, constitute an extension of the stock, the spreaders K, pivotally secured to the stock and to the legs, and slits in the lower end of the stock, and the ends of the legs respectively, these slits being adapted to receive the spreaders K, when the legs are folded together, substantially as set forth. 4th. In a convertible cane and camp stool, provided at one end with a collapsible seat, and at the other end with legs J, adapted to be folded together in the manner described, the combination, with the stock and seat, of a sliding cover H, fitting over the band T, upon the stock A, when the device is converted into a camp stool, substantially as set forth. 5th. In a convertible cane and camp stool, the combination, with the stock A, carrying upon its upper part a seat of legs J, detachably pivoted to the stock so as to be reversible, the spreaders K, pivoted to the legs and to the stock, the collar D, the tips N, having the holes O, the pins S, and the sliding ring R, substantially as set forth. 6th. In a convertible cane and camp stool, the stock A, constituting the upper part of a cane, the legs J, constituting when folded the lower part of the cane, in combination, with a collapsible seat connected to the upper part of the stock, which, when the legs are spread, extends from the seat to the ground, to form a central leg or main support for the seat, and spreaders K, pivoted to the stock and to the legs, and adapted to fold together with the legs to form an extension of the stock for a cane, substantially as set forth.

No. 35,177. Draining Well. (*Puits absorbant.*)

Jules Colas, Montreal, Quebec, Canada, 10th October, 1890; 5 years.

Claim.—1st. In a draining well, the combination, with the section A, of the section D, inclined bottom E, outlet F, outwardly opening removable door G, top section I, brackets J, corners K, concave segmental spout L, cover M, having a manhole n, sliding grate O, inwardly opening door P, and ventilating pipe S, substantially as set forth. 2nd. The combination, with a draining well, of the cover M, having a roughened top N, manhole n, grate O, grooves o, door P, pintles p, L-shaped grooves Q, stops R, and ventilating pipe S, substantially as set forth. 3rd. The combination, with the cover, of a draining well, of the ventilating pipe S, substantially as set forth. 4th. The combination, with a draining well, of the inclined bottom E, outlet F, door G, pintles g, slots f, and stops H, substantially as set forth.

No. 35,178. School Number Table. (*Table de numeration pour écoles.*)

Etta Barlow, Saint John, New Brunswick, Canada, 10th October, 1890; 5 years.

Claim.—1st. A number table, having one or more troughs or receptacles divided into compartments, substantially as and for the purposes described. 2nd. A number table, having one or more troughs or receptacles, substantially as and for the purposes described. 3rd. In a number table, the combination of the top A^1, having the cover b, with the trough or receptacle a, substantially as and for the purposes described. 4th. In a number table, the combination of the top A^1, having the cover b, with the trough or receptacle a, having the diaphragms c, substantially as and for the purposes described. 5th. The combination of the table A, the top A^1, the cover b, the trough a, and diaphragms c, substantially as and for the purposes described.

No. 35,179. Oar (*Rame.*)

John Van Dyke Eldrege, Detroit, Michigan, U.S.A., 10th October, 1890; 5 years.

Claim.—1st. An oar, consisting of two portions pivotally engaged together, the inner or handle portion being pivoted to the boat, and the outer or blade portion connected to the boat by rods or chains, substantially as described. 2nd. An oar, consisting of two portions B, B^1, pivotally engaged together, the portion B, pivoted to the gunwale, and the portion B^1, provided with arms C^1, C^2, said arms connected with the gunwale by chains or rods, substantially as described. 3rd. An oar, consisting of two portions B, B^1, pivoted together, the portions adjacent to the pivot so arranged that the portion B^1, extends at an angle from the portion B, said portion B^1, engaged to the gunwale of the boat, substantially as described.

No. 35,180. Process of Treating Restored Rubber, etc. (*Procédé de revivification du caoutchouc, etc.*)

Nathaniel Chapman Mitchell, Philadelphia, Pennsylvania, U.S.A., 11th October, 1890; 5 years.

Claim.—1st. The herein described process of treating restored or devulcanized rubber, the said process consisting in passing the stock while moist between rollers until reduced to a pulverulent condition, and then drying the powder, and at the same time agitating or stirring it to prevent adhesion of the separate particles, substantially as described. 2nd. The herein described process of treating rubber, reclaimed from waste rubber goods, said process consisting in devulcanizing the rubber by the action of live steam, then while the rubber is yet moist, rolling it until reduced to a powder, and finally drying the powder, and at the same time agitating or keeping it in motion to preserve the powdery condition, substantially as described. 3rd. The herein described devulcanized rubber powder.

No. 35,181. Coupling Key Board for Organs. (*Accoupleur de clavier d'orgue.*)

Carl Blomquist, Harrison, California, U.S.A., 11th October, 1890; 5 years.

Claim.—1st. A coupling key-board for organs, consisting of a series of supplementary keys placed above the main keys of the organ, a series of arms or levers adapted to extend over, and lie in contact with the main keys, and a series of concentric slotted tubes connecting the supplementary keys with the arms or levers, whereby as the former are pressed down the latter are forced down also, to operate the corresponding keys of the main key-board, substantially as described. 2nd. A coupling key-board for organs, consisting of a series of supplementary keys placed above the main keys of the organ, the series of arms or levers adapted to lie over and in contact with the main keys of the organ, and the concentric series of axially-rotating tapering and slotted tubes, connecting the supplementary keys with the arms or levers, whereby as the former are operated the latter press down the main keys of the organ, substantially as described. 3rd. A coupling key-board for organs, comprising a frame adapted to be attached to the organ-face, and having a front casing, the concentric series of tapering slotted tubes mounted and adapted to be axially moved in said casing, the series of keys attached to said tubes, and the series of arms or levers attached to said tubes, arranged and adapted to operate, substantially as described.

No. 35,182. Fire Alarm, or Fire and Heat Indicator. (*Avertisseur d'incendie, ou indicateur du feu et de la chaleur.*)

Charles William Summerskill, Hockley Heath, Warwick, England, 11th October, 1890; 5 years.

Claim.—1st. The employment, in a fire alarm or fire and heat in-

dicator, of one, two or more closed elastic metallic chambers or vessels filled with air or other gaseous fluid, in combination with the screw adjusting arrangement described and represented, whereby the instrument or apparatus may be so adjusted that the expansion of the air or other elastic fluid in the chamber or chambers shall at the required temperature close an electric circuit, combined with the said instrument or apparatus, and thereby put into operation an electro magnet, which effects the ringing of a bell or operates any other signal, substantially as hereinbefore described and illustrated in the accompanying drawings. 2nd. The employment, in a fire alarm or fire and heat indicator, of a finger or pointer on the adjusting screw of the instrument or apparatus, in conjunction with a graduated scale or dial, by the position of which finger or pointer upon the said dial, the instrument may be so adjusted that it will be put into operation and an alarm given or signal operated when the temperature of the room or place in which the instrument is fixed has risen to the height indicated on the dial by the finger or pointer, substantially as hereinbefore described and illustrated in the accompanying drawing.

No. 35,183. Fanning Mill Shoe.

(Sabots pour tarrares-cribleurs.)

Robert Caslick and Edward J. Clark, both of Mount Brydges, Ontario, Canada, 11th October, 1890; 5 years.

Claim.—1st. As a new article of manufacture, a fanning mill or grain separator shoe, formed with a beater or beaters, substantially as shown and described, and for the purpose specified. 2nd. The beater shaft B, the arms H, nobs N, the cover I, the double crank G, the cross bar E, or other suitable support, and the shoe frame F, provided with the cross bar A, and the screens S^1, and S^2, substantially as shown and described, and for the purpose specified.

No. 35,184. Dental Elevator. (*Arrache-chicot.*)

Daniel Siddall, The Dalles, Oregon, U.S.A., 11th October, 1890: 5 years.

Claim.—1st. A dental elevator or stump-extractor, consisting in a shank formed with a laterally-extending projection at one end, one vertical face or the tooth side of the projection being flat, and the opposite or gum side being rounded from its inner or shank end to its outer or free end, to form a fulcrum-point, the edge at which said flat or rounded sides meet or converge being serrated or toothed, substantially as set forth. 2nd. A dental elevator or stump-extractor, comprising a shank having at one end a projection extending laterally beyond one side edge thereof, and formed with a flat vertical face on the tooth side, and rounded on its opposite or gum side from its inner or shank end to its outer or free edge, to form a fulcrum-point, the edge at which the flat and rounded sides meet or converge being convex, and serrated or toothed, substantially as set forth.

No. 35,185. Mechanical Power.

(Moteur mécanique.)

William Riley Hunter, Afton, Iowa, U.S.A., 11th October, 1890; 5 years.

Claim.—1st. In a mechanical motor, the combination, with the frame-work having a rod extending longitudinally thereof at the rear, a sleeve mounted on said rod, and treadles pivoted on said sleeve, of a driving shaft, a sleeve longitudinally adjustable thereon, clutches turning with said sleeve, and ropes connecting said treadles with said clutches, substantially as described. 2nd. In a mechanical motor, the combination, with the frame work having a rod extending longitudinally thereof at the rear, a sleeve mounted on said rod, a set screw in said sleeve, uprights rising from said sleeve and connected at their upper ends by a slotted plate, a thumb-nut securing said plate adjustably to the head of the frame work, a seat carried by said upright, and levers pivoted on said sleeve, of a main shaft, clutches thereon movable longitudinally thereof, and ropes connecting said treadles with said clutches, substantially as described. 3rd. In a mechanical motor, the combination, with the frame work having a rod extending longitudinally thereof at the rear, a sleeve mounted on said rod, a set screw in said sleeve, uprights rising from the sleeve and adjustably connected at their upper ends to the head of the frame work, a block pivoted between said uprights, a bar pivoted to said block and carrying a seat, and a foot piece supporting said seat, of levers pivoted on said sleeve, a main driving shaft, longitudinally movable clutches thereon, and ropes connecting said levers with the clutches, substantially as described. 4th. In a mechanical motor, the combination, with the main driving shaft, having a longitudingal groove, the sleeve thereon, a set screw in said sleeve taking into said groove, clutches turning with said sleeve, and ropes running over said clutches, of levers connected to the lower ends of the ropes, and means, substantially as described, for moving the pivotal supports of the levers in unison with the movement of the sleeve on the main shaft, as and for the purpose set forth. 5th. The herein described clutch, the same comprising two cup-shaped heads mounted upon an axle, a ring between them, having internal ratchet teeth, bolts connecting said parts, a lug keyed to said axle, a pawl pivoted to said lug, and provided with a hole through its body parallel with the axle, a spring in said hole, and heads at the ends of said spring, pressed outwardly against the inner faces of said cup-shaped heads, the whole operating substantially as described.

No. 35,186. Tire for Vehicle Wheels.

(Bandage pour roues de voiture.)

Howard Malcolm Du Bois, Philadelphia, Pennsylvania, U.S.A., 11th October, 1890; 5 years.

Claim.—1st. A vehicle wheel, having a channeled plate secured to the felloes, a tire, and an elastic cushion between said plate and tire, the tire being upset and all parts operating, substantially as described. 2nd. A vehicle wheel, having a channeled plate, a tire, and an elastic cushion between said plate and tire, said tire having a central tongue which enters a groove in the cushion, the tire being upset, substantially as described. 3rd. A vehicle wheel, having a channeled plate, a tire, and an elastic cushion between said plate and tire, said tire having a tongue which enters the cushion, and flanges which embrace the same, the tire being upset, substantially as described. 4th. A vehicle wheel, having a channeled plate, an elastic cushion therein, and a surrounding tire, the latter being provided with a semi-cylindrical tongue which enters a semi-cylindrical groove in said cushion, and flanges which embrace the sides of the same, said tire with its tongue and flanges being upset, the parts being combined substantially as described.

No. 35,187. Apparatus for Extracting Bolts, Nails, Spikes, etc. (*Appareil pour arracher les clous, boulons, chevilles, etc.*)

Robert Hannah, Stayner, Ontario, Canada, 11th October, 1890; 5 years.

Claim.—The combination of lever A, with raised thread D, thereon, the loop B, attached on pivots on C, and the nut C, as and for the purpose hereinbefore set forth.

No. 35,188. Stretcher for Pants.

(Appareil pour étirer les pantalons.)

John Draper, Whitby, Ontario, Canada, 11th October, 1890; 5 years.

Claim.—1st. As an improved pants-stretcher, a pair of bars connected together by toggle-jointed links, in combination with a rod pivoted on the joints of the links, substantially as and for the purpose specified. 2nd. A pair of bars A, connected together by toggle-jointed links formed by plates B, pivoted at *a*, and connected together by the bolts C, and one pair of them having horns E, formed on them, as described, in combination with the rod D, pivoted on the bolt C, arranged to operate the bars A, substantially as and for the purpose specified.

No. 35,189. Catch for File Cabinets.

(Crochet pour serre-papiers de buffet.)

The Firm of M. Ohmer's Sons, (assignees of Wilfred Ignatius Ohmer), all of Dayton, Ohio, U. S. A., 11th October, 1890; 5 years.

Claim.—1st In a file cabinet, the combination, with a sliding door and an adjacent portion of the case, of a gravity pawl, having a downward extension, and a projecting spur formed in one piece, and pivoted in the said door so as to engage the said adjacent portion, and support the said door. 2nd. In a file cabinet, the combination, with a sliding door, and an adjacent portion of the said case, of a pivoted gravity pawl having a downward extension to bear upon the said adjacent portion when raised by a spur that normally occupies an elevated position on the said pawl, and means to secure said pawl in its pivotal position in said door. 3rd. In a file cabinet, the combination, with a sliding door, and an adjacent portion of the case, of a frame adapted to hold a card, and having a lift formed integrally thereon, and also having a slot in the frame near the said lift, and a gravity pawl in one piece, pivoted in the said slot, and adapted to engage said portion of the case and support the said door. 4th. In a file cabinet, the combination, with a sliding door, and a frame adapted to hold and expose a card, and having a lift formed integrally thereon, and also having ears, a gravity pawl pivoted between the said ears, and having a downward extension to support the door, and an upward spur projecting outside of the frame to manipulate said pawl. 5th. In a catch, the combination, with a frame adapted to hold and expose a card, and having lugs to form pivot supports, of a pawl pivoted between said lugs, and having a gravitating end to engage a fixed object, and a normally elevated end adapted to be manipulated by the hand. 6th. As a new article of manufacture, a lift for doors consisting of a single piece of metal provided with an index-display opening, and a pawl pivoted thereto.

No. 35,190. Cabinet. (*Buffet.*)

The Firm of M. Ohmer's Sons, (assignees of Wilfred Ignatius Ohmer), all of Dayton, Ohio, U.S.A., 11th October, 1890; 5 years.

Claim.—1st. A cabinet, having its upright portions provided with a series of supports or rests, and vertically moving doors or covers mounted between said portions, and adapted to engage the said portions or rests. 2nd. In a cabinet, the combination, with the upright portions thereof having a series of supports or rests at intervals, of vertically movable doors or covers mounted between said portions, and adapted to be moved upon and from said supports or rests. 3rd. In a cabinet, the combination, with the upright portions thereof, and shelves between the said portions, of interior rests or supports, and vertically movable doors or covers mounted between the upright portions, and adapted to be moved from and upon the said rests or supports. 4th. In a cabinet, the combination, with the upright portions thereof, of grooves formed with rests or supports, and vertically sliding doors adapted to engage the said rests or supports. 5th. In a cabinet, the combination, with the upright portions thereof, of vertical grooves having one of their sides cut away to form rests or supports, and vertically sliding doors moving in said grooves, and adapted to engage said rests. 6th. In a cabinet, the combination, with the upright portions of a series of superincumbent vertically movable doors mounted between the same, and having beveled portions adapted to prevent one door dropping back or in front of those above or below it.

No. 35,191. Curtain Pole. (*Porte-rideaux.*)

Odile Feher and Eugène Chantrelle, both of Montreal, Quebec, Canada, 11th October, 1890; 5 years.

Résumé.—Un rouleau A, servant de porte-rideaux muni d'une rainure B, dans laquelle se trouvent disposées les poulies *a*, *d*. d^1, les ouvertures *e*, e^1, le cordon *b*, b^1, fixé aux anneaux *c*, c^1, le tout tel que decrit et pour les fins sus-mentionnées.

No. 35,192. Game, or Puzzle. (*Jeu de patience.*)

Alfred Garten, (assignee of Joseph Addison Eno), both of Newark, New Jersey, U.S.A., 11th October, 1890; 5 years.

Claim.—A game or puzzle apparatus, consisting of a tray or bed having three or more parallel grooves or channels connecting with each other, and in combination with a series of numbered blocks, adapted and arranged to be moved from one groove to another on said bed, substantially as described.

No. 35,193. Combined Whip Socket and Rein Holder. (*Porte-fouet et accroche-guides combinés.*)

Rufus P. Redmond and E. Cordingly, Carberry, Manitoba, Canada, 11th October, 1890; 5 years.

Claim.—The combination of the plate A, for attachment to the vehicle, and having a longitudinal opening or recess B, the whip socket or holder D, provided on the exterior with a rib F, coinciding with said opening or recess, and pivoted near the middle to said plate to tilt lengthwise, and a spring J, intervening the plate and holder to keep the rib within the opening or recess in the plate when the reins are inserted interveningly, whereby the reins will be frictionally held, as set forth.

No. 35,194. Travelling Hammock for Children. (*Hamac de voyage pour enfants.*)

L. Arth. Dion, Quebec, Province of Quebec, Canada, 11th October, 1890; 5 years.

Claim.—1st. The combination of a child's hammock with metallic curved hands A, and elastic covering F, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of the metallic curved hands A, with the hammock E, the loop or eye B, and the straps D, giving differential length to the hammock, substantially as and for the purpose hereinbefore set forth.

No. 35,195. Hame Fastener. (*Couplière d'attelles.*)

John G. Wood and G. M. Roat, Pillar Point, N. Y., U. S. A., 11th October, 1890; 5 years.

Claim.—1st. A hame fastener, composed of the end pieces A, B, each having a hook A^1, B^1, respectively, the piece A, having a slot A^2, and provided with the stop A^3, and notches A^4, the link C, having a free end provided with a cross head C^1, and loosely sliding in the slot A^2, and engaging the notches A^4, and the opposite end curved and pivoted to a lever D, which is pivoted at a distance from said end to the slotted end of the end piece B^1, whereby the adjustment of the lever, in one direction draws the hames closer, and brings the curved end of the link into the slot in the end piece B, and the pivot points of the lever in alignment with the hooks to lock the fastener, and the adjustment of the lever in the opposite direction elongates the distance between the hooks and unlocks the fastener. 2nd. The combination of the hooked end pieces A, B, adjustable connecting link C, and the lever D, pivoted to the piece B, and link, to operate as set forth.

No. 35,196. Vehicle Wheel. (*Roue de voiture.*)

The Gendron Manufacturing Company, (assignees of Peter Gendron), Toledo, Ohio, U.S.A., 11th October, 1890; 5 years.

Claim.—1st. In a vehicle wheel, having wires bent to form two spokes of segmental circular bearings *i*, formed between the two spokes, substantially as described. 2nd. In a wheel, having wires bent to form two spokes of a bearing at the bent portion thereof, adapted to engage into a groove between the two flanges, one of which is adapted to be peened over upon the spokes securing them in position, substantially as described. 3rd. In a vehicle wheel, a hub consisting of a central section of hub sections secured upon the ends thereof, having a hooked flange of spoke notches therein, and of a securing flange adapted to be peened over upon the spoke, substantially as described. 4th. In a wheel, a hub section, having spoke sections upon the end thereof, and of shoulders such as *h*, within such spoke sections, substantially as described. 5th. In a wheel, a hub, consisting of a central portion D, of spoke sections E, and E^1, having a collar *a*, of hooked flange *b*, spoke passages *c*, flange *e*, and the groove *j*, between said flanges, substantially as described. 6th. In a wheel, the combination of the following elements, the central hub sections D, the spoke sections E, and E^1, having the shoulder *a*, flanges *b*, *e*, spoke notches *c*, and the boss *h*, the wires being bent to form two spokes, and having the segmental circular bearing part *i*, between, and the tire A, the parts being arranged to operate, substantially as and for the purpose described.

No. 35,197. Packing for Journals. (*Garniture de tourillon.*)

Harriett Brookman Devlan, Jersey City, New Jersey, U. S. A., 11th October, 1890; 5 years.

Claim.—1st. A packing for journal boxes, comprising bamboo fiber, and pieces of sponge, substantially as described. 2nd. A packing for journal boxes, comprising bamboo fiber, pieces of sponge, and a mineral substance—such as asbestus, steatite, or graphite—substantially as described. 3rd. A packing for journal boxes, consisting of bamboo fiber, pieces of sponge, hair, or like fiber, and a mineral substance—such as asbestus, steatite, or graphite—mixed together in about the proportions stated, substantially as described.

No. 35,198. Stock Car. (*Char à bestiaux.*)

John Horatio Kimball, Montreal, Quebec, Canada, 11th October, 1890; 5 years.

Claim.—1st. In a stock car, the combination of a main body divided centrally by a partition, a series of transverse bars provided with notches upon their upper edges, the notches registering in a vertical line, and said bars having angular ends adapted to be secured to the ends of the car, and to opposite faces of the central partition, stall partitions provided upon their forward ends with extending headed lugs or trunnions, arranged at such a distance apart, in a vertical line, as to register and fall into engagement with a line of notches in the transverse bars, and laterally-adjustable partition posts to which the rear ends of the stalls are secured, substantially as set forth. 2nd. In a stock car, the combination of a main body, divided centrally by a partition, a series of transverse bars provided with notches upon their upper edges, the notches registering in a vertical line, and said bars having angular ends adapted to be secured to the ends of the car, and to opposite faces of the central partition, stall partitions having their forward ends rabetted, angle irons secured to said rabetted ends and formed or provided with extending lugs or trunnions arranged at such a distance apart, in a vertical line, as to register and fall into engagement with a line of notches in the transverse bars, and laterally-adjustable partition posts to which the rear ends of the stall are secured, substantially as set forth. 3rd. In a stock car, the combination of a main body divided centrally by a partition, a series of transverse bars provided with notches upon their upper edges, said bars secured to the ends of the car, and to opposite faces of the central partition, stall partitions provided upon their forward ends with headed lugs or trunnions engaging the notches of the transverse bars, locking rods passing through staples in the sides, and to the forward ends of the partitions, and having one end extending downwardly and the opposite end extending upwardly, the latter adapted to pass to the rear of the bars, and laterally-adjustable partition posts to which the rear ends of the stalls are secured, substantially as set forth. 4th. In a stock car, the combination of a main body, divided centrally by a partition and provided in each subdivision with a series of transversely arranged mortises or notches, stall partitions arranged within said main body, and having their rear ends adjustably secured to the ends of the car and to the opposite faces of the central partition, metallic facings secured to the rabetted rear ends of the partitions, and protruding out therefrom, and T-shaped partition posts having the webs or stems thereof fitting between the protruding ends of the metallic facings, and also having their upper ends moving in suitable ways or guides and their lower ends fitting in the mortises or sockets in the car bottom, substantially as set forth. 5th. In a stock car, the combination of a main body, centrally divided by a partition, stalls arranged therein, said stalls having their rear ends adjustably secured to the ends of the car and to the central partition, metallic facings secured to the rabetted rear ends of the partitions and protruding out therefrom, T-shaped partition posts having their webs or stems fitting between the protruding ends of the metallic facings, said webs or stems also provided near their upper ends with slots, and transverse brace bars passing through said slots, substantially as set forth. 6th. In a stock car, the combination with a main body, centrally divided by a partition, and provided in each subdivision with series of mortises or sockets, stall partitions arranged within said main body, said partitions having their rear ends adjustably secured to the ends of the car and to the central partition, T-shaped partition posts having their webs or stems secured to the grooves formed in the rear ends of the partitions, and provided with lower tenoned ends which fit into the mortises or sockets in the car bottom, and also provided near their upper ends with elongated slots, transverse brace bars passing through said slots, and transverse guides or ways between which the upper ends of the partition posts pass, substantially as set forth. 7th. In a stock car, the combination of a main body, centrally divided by a partition, and provided in each subdivision with series of mortises or sockets, stall partitions arranged within said main body, having their forward ends adjustably secured to the ends of the car and to opposite faces of the central partition, metallic facings secured to the rabetted ends of the partitions and protruding out therefrom, T-shaped partition posts provided with lower tenoned ends fitting in the mortises or sockets of the car bottom, and having their webs or stems fitting between the protruding ends of the metallic facings, said webs or stems also provided, near their upper ends, with elongated slots, transverse perforated brace bars passing through said slots, chains centrally secured to the partition posts and provided with hooked ends adapted to engage the perforations of the brace bars, and transverse guides or ways for the reception of the upper ends of the partition posts, substantially as set forth. 8th. In a stock car, the combination, of a main body provided with a series of hinged doors, of stalls located in said main body, and provided with a series of openings or apertures registering with the hinged doors, substantially as set forth. 9th. In a stock car, a car body provided with side hinged doors, and also provided with central and end stall partitions, having their forward end corners provided with registering openings or apertures, substantially as set forth.

No. 35,199. Combined Mower and Hay-Tedder. (*Faucheuse et faneuse combinées.*)

Daniel F. Saurer, Land, Indiana, U. S. A., 11th October, 1890; 5 years.

Claim.—1st. The combination, with the mower frame and axle, of the brackets on the axle, and the tedder frame detachably engaging

the said brackets, substantially as specified. 2nd. The combination, with the mower frame and the axle, of the oscillating brackets on the axle, the tedder frame having hooked arms detachably engaging the brackets, and means for tilting the brackets and raising the tedder-frame from the mower, substantially as specified. 3rd. The combination, with the mower frame and the axle, of the oscillating brackets on the axle, the tedder-frame having arms detachably engaging the brackets, the transverse shaft journalled in bearings on the mower, and the lever on the mower connected with said brackets, substantially as and for the purpose specified. 4th. The combination, with the crank-shaft, of the clip embracing the same, the prong, and an eye-bolt through the eye of which the prong passes, as set forth. 5th. The combination, with the crank shaft and the clip embracing the same, and carrying an eye-bolt, of the prong D, passed through said eye-bolt, and having a coil D^1, bearing on the clip, substantially as and for the purpose specified. 6th. The combination, with the tedder-frame and the crank shaft, of the clips embracing the cranks of the said shaft, the eye bolts passed through the clips, and the prongs D, passed loosely through the thimbles rigidly held in the eye bolts, and formed near their centres with a coil D^1, embracing the clips and the crank shaft, substantially as specified. 7th. The combination, with the mower and the tedder, of the shaft carried by bearings, adjustable on the tedder frame, connections between the shaft and the axle, of the mower and the crank shaft of the tedder, and means for raising and lowering the tedder, substantially as specified.

No. 35,200. Band Cutter and Feed Attachment to Threshing Machines. (*Coupe-hart et alimentateur pour machines à battre.*)

George Nelson Brintnell, Canifton, Ontario, Canada, 11th October, 1890; 5 years.

Claim.—1st. The combination, with the table or platform 1, having longitudinal slots 2, and bearings 8, of the shafts 4, 4, carrying sprocket wheels 6, and endless chains 7, provided with arms 9, pintled at intervals to the links of said chains, whereby said arms travel through the slots in the table and are maintained erect by passing over the bearing 8, as set forth. 2nd. The combination, with the feed table 1, provided with a shaft 4, carrying sprocket wheels 6, of the frame 11, having one end hung to said shaft, and the other end engaging and disengaging a holder 15, secured to the feed table, said frame carrying a shaft 12, having rotary cutters 14, projecting through slots in the table, whereby the cutters may be raised or lowered by the adjustment of the frame, for the purpose set forth

No. 35,201. Process of Manufacturing Steel Wheels. (*Procedé de fabrication des roues d'acier.*)

James Auber Facer, Philadelphia, Pennsylvania, U.S.A., 13th October, 1890; 5 years.

Claim.—1st. The herein described process of making forged wheels which consists in first subjecting an ingot or bloom in a heated condition to forging operations to reduce it to approximately the proper thickness, then placing it between dies in an upright position or in a position parallel to the line of action of said dies, and subjecting it to forging operations between said dies, turning it under them and rounding it up into approximately the shape of the finished wheel, and finally subjecting it to pressure between finishing dies, forging its entire surface into the finished form. 2nd. The herein described process of making forged wheels, which consists in first subjecting an ingot or bloom in a heated condition to forging operations to reduce it to approximately the proper thickness, then placing it between dies in an upright position, or in a position parallel to the line of action of said dies, and subjecting it to forging operations between said dies, turning it under them and rounding it up into approximately the shape of the finished wheel, and finally subjecting it to pressure between finishing dies forging its entire surface into the finished form. 3rd. The herein described process of making forged wheels, which consists in first subjecting an ingot or bloom in a heated condition to forging operations to reduce it to approximately the proper thickness, then placing it between dies in an upright position, or in a position parallel to the line of action of the dies, and subjecting it to forging operations between said dies, turning it under them and rounding it up into approximately the shape of the finished wheel, simultaneously forming the flange upon the bloom while in said upright position by the forging operation, then punching the axle-hole through its center, and finally subjecting it to pressure between finishing dies forging its entire surface into the finishing form. 4th. The herein described process of making forged wheels, which consists in first flattening a heated bloom to approximately the proper thickness, then placing the bloom on end and rounding it up and forming the flange by turning it under forging dies, then reheating the rounded and flanged bloom, then placing it on end and tapping it slightly to remove scales and dirt, and finally subjecting the bloom so shaped to finishing dies forging the bloom into its finished shape.

No. 35,202. Steam Hammer for Forging Steel Wheels. (*Marteau-pilon pour forger les roues d'acier.*)

James Aubra Facer, Philadelphia, Pennsylvania, U. S. A., 13th October, 1890; 5 years.

Claim.—1st. In a steam hammer for forging wheels, a hammer die, having a projection upon one face thereof, in combination, with an anvil die provided with a laterally extending support for the periphery or tread, of the wheel blank to hold said blank in an upright position against the side or face of the anvil, and permit it to be turned during the rounding up and flanging operation. 2nd. In a steam hammer for forging wheels, a hammer die, having a projection upon one face thereof, in combination, with an anvil die provided with a laterally extending support for the periphery or tread of the wheel blank at the base, and face to hold said blank in an upright position against the side or face of the anvil, and permit it to be turned during the rounding up and flanging operation. 3rd. In a steam hammer for forging wheels, a hammer die having a projection upon one face thereof, having a curved under surface, in combination, with an anvil die provided with a laterally extending support for the periphery or tread, of the wheel blank to hold said blank in an upright position against the side of the anvil, and permit it to be turned during the rounding up and flanging operation. 4th. In a steam hammer for forging wheels, a hammer die, having a projection upon one face thereof, having a curved and grooved under surface, in combination, with an anvil die provided with a laterally extending support for the periphery or tread, of the wheel blank to hold said blank in an upright position against the side or face of the anvil, and permit it to be turned during the rounding up and flanging operation, provided with a groove for receiving the flange on the periphery of the blank. 5th. In a steam hammer for forging wheels from solid ingot blooms, the combination of a hammer and an anvil die, having flat surfaces to flatten and drive a punch into the bloom, a projection upon said hammer die, and laterally projecting supports upon the base of the anvil die to support the flattened blank in an upright position against the face of the anvil die, for the purpose of rounding it up. 6th. Dies for forging steel wheels, consisting of an anvil die having a smooth or flat upper surface, and a vertical front portion provided at a point below the upper surface with a grooved support for the flange of the wheel blank, in combination, with a hammer die having an under face corresponding in area to the face of the anvil die, and a front projection above the support of the anvil die, and having its under surface to correspond to the flange of the wheel blank. 7th. Dies for forging steel wheels, consisting of an anvil die, having a smooth or flat surface, and a vertical front portion provided at a point below the upper surface with a grooved support for the flange of the wheel blank, and a lateral support secured to the anvil die, and arranged to one side of the grooved support to hold the wheel blank from moving laterally, in combination, with a hammer die having an under face corresponding in area to the face of the anvil die, and a front projection above the said lateral support secured to the anvil die, and having its under surface shaped to correspond to the flange of the wheel blank. 8th. Dies for forging steel wheels, consisting of an anvil die having a smooth or flat upper surface, and a vertical front portion provided at a point below the upper surface with a grooved support for the flange, of the wheel blank and lateral support to the anvil die, and arranged to one side of the grooved support to hold the wheel blank from moving laterally, and detachable pins secured to the anvil die laterally with respect to the grooved support, and on the side opposite to the lateral support, in combination, with a hammer die having an under face corresponding in area to the face of the anvil die, and a front projection above the support of the anvil die, and having its under surface shaped to correspond to the flange of the wheel blank.

No. 25,203. Fence Post Holder. (*Socle pour pieux de clôture.*)

Lawrence Heiland, The Bend, Ohio, U.S.A., 13th October, 1890; 5 years.

Claim—1st. A fence post holder, of polygonal shape, having longitudinal recesses in its faces, flat bases at the lower ends of the recesses, and cuneal webs between the recesses, substantially as described, and for the purposes stated. 2nd. A fence post holder, of polygonal shape, having longitudinal recesses, each of which at its outer extremity extends entirely across one face, and part way across each of the adjoining faces, cuneal webs between the recesses a flat base at the bottom of each recess, a socket in the top of the holder, and one or more lateral openings leading from the bottom of the socket, as and for the purposes set forth.

No. 35,204. Hub Band. (*Doublure de moyeu.*)

Thomas J. Reid, Gananoque, Ontario, Canada, 13th October, 1890; 5 years.

Claim.—1st. The combination, with the maleable or expansible hub-band for the ends of vehicle-hubs, of a covering and lining therefor in a single piece, bent as shown, the parts being secured to each other by the conjointly flared outer portion of the hub-band lining and exterior covering, substantially as set forth. 2nd. The combination, with a malleable or expansible hub-band, of a covering and lining therefor in a single piece, the parts being secured together by the conjointly expanded outer portion of the hub-band, and of the lining, substantially as set forth. 3rd. The combination, with a malleable hub-band having a central portion of increased thickness provided with oppositely-extended inclined faces, of a covering and lining made in a single piece, the parts being secured together by the lining being in intimate relation with said inclined faces, and conjointly expanded lining and hub-band, substantially as set forth.

No. 35,205. Recorder and Combination Lock for Money Tills. (*Régistre et serrure à combinaison pour caisses de comptoire.*)

Arthur R. Peck, Cortland, New York, U.S.A., 13th October, 1890; 5 years.

Claim.—1st. In a combination lock for drawers, a series of rocking tumblers on a shaft, having one of their ends notched, said notches being adapted to register with each other, and to receive an oscillat-

ing bar, substantially as and for the purpose set forth. 2nd. In a lock, a series of reversible tumblers, having one end journaled in a frame, and the other end with a notch at one side, the centre of its end face, said tumblers adapted to be rocked to bring the notches in alignment to receive an oscillating bar, substantially as and for the purpose set forth. 3rd. The combination, with a rectangular frame or bracket having a cross bar or floor therein, of a series of rocking tumblers journalled at one end in the frame, the other end resting on its floor, said tumblers having notches in one end adapted to register and receive an oscillating bar, substantially as and for the purpose set forth. 4th. In a lock frame, a series of reversible tumblers journalled at one end therein, the other end having a notch at one side, the centre of the space with one inwardly inclined wall part, of the tumblers arranged on the journal with the notches below the centre, and adapted to be rocked to bring all the notches in line with the inclined wall of the rocked tumblers, on the same plane with the straight walls of the notches, of the stationary tumblers arranged with notches above the centre, and to receive an oscillating bar in said notches, as set forth. 5th. The combination, with a lock frame or bracket, composed of a side or securing plate and open slotted end plate extending from one end of the securing plate, having an arm at right angles thereto, and a closed slotted end plate on the other end of the securing plate, of the bar pivoted on the right angled arm, and working in the slots of the plates, and adapted to take into notches in rocking tumblers journalled in the bracket, substantially as and for the purpose set forth. 6th. The combination, with a lock frame or bracket, having slotted end pieces with a cross bar between them, and an arm at right angles from one of the said pieces having the end of a bar pivoted thereon that oscillated in the slots and in notches of the rocking tumblers journalled in the frame, of a sleeve on the other end piece provided with a spring actuating locking bolt, said bolt being connected with the free end of the bar by a link limiting the movement of the bolt, substantially as and for the purpose set forth. 7th. The combination, with a desk, having a lock frame or bracket secured on its inner side, with a series of end notched rock tumblers journalled within one side of the frame, and an oscillating pivoted bar on the other side of the frame working in the notches of the tumblers, and having its free end connected with a vertical locking bolt, of a series of spring push buttons on the side of the desk for rocking the tumblers, and a push button on the top of the desk for operating the locking bolt, substantially as and for the purpose set forth. 8th. The combination in a lock frame, with a series of rocking tumblers, having notches in their ends adapted to register and to receive a pivoted oscillating bar of one of the end plates, of the frame reinforced at one end with a cutaway sleeve therein, having a vertical locking bolt recessed in its side, and a link pivoted in said recess, and to the free end of the oscillating bar, substantially as and for the purpose set forth. 9th. The combination, with a desk, having a lock frame secured on its inner side with reversible rocking tumblers therein, having notched ends receiving an oscillating bar, the free end of the bar connected with a vertical bolt in the end plate of the frame, of a shoe secured to the floor of the desk having a pivoted spring lever therein, and underneath said bolt, one end of said lever connected with a bolt extending through the floor, and adapted to take into the edge of a spring actuated drawer beneath, substantially as and for the purpose set forth. 10th. The combination, with a desk, having a reversible tumbler lock mechanism connected with a vertical bolt, of a shoe beneath the bolt having side plates at one end with a lever pivoted between them, one of said plates, having a semi-circular recess, a locking bolt in said recess extending through a sleeve beneath the shoe, the upper part of the locking bolt having a notch therein, to receive one end of the lever, and the other end supported by a spring beneath the vertical bolt of the lock, as set forth. 11th. The combination of the lever 11, pivotally connected to the side bars 3, the pawl carrying lever 14, having a dog 16, the V-shaped lever 21, pivotally connected to the lower end of the lever 11, the ratchet wheel 10, rigidly secured to one end of the winding drum 8, and stud pin 36, rigidly secured to the side of the drawer B, substantially as and for the purpose set forth. 12th. The combination of the lever 11, pivotally connected to the side bar 3, the pawl carrying lever 14, having a dog 16, formed on the outer end thereof, the V-shaped lever 21, pivotally connected to the outwardly extending foot 17, of the lever 11, the ratchet wheel 10, rigidly secured to one end of the winding drum 8, and eye plate 29, extending outwardly from the leg 4, and the set screw 30, substantially as and for the purpose set forth. 13th. The combination of the lever 11, pivotally connected to the side bar 3, the pawl carrying lever 14, having a dog 16, formed on the outer end thereof, the ratchet wheel 10, rigidly secured to the drum, the V-shaped lever 21, consisting of an arm 22, having formed in the end opposite the hub 20, a sleeve 23, through which passes a set screw 24, and an arm 25, in which is formed a notch 26, and its outer end turned upwards to form a block 27, with the leg 28, the eye plate 29, and set screw 30, substantially as and for the purpose set forth. 14th. The combination of the lever 11, pivotally connected to the side bar 3, the pawl carrying lever 14, having a dog 16, formed on the outer end thereof, the V-shaped lever 21, pivotally connected to the outwardly extending foot 17, of the lever 11, the ratchet wheel 10, rigidly secured to the winding drum 8, the T-lever 31, pivotally connected to the side bar 3, between the ratchet wheel 10, and the table 5, the spring pawl 33, one end of which is secured to the key-lever 31, and the other shaped to fit the face and side face of the ratchet teeth, the V-shaped lever 21, pivotally connected to the end of the outwardly extending foot 17, of the lever 11, the eye plate 29, and set screw 30, substantially as and for the purpose set forth. 15th. The combination of the lever 11, pivotally connected to the side bar 3, the pawl carrying lever 14, having a dog 16, formed on the outer end thereof, the ratchet wheel 10, rigidly secured to the drum 8, the V-shaped lever 21, pivotally connected to the outwardly extending foot 17, of the lever 11, and consisting of an arm 22, having formed in the end thereof, opposite hub 20, a sleeve 23, through which passes a set screw 24, and an arm 25, in which is formed a notch 26, and its outer end turned upwards to form a block 27, with the leg 28, secured to and extending outwards from the lower end of the lever 11, and engaging with the block 27, formed on the end of the arm 25, to the eye plate 29, extending outward from the leg 3, and set screw 30, substantially as and for the purpose set forth.

No. 35,206. Medicinal Compound.

(Composition médicale.)

Daniel Whalen, Fort William West, Ontario, Canada, 13th October, 1890; 5 years.

Claim.—A compound, composed of the ingredients aforesaid, mixed together, substantially in the manner and proportions aforesaid, and for the purposes set forth.

No. 35,207. Metal Cutter.

(Appareil pour couper le métal.)

William Smith, (assignee of Albert Corry Irvine), Boston, Massachusetts, U.S.A., 13th October, 1890; 5 years.

Claim.—1st. The combination and arrangement of the standard-plate, the lever, and the lower blade bar, with the upper blade bar divided into two arms at its left hand end, said arms passing respectively on each side of a projection from the lower blade bar, and the standard-plate, all constructed and arranged, substantially as shown and described. 2nd. The combination and arrangement of the two blade bars with their respective blades and the standard or supporting plate, and the working lever provided with segmental gear carrying round-top cogs, and the corresponding segmental gear on the lower blade bar, all constructed and arranged substantially as shown and described.

No. 35,208. Method and Apparatus for Sizing and Separating Ores, etc.

(Mode et appareil pour assortir et séparer les minerais, etc.)

Richard Stanfield, Edinburgh, Scotland, and Thomas Clarkson, London, England, 15th October, 1890; 5 years.

Claim.—1st. The hereinbefore described method of separating metals, minerals and other dense bodies from their ores, or associated materials, or of classifying materials according to size, consisting in the use of a rapidly rotated vessel, having apertures in its periphery, substantially as set forth. 2nd. The method of separating gold or silver from ores, consisting in first adding to the pulverized materials a heavy substance such as mercury, and then subjecting the whole to the action of a rapidly rotated vessel with apertures in its periphery, whereby separation will be assisted, as set forth. 3rd. The use for the purposes specified, of a centrifugal machine provided with a rotary vessel such as A, for the reception of pulverized material, with one or more rows of specially constructed apertures or tubular arms around its periphery for the ejection thereof, and operated, substantially as hereinabove set forth. 4th. In a centrifugal machine for the purposes hereinbefore specified, a vessel A, made in two parts the upper part a^1, detachably fitted to the lower part a^2, which forms the head of a rotating spindle B, to facilitate the attachment of duplicate vessels suitable for the particular material to be operated upon, and having apertures a, a, constructed and arranged, substantially as hereinbefore described. 5th. In a centrifugal machine, for the purposes hereinbefore specified, the combination, with a rotary vessel A, provided with apertures a, and rotated by a shaft B, of an enclosing cover J, having arms O, carrying brushes P, all arranged and operated, substantially as and for the purposes hereinbefore specified, and shown in the accompanying drawings. 6th. The combination, with a centrifugal machine, constructed substantially in the manner specified, of a receiver such as Q, having any convenient number of concentric receiving compartments disposed, constructed, and arranged substantially as and for the purposes hereinbefore described, and shown in the accompanying drawings. 7th. In apparatus for the purpose set forth, the provision, in combination, with a centrifugal machine, and a receiver disposed as specified, of a suction fan or blower for causing an air current intermediate between the centrifugal machine and the said receiver, substantially as and for the purpose set forth. 8th. An apparatus for separating metals, minerals and other dense bodies from ores or associated materials, and collecting same according to their weights or size, consisting essentially of a centrifugal machine constructed and operated, substantially as stated, a receiver surrounding same, and divided into concentric compartments with discharge orifices, and swept by rotating brushes or scrapers, the said apparatus having a receptacle for waste provided with means for removing same, and being combined or not with a fan or blower, the whole constructed arranged and operating, substantially in the manner, and on the principle hereinabove described and illustrated.

No. 35,209. Car Wheel. *(Roue de char.)*

James Rigby, Minneapolis, Minnesota, U.S.A., 15th October, 1890; 5 years.

Claim.—1st. In combination, with a car wheel body, a tire formed with annular ledges upon its inner periphery, and near its outer and inner faces for receiving the body, and having a continuous or uncut annular flange projecting from its inner face, and adapted to be hammered down over the body for holding it in place, as described. 2nd. In a car wheel, the tire formed with annular steps or ledges on its inner periphery, and having grooves cut in such ledges, and with a continuous or uncut annular flange projecting from its face, in combination, with the body, having a smooth-faced flange k, and provided with annular projecting beads a, f, adapted to fit in the grooves of the tire and interlock, said flange of the tire being adapted to be hammered down all around over the body to hold it in place substantially as described. 3rd. The method of securing together the body and tire of a car wheel, which consists, in placing the body within the tire, and forcing it against a flange or ledge projecting inward from the inner periphery at or near one face, heating a flange on the other face of the tire to the working temperature, and, after the body is in position, turning such flange inward and hammering

it down upon the body, whereby the parts are held securely together without the use of bolts, nuts or rivets. 4th. The method of constructing car wheels, which consists in forming grooves and interlocking beads or flanges upon the outer periphery of the body, and inner periphery of the tire, and a flange projecting from the face of the tire, then placing the body within the tire and interlocking their beads or flanges, and then heating the flange projecting from the face of the tire and hammering it down upon the body for securing them together.

No. 35,210. Cresting for Sheet Metal Roofs.

(*Ornamentation des feuilles de metal pour toitures.*)

John Hewitt, Chicago, Illinois, U.S.A., 15th October, 1890; 5 years.

Claim—1st. The sheet metal cresting for roofs, made in two parts, and consisting of the comb strip B, and the crest strip C, applied to the comb strip by means of the legs *c*, bent in opposite directions, substantially as specified. 2nd. The combination of the comb strip B, and the crest strip C, the latter provided with legs *c*, alternately bent in opposite directions, substantially as specified. 3rd. The combination of the comb strip B, and the crest strip C, the latter provided with legs *c*, alternately bent in opposite directions, and the final applied to the comb strip in the same manner as the crest is applied, substantially as specified. 4th. The crest strip C, of sheet metal, with any desired form of openings, provided with legs *c*, on opposite sides to be applied to the comb of a building, as set forth.

No. 35,211. Rope Coupling. (*Joint de cordage.*)

Charles Davidson, Guelph, Ontario, Canada, 15th October, 1890; 5 years.

Claim.—1st. A rope or cable coupling, consisting of a hook and eye, each having a hollow shank split up either side, forming two jaws, the said jaws being provided with a series of annular serrations or teeth, and rivet holes and rivets adapted to be driven through the rope or cable and hold the jaws securely thereto, substantially as set forth. 2nd. The combination in a rope or cable coupling, with the hook A, shank B, splits C, interior annular serrations or teeth D, having square shoulders *d*, rivet holes *e*, rivets E, of the rope R, the end of which being whipped with wire *r*, substantially as set forth. 3rd. The combination in a rope or cable coupling, with the eye F, shank G, splits C, interior annular serrations or teeth D, having square shoulders *d*, rivet holes *e*, rivets E, of the rope R, the end of which being whipped with wire *r*, substantially as set forth.

No. 35,212. Brace for Chairs.

(*Tirant pour chaisses.*)

James S. Virtue, Leadville, Colorado, U.S.A., 15th October, 1890; 5 years.

Claim.—1st. As a new article of manufacture, a brace for connecting the seats of chairs with the rungs thereof, the same comprising a body screwed to the seat, a hook detachably embracing one of the rungs, and means, substantially as described, for adjustably connecting the meeting ends of said body and hook, as and for the purpose set forth. 2nd. The body B, having its ends E, turned at right angles, and provided with holes H, and a screw S, adapted to pass through one of said holes into a chair-seat, in combination with the rod D, having a hook K, at its lower end adapted to engage one of the rungs, and its upper end passing through the holes in the lower end E, of said body, and means, substantially as described, for adjustably connecting the meeting ends of said body and rod, as and for the purpose set forth. 3rd The body B, having its ends E, turned at right angles, and provided with holes H, and a screw S, adapted to pass through one of said holes into a chair seat, in combination with the rod D, having a hook K, at its lower end adapted to engage one of the rungs, and at its upper end passing through the hole in the lower end E, of said body, and being provided with screw threads T, and a nut N, engaging said threaded end above the lower end of the body, as and for the purpose set forth.

No. 35,213. Spoke Socket. (*Mortaise de jante.*)

Joseph Watson, Cincinnati, Ohio, U. S. A., 15th October, 1890; 5 years

Claim.—1st. The combination, with the felly and its spoke, of the sections 1, and 2, mounted at opposite sides thereof, each of said sections comprising a central transverse embracing curved portion, and an upper semi-cylindrical reduced spoke embracing portion, webs connecting said portions, and having opposite threaded openings, binding screws passed through the perforations, the section 1, having at its lower end a right angularly disposed flange centrally recessed, as at 8, and forming opposite triangular prongs 9, and the section 2, having triangular portion or flange 10, disposed at a right angle to the remainder of the section, and adapted to take into the recess in the flange of the opposite sections, perforations formed in the prongs, and screws inserted through the prongs into the felly and spoke, substantially as specified. 2nd. A spoke socket formed in opposite sections or halves, and adapted to be applied to the opposite sides of a rim or felly, each of said sections consisting of a felly embracing portion, a spoke embracing portion, and the felly embracing portion terminating in flanges taking under the rim of the wheel, and said flanges interlocking, substantially as specified.

No. 35,214. Jack for Horse Shoeing.

(*Banc pour le ferrage des chevaux.*)

James Allen, Alliston, Ontario, Canada, 15th October, 1890; 5 years.

Claim.—1st. A horizontal rest, shaped as described, to receive and support the leg of the horse, in combination, with a vertical stand provided with a spring latch designed to engage notches made in the vertical stand C, substantially as and for the purpose specified. 2nd. A horizontal rest, composed of a horn-shaped bracket I, adjustably supported on the plate M, fixed to the standard C, on which a cup-shaped bracket K, is fixed, in combination, with the stand A, provided with a pivoted lever D, having a latch F, to fit into one of the notches H, and actuated by a spring G, substantially as and for the purpose specified.

No. 35,215. Heater for Bath Water.

(*Réchauffeur d'eau pour bains.*)

John L. Brandt, Terre Haute, Indiana, U.S.A., 15th October, 1890; 5 years.

Claim—A heating apparatus, consisting of the vessel, having the horizontal and vertical portions, a slide located between said portions and provided with an air passage in its lower end, a zig-zag hot air flue, having a width equal to the width of the vessel and extending upward from the horizontal portion thereof, whereby, it presents an extended heating surface to the water, transverse tubes extending across said horizontal portion, and a burner or burners located in such portion beneath the zig-zag flue, substantially as described.

No. 35,216. Whip. (*Fouet.*)

Edward K. Warren, Three Oaks, Michigan, U. S. A., 15th October, 1890; 5 years.

Claim.—1st. As an improved article of manufacture, a whip, having a tapering core and an external layer of bone, formed of thin flat splints of bone bound flatwise longitudinally upon said previously formed core, with their longitudinal edges overlapped, and arranged to break joint, and a binding material around the exterior of the layer of bone, substantially as set forth. 2nd. In a whip, the tapering resilient core, provided with a covering composed of separate and independent thin flat splints, and small fibres *c*, *c*^{1}, of bone, arranged to break joint, as described, and bound upon the core throughout its length. 3rd. As an improved article of manufacture, a whip, consisting in a resilient core, of less length than the whip, a series of separate and independent flat splints *c* of bone, bound upon the core throughout its length, arranged to break joint, and extended beyond the end of the core, and there bound together to form the tip B, and the outer lining inclosing the whole, substantially as set forth.

No. 35,217. Paper File. (*Serre-papier.*)

Charles Edgar Stone, Toronto, Ontario, Canada, 15th October, 1890; 5 years.

Claim.—1st. The combination, in a paper file, of the upright curved wires A, A, with the plate B, the upright wires or tubes C, C, with the balanced weight D, and the pivot E, in box F, as shown and described. 2nd. The combination, in a paper file, of the button G, with lock plate G^1, and flange H, on box F, with the plate B, as shown and described, the whole arranged and combined and operating, substantially as set forth.

No. 35,218. Machine for Uniting the Soles and Uppers of Boots and Shoes.

(*Machine pour assembler les semelles et empeignes des chaussures.*)

Stillman Williams Robinson and Sern Perley Watt, both of Columbus, Ohio, U.S.A., 15th October, 1890; 5 years.

Claim.—The combination, with the spindle-piece A, constructed as described, and having internally-located spring-actuated upper grippers B, of the gripper-carriers C, thread-ring E, having prongs *e*, pronged coupling D, a lapted to be made to interlock with the prongs of said thread-ring, the grippers G, grip-ring F, and ring I, adapted to operate, substantially as described.

No. 35,219. Wire Stretcher.

(*Tendeur de fil de fer.*)

Joseph Klopfenstein, Archbold, Ohio, U.S.A., 15th October, 1890; 5 years.

Claim.—The combination of the end post, provided with eyes 2, arranged near its top and bottom, and having the stop or support 9, the tube or pipe journaled in the eye, and resting upon the stop or support, and provided with a vertical series of perforations to receive the wire, and having its upper end squared, and adapted to be engaged by a wrench or similar tool, and provided with perforations 8, arranged at various points on the circumference of the tube or pipe, and the pin 7, passing through one of the perforations 8, and engaging the end post, and preventing the tube or pipe from turning in the eyes 2, substantially as described.

No. 35,220. Transposing Pianoforte.

(*Transpositeur pour pianoforte.*)

Henry Schallehn, London, Middlesex, England, 15th October, 1890; 5 years.

Claim.—1st. In a pianoforte, the combination of the case, having an horizontal lever F, with a forked inner end K, and an outer handle H, with the adjustable back, having a stud or staple L, for making a detachable connection with the lever F, substantially as hereinbefore described. 2nd. In a pianoforte, the combination of the adjustable back, having a rack N, with the case, having a looking pedal P, and means, substantially as described for moving this back to the right or to the left, substantially as and for the purpose specified. 3rd. The transposing pianoforte, substantially as hereinbefore described, and shown in the accompanying drawings.

No. 35,221. Machine for Forming Bodies from Pulp. (*Machine à former les corps de la pate à papier.*)

Henry Fairbanks and Howard Parker, both of St. Johnsbury, Vermont, U.S.A., 15th October, 1890; 5 years.

Claim.—1st. In a machine for making pulp into sheets or cylinders, the combination of a pulp-vat, a mold-roll arranged with a portion of its surface dipped into the vat of pulp, a couch-roll, the surface of which runs in contact with said mold-roll, the couch-roll presenting a porous surface, in contact with the mold-roll, an exhaust applied to the interior of the couch-roll through one or both the ends, and a press-roll, the said press-roll and couch-roll held in yielding contact, whereby, the said rolls are permitted to separate, but still held under pressure toward each other, substantially as and for the purpose described. 2nd. The combination of a pulp-vat, the mold-roll A, having a porous surface adapted to dip into said vat, a hollow couch roll B, presenting a porous surface, and so as to run in contact with said mold-roll A, a tubular axle extending through the hollow gudgeons of the couch-roll, and bent down within the couch-roll, so as to stand stationary at the lowest point in the couch-roll, the said tubular axle within the couch-roll perforated and provided with a suitable exhaust, whereby an inward current may be produced through the porous surface of the couch-roll, and a press-roll G, arranged to run in substantial contact with the surface of the couch-roll, substantially as described. 3rd. The combination of the pulp-vat, the mold roll A, the hollow porous surface couch-roll B, arranged to run in contact with the surface of the mold-roll A, the gudgeons of the said couch-roll hollow, and provided with an exhaust from the inside of the roll, the press-roll G, and the pressure-roll N, substantially as and for the purpose described. 4th. In a machine for forming layers of paper-pulp, the combination of a perforated hollow roll adapted to receive a layer of pulp upon its surface, a hollow axle running through one of the gudgeons of the roll bent down upon the inside of the roll so as to lie close upon the lowest point of the interior of the roll, the said hollow axle open near the said lower surface of the roll, and in connection with an exhaust, substantially as and for the purpose described. 5th. In a machine for forming layers of pulp, the combination of a hollow roll presenting a perforated surface, adapted to receive a layer of pulp upon its said surface, a hollow axle extending into said roll, and bent down within the roll to substantially the lowest point therein, and open at such point into the roll, with means, substantially such as described to produce exhaust through said hollow axle, and a press-roll presenting a hard surface arranged to work in contact with the said perforated roll, and adapted to receive a layer of pulp from the said perforated roll, substantially as described. 6th. The combination of a hollow perforated couch-roll partially exhausted of air, and the ordinary mold-roll when arranged for joint action, with their surfaces in immediate rolling contact, adapted to transfer the layer of soft pulp directly to the couch-roll, substantially as set forth.

No. 35,222. Handle for Brakemen's Lamps.

(*Anse pour lampes de serre-frein.*)

William Henry Brady, Belleville, Ontario, Canada, 16th October, 1890; 5 years.

Claim.—An armlet, designed to be a snug fit to the arm, and having two fingers rigidly connected to it at one end, and provided with means to connect them with the lamp D, substantially as and for the purpose specified.

No. 35,223. Dump Cart. (*Tombereau à bascule.*)

Moses Seymour McCraney, Toronto, Ontario, Canada, 16th October, 1890; 5 years.

Claim.—A crank axle rigidly secured to the body of a cart, and journalled on the cart wheels, in combination, with a pair of shafts pivoted to the cart body at a point above or below the axle journal, substantially as and for the purpose specified.

No. 35,224. Automatic Condenser.

(*Condenseur automatique.*)

Louis Schutte, Philadelphia, Pennsylvania, U. S. A., 16th October, 1890; 5 years.

Claim.—1st. In combination, a condenser and a thermostat subject to the influence of the condensing water, and acting to vary the capacity of the condenser, through suitable connecting devices, substantially as described and shown. 2nd. In combination, with a condenser, a thermostat subject to the influence of the outflowing water, and means, substantially as set forth, operated by the thermostat to control the water delivery to the condenser, whereby the temperature of the out-flowing water is caused to vary the water supply in due relation to variations in the steam supply. 3rd. In combination, with a condenser and means, substantially as described, for changing the rate of water delivery thereto, two thermostats, one subject to the inflowing water, and the other subject to the outflowing water, arranged to act jointly on the water-controlling devices, substantially as described and shown. 4th. In combination, with an induction condenser, having the combined tube and the adjustable spindle or equivalent adjustable devices to vary the steam and water passages as usual, and a thermostatic device subject to the water flowing through the apparatus, said elements combined for joint operation, substantially as described and shown. 5th. The induction condenser, having the adjustable sleeve and spindle, in combination with the cylinder, and pistons for moving them, the piston-controlling valve and thermostatic devices subject to the influence of the condensing water for operating the controlling valve. 6th. In a condenser provided with means of water-supply, and with means, substantially as described, for changing the rate of supply, two thermostats subject respectively to the inflowing and outflowing water, a lever connected at opposite ends to the respective thermostats, and connections for communicating motion from said lever to the water-controlling devices. 7th. In combination, with a cylinder and piston, a valve controlling the delivery of an actuating fluid thereto, a lever to control the valve, and two independent thermostats acting to move the lever in opposite directions when subjected respectively to an increasing temperature. 8th. In an induction condenser, having the mixing tube with forwardly-inclined openings for steam admission, the central longitudinally-adjustable spindle, having the pointed exposed end. 9th. In an induction condenser, having a mixing tube, with the steam inlet slits therethrough the central spindle, the sleeve surrounding the tube, and the sleeve-controlling rod attached directly to the head of the spindle, as shown.

No. 35,225. Sled Propeller.

(*Propulseur de traîneau.*)

John Stanford, Chester, Nova Scotia, Canada, 16th October, 1890; 5 years.

Claim.—1st. The combination, with two spaced runners, and a revoluble propelling wheel between, of a device which may be adjusted to alter the speed of the propelling wheel, substantially as set forth. 2nd. A sled propeller, having a spring-supported propelling wheel, and an adjustable seat, substantially as set forth. 3rd. A sled propeller having two runners spaced apart, a propelling wheel between, an adjustable seat above the propelling wheel, a differentially-speeded actuating device for the propelling wheel, a steering device, and a brake rigging, substantially as set forth. 4th. In a sled propeller, the combination, with a pair of runners, parallel yoke frames thereon, and side bars on the yoke frames, of a propelling wheel between the runners, which is pivoted on spring bars that are attached to the side bars of the frame, and an adjustable device to elevate the propeller wheel by flexure of the spring bars, substantially as set forth. 5th. In a sled propeller, the combination, with a pair of runners, a spring-supported propelling wheel between, an adjustable seat, and a device to elevate the propelling wheel, of a changeable gearing to alter the speed of the propelling wheel, and a steering device, substantially as set forth. 6th. In a sled propeller, the combination, with two spaced runners, yoke frames, and side bars which are erected on these runners, curved spring-bars, which are secured by one end to the side bars of the frame, and adapted to support revolubly a propelling wheel, and a propelling wheel on a journaled shaft which engages the boxes on the spring bars, of an adjustable seat supported on the side bars, sprocket wheels on the journal shaft of different diameters, mating sprocket wheels on a forward revoluble treadle shaft, a clutch device which is adapted to interlock with either sprocket wheel on the treadle shaft, chains to connect the sprocket wheels on the treadle shaft with those on the propelling wheel shaft, a steering device, and a brake rigging, substantially as set forth.

No. 35,226. Automatic Coupling for Steam Pipes. (*Joint automatique pour tuyaux à vapeur.*)

Joseph Walker, Clark's Green, Pennsylvania, U.S.A., 16th October, 1890; 5 years.

Claim.—1st. In a pipe-coupling, the combination, with the head and the guide-eye, of the flexible bar passing through the eye and mounted on a rigid base, substantially as described. 2nd. In a pipe coupling, the combination, with the head connected to the main pipe with the passage through the same, and the spring-pressed valve in said passage for automatically cutting off the supply from the main pipe, of the downwardly extending trap on the head with the discharge-opening in the lower end, and the screw opening in the wall opposite said trap, and the expansion-bar passing through the screw opening across the passage through the head and fitting within the trap for closing the discharge opening therein, substantially as and for the purpose set forth. 3rd. In a pipe-coupling, the combination, with the head and the valve, and valve-seat, having the extension K^4 thereon, of the elastic packing surrounding the said extension, and the removable plate or ring L, overlying the outer edge of said packing, and secured to the head, substantially as described.

No. 35,227. Waggon Brake. (*Frein de wagon.*)

William H. Grant, Waltham, Maine, U.S.A., 16th October, 1890; 5 years.

Claim.—1st. The combination, with the front axle and the hounds of the tongue moving longitudinally between the hounds, and provided at its rear end with the bar 10, the cross bar 13, secured to the hounds, and arranged at the back of the wheels, the brake levers pivoted to the ends of the cross bar 13, and provided with shoes arranged to engage the back of the wheels, and having their inner adjacent ends pivoted to the rear end of the bar 10, the brake bar secured to the tongue and provided with brake shoes arranged to engage the front of the wheels, and the stay chains connecting the brake bar and the axle, substantially as described. 2nd. The combination of the front axle, the hounds provided near their rear ends with the cross bar 13, the plate 6, secured to the lower faces of the front ends of the hounds, the plate 5, secured to the upper faces of the hounds, and provided with a perforation 19, the longitudinally sliding tongue provided with perforations 17 and 18, arranged to register with the perforation 19, the bolt 20, adapted to hold the tongue stationary, the bar 10, secured to the rear end of the tongue, and having its rear end provided with a transverse slot, the brake levers fulcrumed at the ends of the cross bar 13, and having their inner adjacent ends pivoted in the transverse slot of the bar, and their outer ends provided with brake shoes arranged to engage the back of the wheels, and the brake bar secured to the tongue at the front of the hounds, and provided with shoes arranged to engage the front of the wheels, substantially as described. 3rd The combination of the longitudinally sliding tongue 1, provided with the pivoted brake

levers 12, for the rear face of the front wheels and the brake bar 7, for the front face of the front wheels, and chains 9, connecting the brake bar 7, to the axle, both brake bars moving in unison with the movement of the tongue, as set forth.

No. 35,228. Circulator and Purifier for Steam Boilers. (*Circulateur et epurateur pour chaudières à vapeur.*)

Alexander Grant, Los Angeles, California, U. S. A., 16th October, 1890; 5 years.

Claim.—1st. The combination of a steam boiler, an exterior water circulating conduit connecting the intermediate part of the boiler with the lower part of the same, and a downwardly discharging feed water pipe communicating with said exterior conduit. 2nd. The boiler, consisting of a top section A, and a bottom section C, and an intermediate enlarged section D, in combination, with the exterior conduit communicating with the bottom of the intermediate section and extending, under the grate bars of the furnace, to and communicating with the bottom section of the boiler. 3rd. A steam boiler provided with a conduit which communicates with the intermediate part of the boiler, below the water line, passes thence along the outside of the boiler and into the boiler near the bottom thereof, extends upward therefrom, is enlarged at the top and thence extends downward to surround its upper extension to near the bottom thereof, and there opens to discharge near the bottom of the boiler. 4th. The combination of a steam boiler, a conduit which communicates with the intermediate part of the boiler, below the water line, passes thence along the outside of the boiler and into the boiler near the bottom thereof, extends upward therefrom, is enlarged at the top, and thence extends downward to surround its upper extension to near the bottom thereof, and there opens to discharge near the bottom of the boiler, and a feed water-pipe arranged to discharge downward into such conduit. 5th. The combination of a steam boiler, a purifier located outside of the boiler, a conduit communicating with the intermediate part of the boiler below the water line, and arranged to discharge into one end of the purifier, and a conduit communicating with the other end of the purifier, and arranged to discharge into the lower part of the boiler. 6th. The combination of a steam boiler, a purifier located outside of the boiler, a conduit communicating with the intermediate part of the boiler below the water line, and arranged to discharge into one end of the purifier, a conduit communicating with the other end of the purifier, and arranged to discharge into the lower part of the boiler, and means for distributing the water at the point of discharge. 7th The combination of a vertical steam boiler, a purifier located outside of the boiler, a conduit communicating with the intermediate part of the boiler below the water line, and arranged to discharge into one end of the purifier, a conduit which communicates with the other end of the purifier, passes into the boiler near the bottom thereof, extends upward therefrom, is enlarged at the top, and thence extends downward to surround its upper extension to near the bottom thereof, and there opens to discharge near the bottom of the boiler. 8th. The combination of a steam boiler, a purifier located outside of the boiler, a conduit communicating with the intermediate part of the boiler below the water line, and arranged to discharge into one end of the purifier, a feed water pipe arranged to discharge toward the purifier into such conduit, and a conduit communicating with the other end of the purifier, and arranged to discharge into the lower part of the boiler. 9th. The combination, with a vertical steam boiler, comprising a top section, a bottom section, and an enlarged intermediate section, of a purifier, a conduit communicating with the intermediate part of the boiler below the water line, and arranged to discharge into one end of the purifier, a feed water-pipe arranged to discharge toward the purifier into such conduit, a conduit which communicates with the other end of the purifier, passes into the boiler near the bottom thereof, extends upward therefrom to near the bottom of the enlarged intermediate section, is enlarged at the top and extends thence downward to surround its upward extension and discharge near the bottom of the boiler. 10th. The combination, with a steam boiler, comprising the top and bottom sections, and enlarged intermediate section, of the perforated partition, the purifier located outside of the boiler, the conduit communicating with the intermediate part of the boiler below the water line, and arranged to discharge into one end of the purifier, and the conduit communicating with the other end of the purifier, and arranged to discharge into the lower part of the boiler.

No. 35,229. Axle Bearing. (*Coussinet d'essieu.*)

Walter Bristow, Ottawa, Ontario, Canada, 16th October, 1890; 5 years.

Claim.—1st. An axle bearing in wheel hubs, consisting of the axle sleeve or bearings B, at opposite ends of the hub, and having a raised rim or projection B^1, balls C, traveling around said sleeve or bearings, and a ring D, inserted in both ends of the hub, and having a raised projection or rim D^1, which, with the rim or raised projection B^1, of the bearings B, compel the balls to travel or circuit in a row or rows around the inside of ring D, whereby the hub may turn on the balls independently of the sleeve or bearings B, or the balls and bearings B, move combinedly around the axle spindle, as set forth. 2nd. The combination, with the hub A, of the sleeve or bearings B, having projections B^1, balls C, travelling around said sleeve or bearings, rings D, inserted in the ends of the hub, and having an annular projection D^1, to retain the balls in their circuit, and rings J, secured to the ends of the hub to cover the opening to the balls, whereby the balls and bearings will travel together, or independently, as set forth.

No. 35,230. Shaft Coupling.

(*Armon de limonière.*)

David Boorman, Altoona, Pennsylvania, U.S.A., 16th October, 1890; 5 years.

Claim.—1st. In a shaft coupling, the combination, with a pair of shafts having key-seats formed therein, said key-seats increasing in depth from the ends of shaft toward center, of a collar having key-seats therein, keys made to conform to the shape of the openings formed by the key-seats in the shafts and collar, when registering with one another, and devices on the ends of the keys for holding them securely in place, substantially as set forth. 2nd. In a shaft coupling, the combination, with a pair of shafts having key-seats therein, which increase in depth from the ends toward center of shafts, of a collar having straight key-seats therein, keys formed to correspond in shape with the openings formed by the key-seats in the shaft, and collar registering with one another, the ends of the keys protruding out at the ends of the collar, and having threads thereon, nuts for tightening the keys, and flanges on the ends of collar, substantially as set forth.

No. 35,231. Wire Tightening Device.

(*Cric-tendeur des fils de fer.*)

John McDougall, Ernest, Kansas, U.S.A., 16th October, 1890; 5 years.

Claim.—1st. In a wire tightener, the combination, with a supporting upright, of a lever pivoted to said upright, said lever provided at a point near its free end, and upon its upper face, with a notch and at a point near its pivot-point, and on its under face with a pin, and a loop adapted to engage the notch, as and for the purpose set forth. 2nd. In a wire tightener, the combination, with an upright, of a lever *l*, pivoted thereto, said lever provided on its upper face, and at its free end with a notch *n*, and on its under face near its pivot-point with a pin *p*, a loop O, arranged to engage notch *n*, and a loop *e*, arranged to engage pin *p*, as and for the purpose set forth.

No. 35,232. Stand for Carboys.

(*Porte-touque à bascule.*)

James F. Stevenson, Allegheny, Pennsylvania, U.S.A., 16th October, 1890; 5 years.

Claim.—1st. A stand for carboys, consisting of the parallel rockers, having the brace at the lower ends to engage the carboy, and steps or bends at the upper ends to secure the carboy, substantially as described. 2nd. A stand for carboys, consisting of a wire bent to form rockers, and having the lower closed end bent up to engage one of the lower edges of the carboy, and their free ends formed with steps to engage one of the upper edges of the carboy, substantially as described. 3rd. The herein described stand for carboys, consisting of the curved rockers, having their lower ends turned up to form a brace for the carboy, and their upper ends turned inward and formed with step angles for securing the carboy, substantially as described.

No. 35,233. Water Wheel. (*Roue hydraulique.*)

David A. Van Kleek, Pardee, Kansas, U.S.A., 16th October, 1890; 5 years.

Claim.—1st. The combination, in a water-wheel, of an endless chain of buckets mounted on pulleys, so that the buckets with which the water contacts will be downwardly-inclined, bars and links pivotally connecting said buckets to each other, said bars having rollers which contact with guides, together with vertical sides and top forming an inclined chamber, contracted toward its lower end, and in which the upper portion of the endless chain moves, and a supply-gate located at the upper end of said chamber, substantially as shown and for the purpose set forth. 2nd. The combination, in a water-wheel, of a frame work constructed, substantially as shown, and provided with a water-way which converges toward the discharge-opening, of a chain of buckets mounted on sprocket-wheels attached to shafts, so that the buckets with which the water contacts will incline downward y from the inlet to the outlet openings, together with vertical sides and top forming an inclined chamber contracted toward its lower end, and in which the upper portion of the endless chain moves, and a supply-gate located at the upper end of said chamber, substantially as shown and for the purpose set forth. 3rd. In combination, with a water-wheel an endless belt, made up of a series of buckets constructed, substantially as shown supporting-shafts having notched wheels over which the endless chain passes, slotted bars G, G, secured removably to the frame, and provided with bearings for one of the shafts, and wedges for adjusting the bars G, the parts being organized, substantially as shown and for the purpose set forth. 4th. The combination, in a water-wheel, of an inclined endless belt located within an upper casing contracted toward its lower end as described, said belt being composed of a series of transverse boards provided with loops or straps pivotally connected by rods carrying rollers, angular end plates secured to the face of the boards, and transverse inclined plates with which the boards and angle-plates form buckets, substantially as set forth. 5th. In combination, with a water-wheel, constructed substantially as shown, a supporting-frame therefor, made up of sill pieces and vertical beams inclined or wedge-shape side pieces C, C, and a removable top D, whereby a converging water-way above the buckets is provided, the inclined endless chain of buckets being provided with rollers and guides with which said rollers contact, so that the buckets will not be depressed by the weight of the water, substantially as set forth.

No. 35,234. Rotary Engine.

(*Machine rotative.*)

Joseph J. Bentley, Sadorus, Illinois, U.S.A., 16th October, 1890; 5 years.

Claim.—1st. In combination, in a rotary engine, the cylinder, a suitable abutment within the cylinder mounted on a shaft normally in line with the axis of said cylinder, a collar on said shaft at a suitable distance from that end of said shaft which is within the cylinder, and bolts passing through the abutment and through the

aforesaid collar, substantially as described. 2nd. In combination, with the cylinder, of a rotary engine, a suitable abutment within said cylinder, the shaft on which said abutment is mounted, and the spring bearing for said shaft, together with the hinged valve-pistons turning on axis at one end of the cylinder, and arranged radially thereto, together with a face-plate at the other end of the cylinder, adjustable in the direction of the axis of said cylinder, and at any slight angle to the said axis, substantially as described. 3rd. In a rotary engine, the combination of the cylinder, the spring-pressed face-plate, the abutment within said cylinder, the shaft on which said abutment is mounted, and the bearing for said shaft, within which the shaft is automatically adjustable in the line of its axis, substantially as described.

No. 35,235. Wear Plates for Railway Ties.

(*Platine et chevillette pour traverses de chemin de fer.*)

The Durham Manufacturing Company, Boston, Massachusetts, U.S.A., assignees of James Churchward, Brooklyn, New York, U.S.A., 18th October, 1890; 5 years.

Claim.—1st. The combination, with a railway rail and tie, of an oblong rectangular wear plate, having depending flanges adapted to enter the tie, and formed transversely of its body with oblong elongated slots adjacent to diagonally opposite corners thereof, and spikes, having a broad flat tapering diagonally ranging body adapted to said slots, as shown and described, for the purpose set forth. 2nd. The combination, with a railway rail and tie, of an oblong rectangular wear plate 20, formed with depending sharpened side flanges 21, and formed also transversely of its body at diagonally opposite corners with oblong rectangular slots 23, and spikes, as 26, driven through said slots into the tie in directions opposite each other, substantially as shown and described, for the purposes specified.

No. 35,236. Nose Ring for Cattle.

(*Anneau nasal pour bestiaux.*)

Edmund K. Rea, Cowgill, and Ella Barr Sargent, Ovid, both of Missouri, U.S.A., 18th October, 1890; 5 years.

Claim.—A nose ring, comprising the section A, bifurcated at its free end and provided with the notches G, G, and the transverse pin D, and the section A_1, provided with a tongue to fit in the bifurcation of the other section, and having a notch E, to engage the pin D, the section A_1, being further provided on opposite sides of its tongue with the inclined spurs F, F, to engage the notches G, G, in the end of the section A, all constructed and arranged, substantially as specified.

No. 35,237. Convertible Hay and Stock Rack. (*Râtelier convertible pour foin et bestiaux.*)

Edward W. Avery and Charles A. Slayton, Tecumseh, Michigan, U.S.A., 18th October, 1890; 5 years.

Claim.—1st. In a convertible hay and stock rack, metal hangers formed with hooks at an obtuse angle to the body portion, bracket arms secured to the body portion, the lower ends of the body portion being at an angle to the box in bed pieces, being arranged transversely of the box and extending beyond the sides thereof, as and for the purpose set forth. 2nd. In a convertible hay and stock rack, metal hangers formed with hooks for engagement with the side of the wagon box, a bracket arm swiveled to the hanger at the upper end thereof, in combination, with braces pivotally secured to the bracket arm and connected with a coupling movable upon the hanger, as and for the purposes set forth. 3rd. In a convertible hay and stock rack, metal hangers formed with a hook at the upper end, a body portion at an obtuse angle thereto, with the lower end of the body portion in a parallel plane with the hook portion, supports for sustaining the hangers at an incline to the box, in combination, with a bracket arm pivotally secured to a coupling permanently secured upon the hanger, and sustained in position by braces pivotally secured to the bracket arm and to a movable coupling upon the hanger, as and for the purpose set forth. 4th. In a convertible hay and stock rack, in combination, with the end boards, of the wagon box end sections being pivotally and detachably secured to the end boards by means of staples secured in the end section boards, and hooks upon the end sections, whereby the end sections may be folded within the box or inclined therefrom to the ground, as and for the purpose set forth. 5th. In a convertible hay and stock rack, supplemental side sections, having a hinge connection with hangers secured to the body portion, in combination, with supplemental end sections, having over-lapping portions for securing the side sections from vertical displacement, as and for the purposes set forth.

No. 35,238. Pump Piston.

(*Piston de pompe.*)

Burton H. Wells, and Edward Brook French, both of Oneida, New York, U.S.A., 18th October, 1890; 5 years.

Claim.—In combination, with a pump barrel or pipe, a pump piston composed of a solid piston-head formed with a water-passage between its periphery and inside of said barrel or pipe, and having the edge of the under side beveled, a follower secured to said piston-head, and formed with a similar water-passage at its periphery, and with openings around its center, a ring formed with a circumferential rabbet and divided into segments seated movably radially between the piston-head and follower, a lug formed in the rabbet of one of the said segments, and a ring also divided into segments seated movably radially in the aforesaid rabbet, and breaking joints with the same, the lower of said rings having its bottom edge beveled, substantially as described and shown.

No. 35,239. Chopping Knife. (*Couperet.*)

Egbert L. Maranville, Poultney, Vermont, Andrew J. Melville, Hampton, New York, and John M. Butler, Whitehall, N.Y., all of U.S.A., 18th October, 1890; 5 years.

Claim.—1st. A chopping knife, consisting of an open blade, having a sharpened lower edge, and a handle above said blade having depending ends bolted to the blade, and a bolt through said handle and ends, whereby the distance between said ends may be varied, substantially as described. 2nd. A chopping knife, having an open blade with a sharpened lower edge, and a transverse blade of S-shape secured within and across said open blade, substantially as described. 3rd. A chopping knife, comprising an open blade C, an S-shaped blade S, secured within and across the same, a removable handle H, at right angles to the length of said cross-blade, end pieces E, connected to said open blade at their lower ends, and a bolt passing through said handle and end pieces, whereby the distance between the latter may be adjusted, substantially as hereinbefore described.

No. 35,240. Twine for Binding Grain, etc.

(*Cordonnet pour lier le grain, etc.*)

Orla H. Watkins, and Charles E. Albrook, Eldora, Iowa, U.S.A., 18th October, 1890; 5 years.

Claim.—A band, rope, or twine, composed of straws twisted together, and re-enforced and fastened by thread stitched therethrough, in the manner set forth, for the purposes stated.

No. 35,241. Coagulant Feeder.

(*Alimentateur coagulateur.*)

Hyatt Pure Water Company, Newark, New Jersey, assignees of Charles H. Kendrick, Winchester, New Hampshire, U.S.A., 18th October, 1890; 5 years.

Claim.—The combination, with a receptacle for the fluid to be treated, and a supply pump delivering the fluid thereto, and having a cylinder in which the pressure is intermittingly varied, a motor piston, in communication with the said supply pump cylinder, a coagulant force pump actuated by such motor piston, a tank of coagulant or reagent, and pipes and valves connecting the force pump with the receptacle and with the pump plunger, the whole arranged and operated to deliver a charge of coagulant into the receptacle at each reciprocation of its supply pump, substantially as set forth.

No. 35,242. Wick Trimmer.

(*Appareil pour tailler les mèches.*)

John L. Sanford and John F. Stephenson, Albany, New York, U.S.A., 18th October, 1890; 5 years.

Claim.—1st. Lamp-wick shears, consisting of thumb and finger pieces C, and C_1, handles A, and A^1, and the curved blades B, and B^1, said blades being unequally curved and furnished with the spurs d, and d^1, beveled on their opposing faces, substantially as set forth. 2nd. In lamp-wick shears, substantially such as described, one of the blades having a straight cutting-edge b, and the other blade formed with the angular cutting-edge b^1, and b^2, and the recess c, as hereinbefore set forth. 3rd. Lamp-wick shears, consisting of thumb and finger pieces C, and C^1, handles A, and A^1, and blades B, and B^1, said blades being unequally curved and furnished with the spurs d, and d^1, beveled on their opposing faces, the blade B having a straight cutting-edge b, and the blade B^1, formed with the angular cutting-edges b^1, and b^2, and the recess c, substantially as set forth.

No. 35,243. Waggon Running Gear.

(*Train de wagon.*)

The Gendron Manufacturing Company, Toronto, Ontario, Canada, assignees of Peter Gendron, Toledo, Ohio, U.S.A., 18th October, 1890; 5 years.

Claim.—1st. The combination, in a wagon running gear, of the front axle, the axle-cap D, having sleeves a, and lugs b, of the studs f, having T-shaped heads adapted to engage in the T-shaped aperture in the bolster, substantially as described. 2nd. The combination, in a wagon running gear, of the front axle, having an axle-cap secured thereto, of the stud thereon, having a T-shaped head adapted to engage into a T-shaped aperture in the bolster, and locked in position by a partial rotation of the parts, substantially as described. 3rd. The combination, in a wagon running gear, of the front axle, the axle-cap D, having the sleeves a, clamped upon the axle, a central bearing c, downwardly projecting lugs d, clamped upon the axle, the studs f, T-shaped head g, the bolster F, having the T-shaped aperture and the circular bearing, the parts being arranged to operate, substantially as described. 4th. The combination, in a wagon running gear, of the hind axle, having the rear body supports provided with a sleeve i, clamped upon the axle, the bifurcated bracket j, having a cap k, and studs l, substantially as described.

No. 35,244. Machine for Trueing Tires.

(*Machine à redresser les bandages des roues.*)

The Gendron Manufacturing Company, Toronto, Ontario, Canada, assignees of Peter Gendron, Toledo, Ohio, U.S.A., 18th October, 1890; 5 years.

Claim.—1st. In a machine for trueing tires, a rotary tapering trueing head upon which the tire is adapted to be expanded, substantially as described. 2nd. In a machine for trueing tires, a rotary trueing head, having a forward tapering portion for expanding the tire, and a cylindrical portion upon which the tire is adapted to be rolled, substantially as described. 3rd. In a machine for trueing tires,

the combination, with the tapering trueing head, of the front trueing rolls adapted to force the tire thereon, substantially as described. 4th. In a machine for trueing tires, the combination, with the tapering head, of the front trueing rolls journaled in swinging roller heads at either side, of the trueing head adapted to swing inward to bear upon the tires, substantially as described. 5th. In a machine for trueing tires, the combination, with the tapering trueing head, of front trueing rolls journaled upon swinging roller heads adjustably secured upon sliding feed tables, substantially as described. 6th. In a machine for trueing tires, the combination, with the trueing head upon which the tire is adapted to be forced, of front trueing rolls journaled upon swinging roller heads, of sliding carriages carrying such roller heads, and a feed device for reciprocating said carriages, substantially as described. 7th. In a machine for trueing, the combination, with the front trueing roll journaled in swinging roller heads, which are pivoted upon sliding carriages, of a feed device for reciprocating such carriages, and the spring dogs 42, engaging at one end with the standard 43, and at the other end with the periphery of the swinging roller heads, substantially as described. 8th. In a machine for trueing tires, the combination of the following elements: the frame 1, guide 100, adjustable bed plates 21 and 22, sliding carriages 25, and 26, adjustable base plates 36, swinging roller heads 37, and 38, and trueing rolls 40, and 41, substantially as described. 9th. In a machine for trueing tires, the combination of the following elements: frame 1, guides 100, adjustable bed plates 21 and 22, sliding carriages 25 and 26, carrying the trueing heads, and the rack bars 27, gear pinions 28, slidingly secured upon the shaft 29, by means of a feather engaging in the key way 101, the shaft 31, worm gear 30, worm gear wheel 32, friction clutch 34, hand lever 76, substantially as described. 10th. In a machine for trueing tires, the combination, with the trueing head, of feed mechanism to feed the tire upon the tapering portion of the head, and of the front trueing rolls, substantially as described. 11th. In a machine for trueing tires, the combination, with the trueing head of feed mechanism adapted to feed the tire upon the trueing head, a sliding feed table carrying the front feed rolls arranged on either side of the trueing head, and of mechanism for reciprocating such feed tables, substantially as described. 12th. In a machine for trueing tires, the combination, with the trueing head, of feed mechanism adapted to feed the tire upon the trueing head, of sliding feed carriages carrying the front trueing roll, of two or more rear rolls adapted to bear against the rear edge of the tire, of feed mechanism for reciprocating the feed carriages, and of connections between the rear rolls and the feed carriages, substantially as described. 13th. In a machine for trueing tires, the combination, with the tapering trueing head, of the front and rear trueing rolls adapted to roll the front and rear edges of the tire, substantially as described. 14th. In a machine for trueing tires, the combination of the tapering trueing head of the front trueing rolls, and a side expanding roll, substantially as described. 15th. In a machine for trueing tires, the combination of the sliding carriage 26, carrying the front trueing roll 41, of the rear trueing roll 72, forming a stop for the tire, substantially as described. 16th. In a machine for trueing tires, the combination of the sliding carriage 26, carrying the front trueing roll 41, journaled on the swinging roller head 38, of the rear trueing roll 72, and a detachable connection between these front and rear rolls, substantially as described. 17th. In a machine for trueing tires, the combination of the sliding carriage 26, carrying the front trueing roll 41, journaled in the swinging head 38, of the rear trueing roll 72, journaled on the swinging head 71, the table 66, the hook 74, on the swinging head 71, and the hook 75, on the swinging head 38, substantially as described. 18th. In a machine for trueing tires, the combination of the following elements the guide 63, adjustable bed-plate 64, sliding table 66, swinging head 71, rear trueing roll 72, journaled therein, of a spring 73, secured at one end to the table 66, and bearing with the other against the swinging head 71, of the spring 68, acting with its tension against the forward end of the table 66, and of the hooks 74, and 75, substantially as described. 19th. In a machine for trueing tires, the combination, with the rotary trueing head, of the side roll 47, substantially as described. 20th. In a machine for trueing tires, the combination of the rotary trueing head, the side roll 47, journaled upon a transverse adjustable sliding table, substantially as described. 21st. In a machine for trueing tires, the combination, with the sliding carriage 25, of the swinging roller head 37, the front trueing roll 40, the sliding carriage 48, the rear roll 46, and the side roll 47, substantially as described. 22nd. In a machine for trueing tires, the combination, with the sliding carriage 25, and the swinging roller head carrying the roller 40, of the sliding carriage 48, carrying the expanding side roll, and the rear roll 46, of the screw 49, pinion 51, gear wheel 50, and handle, substantially as described. 23rd. In a machine for trueing tires, the combination of the sliding carriage 25, the transverse sliding carriage 48, the bed-plate 98, the base-plate 61, swinging head 53, carrying the rear trueing roll 46, spring 54, spring 56, the lever 55, bearing with its upper end against the incline on the spring 56, the rod 57, the stops 58, and 60, and the fixed abutment 69, substantially as described. 24th. In a machine for trueing tires, the combination, with the frame and trueing head, of feed-table 5, feed-lever 7, connecting link 9, tilting tire-holder 10, pivoted to the table crank arm 13, having a pin engaging into a segmental circular slot 14, substantially as described. 25th. In a machine for trueing tires, the combination, with the frame of the feed-table 5, operated by the feed-lever 7, of the tilting tire-holder secured upon said feed-table, of the arm 15, of the lever, the link 16, crank 17, rock-shaft 18, and tire-carrying arm 19, substantially as described. 26th. In a machine for trueing tires, a feed-mechanism, consisting, of a feed-table operated by a feed-lever, of a tire holder pivotally secured thereon and provided with adjustable arms, of means such as the crank arm 13, having a pin engaging the segmental circular slot 14, for tilting the table from a horizontal to a perpendicular position in its forward movement, substantially as described. 27th. In a machine for trueing tires, the combination with the trueing head, of the carrying arm 19, having the hooked end 20, adapted to be inverted in its vertical position to drop the tire, substantially as described. 28th. In a machine for trueing tires, the combination, with the trueing head, of the rear trueing roll 72, secured upon the sliding table 66, of the roll 82, carried by said table, substantially as described. 29th. In a machine for trueing tires, the combination, with the trueing head, of the sliding table 66, standard 78, sliding sleeve 79, adjustable arm 80, roller-head 81, and roller 82, substantially as described. 30th. In a machine for trueing tires, the combination of the following elements, the trueing-head 4, front trueing-rolls 40 and 41, adjustably secured upon the sliding carriages 25, and 26, the rear rolls 46 and 72, side rolls 47, tire feeding-mechanism, and mechanism for reciprocating the sliding carriages 21, and 22, the parts being to operate, substantially as and for the purpose described. 31st. In a machine for trueing tires, the combination of the following elements, the frame the adjustable bed-plates, right and left screw-threaded shaft 23, engaging in screw-threaded nuts secured to the bed-plate sliding carriages, and 25 and 26, on said bed-plates, adjustable base-plate 36, swinging heads 37 and 38, carrying the front trueing rolls 41 and 40, the spring-dogs 42, abutments 45, and adjustable stops 96, the parts being arranged to operate, substantially as and for the purpose described.

No. 35,245. Wrench. (*Clé à ecrou.*)

Melville Beach and Sarah Beach, both of Ashton, Illinois, U.S.A. 18th October, 1890; 5 years.

Claim.—1st. In a wrench, the combination, with two curved members pivoted together intermediate their ends, the inner extremities of said members being provided with nut-receiving jaws, and the outer extremities of said members with threaded openings, of binding screws mounted in the openings, substantially as specified. 2nd. In a wrench, the combination, with the oppositely curved members pivoted together intermediate their ends, the inner ends of said members terminating in laterally-disposed nut-receiving jaws, each of which is recessed at its inner edge to receive the upper edge of the opposite member, and the outer ends of which are provided with threaded openings, of binding screws mounted in the openings, substantially as specified. 3rd. In a wrench, the combination, with opposite semicircular members pivoted together intermediate their ends, and terminating at their inner ends in laterally disposed jaws, one of said members terminating at its outer end in a threaded and perforated head, and the opposite member at its corresponding end in a transverse head perforated at its opposite ends, and at an angle to each other, of binding screws mounted in the perforations, substantially as specified. 4th. In a wrench, the combination, with opposite semicircular sections pivoted intermediate their ends, and terminating at their inner ends in laterally disposed nut-receiving jaws, the outer edges of which are recessed to receive the outer edges of said jaws, the outer end of one jaw terminating in a head having a single threaded perforation, and the outer end of the opposite jaw terminating in a laterally disposed head, having opposite angularly disposed threaded openings, set-screws mounted in the openings, and in the single perforation, loose washers mounted on the set screws, and pads upon the inner faces of the washer, substantially as described. 5th. In a wrench, the combination of two curved members pivoted together intermediate their ends, the inner extremities of said members being provided with nut receiving jaws, and the outer extremities of said members being provided with clamping devices to engage the hub band, substantially as specified.

No. 35,246. Mail Pouch Catcher.

(*Attrape-sac pour chars postal.*)

Joseph Andrew Hatlestad and William Rudolf, both of Moss Point, Mississippi, U. S. A., 18th October, 1890; 5 years.

Claim.—1st. As an improved article of manufacture, a mail-pouch catcher, consisting of a body adapted to be hinged to a car, comprising a series of bars curved at their outer ends, the lower bar being formed with a platform, and a gripping arm consisting of curved bars pivoted in the curved extremity of the body, and a plate secured to the pivotal point of the arm, substantially as shown and described, and for the purposes specified. 2nd. In a mail-pouch catcher, the combination, with a body adapted to be hinged to a car, of a gripping arm hinged to the outer end of the body, and provided with a tripping plate, substantially as shown and described. 3rd. In a mail-pouch catcher, the combination, with a body provided with a platform, and adapted to be hinged to a car, of a gripping arm hinged to the outer end of the body, and provided with a tripping plate which extends across the platform when the gripping arm is in the open position, and means for retaining the said arm in closed position, substantially as shown and described. 4th. In a mail-pouch catcher, the combination, with a body portion adapted to be hinged to a car, and having a curved outer end, of a gripping arm pivoted in the curved extremity of the body, and a tripping plate secured to the pivot end of the gripping arm, and adapted to pass rearward through an opening in the body, substantially as shown and described, and for the purpose specified. 5th In a mail-pouch catcher, the combination, with a body portion adapted to be hinged to a car, and provided with a curved outer end, and a platform formed at the bottom, of a gripping arm pivoted in the curved outer end of the body, a ratchet secured to the upper pivotal end of the gripping arm, a pawl pivoted upon the body and engaging said ratchet, and a tripping plate attached to the pivotal end of the gripping arm between its upper and lower extremities, the said tripping plate being adapted to pass rearward through an aperture in the body, substantially as shown and described and for the purpose specified. 6th. In a mail-pouch catcher, the combination, with a body portion adapted to be hinged to a car, and having a curved outer end, and a horisontal platform at the lower side of the said curved end, and an elastic cushion arranged at the back of the body, of a gripping arm hinged to the curved extremity of the body, a ratchet secured to the upper portion of the said arm at its pivotal end, a pawl contacting with the said ratchet and pivoted upon the body, a block secured to the lower end of the arm at its pivotal point, adapted to enter a cavity in the body platform, and a tripping plate also attached to the pivotal end of the gripping arm and adapted to pass rearward through an opening in the body, substantially as shown and described.

No. 35,247. Drains for Refrigerator Car.

(Egouts pour chars réfrigerateur.)

The Interstate Refrigerator Car Company, assignees of Albert A. Wood, all of Atlanta, Georgia, U.S.A., 18th October, 1890; 5 years.

Claim.—1st. In a refrigerator, a drain trap for the drip from the ice-box, in combination with a salt reservoir on a higher level than said trap, and so connected with it as to allow the drip to come in contact with the salt when the main outlet of the drip is obstructed, substantially as described. 2nd. In a refrigerator, a drain trap, having a salt reservoir located above the bend in the trap, and provided with a perforated bottom, substantially as described. 3rd. In a refrigerator, the drain trap, the salt reservoir located above the same, and having a perforated bottom, and the auxiliary exit passage communicating with said reservoir above its bottom, substantially as described. 4th. The drain trap, having the non-conducting dams between its bends, as described.

No. 35,248. Tanning Composition.

(Composition de tannage.)

George H. Russell, Newburgh, and Reister Russell, Reisterstown, both of Pennsylvania, U.S.A., 18th October, 1890; 5 years.

Claim.—The herein described compound for tanning, composed of bark, bi-carbonate of soda, salt, sulphuric acid, and water, in about the proportions specified.

No. 35,249. Fountain Ink Stand.

(Encrier-fountaine.)

John Heberling, Myron Walter Sprague and James Russell Austin, all of Rochester, New York, U.S.A., 18th Octobe, 1890; 5 years.

Claim.—1st. In a fountain ink-stand, a fountain cup sustained by an open-mouthed inverted cup or bell, serving as a combined float and compressor to cause ink to flow to the fountain cup by the compression of air within said cup, substantially as described. 2nd. In a fountain ink-stand, the combination, with a suitable reservoir, having a central chamber or well, in its bottom, of a fountain cup, mounted on and communicating with a tubular stem which rises and falls in the guide or bearing, and an open inverted cup, or bell to act both as a float and an air compressor, mounted upon the tubular stem and rising and falling in said chamber or well, substantially as described. 3rd. In a fountain ink-stand, the combination, with a suitable reservoir, of a cover having a central guide or bearing, a fountain cup mounted on and communicating with a tubular stem, an open inverted cup or bell, adapted to act as a float and compressor, mounted on the tubular stem, the lower end of which drops to the mouth of the inverted cup or nearly so, and is provided with a yielding or elastic collar, or packing, substa tially as described. 4th. In a fountain ink-stand, the combination, with a suitable reservoir having a cap, or cover provided with a central vertical guide, of a tubular stem mounted in said guide, an open inverted cup or bel adapted to act as a float and compressor, mounted on the stem which drops beyond the open mouth of the inverted cup and is shod with a yielding or elastic collar or packing, and a fountain cup mounted on the tubular stem, the latter being provided with a detent or tooth adapted to engage a bracket on the cover, substantially as described. 5th. In a fountain ink-stand, the combination, with a suitable reservoir having a cover or cap, of a tubular stem having vertical movement in a socket bearing in said cap, and provided with one or more air channels cut from a point a little above a collar on the stem, which seats against the lower end of the socket to a point above said socket an open inverted cup or bell, mounted on the lower portion of the stem, and a fountain cup mounted on its upper end, substantially as described. 6th. In a fountain ink-stand, the combination, with a suitable reservoir, of a collapsible inverted vessel, or cup, a t bular stem penetrating the upper, closed collapsible portion of said vessel, and a fountain cup carried by said stem, the latter being sustained by the collapsible cup, substantially as described. 7th. In a fountain ink-stand, the combination, with an ink-reservoir, of a tubular stem rising and falling in a suitable bearing, an inverted vessel or cup having a collapsible portion penetrated by said stem, a fountain-cup carried by and filled from the latter by the collapse of the inverted vessel or cup, and means for locking said stem in position to retain the ink within the fountain cup, substantially as described. 8th. In a fountain ink-stand, the combination, with an ink reservoir having a central recess or depression in its bottom, of an inverted, collapsible vessel having a neck surrounding its open mouth, and adapted to seat upon the bottom of the reservoir around a central recess therein, a tubular stem penetrating the upper, closed collapsible portion of said vessel, and having its open end normally lying above the bottom of the reservoir, and a fountain cup mounted on and communicating with said stem, substantially as described. 9th. In a fountain ink-stand, the combination, with an ink-reservoir, having a suitable cover or cap, of a tubular stem rising and falling in a socket bearing in said cover, an inverted vessel or cup, having an upper, closed collapsible portion which is penetrated and entered by said stem, the lower end of the latter being provided with a yielding collar, a fountain cup carried by said stem, and a set screw tapped into the cover and having a cam-collar engaging a collar or other projection on the tubular stem, substantially as described. 10th. In a foun ain ink-stand, the combination, with a fountain-cup having a tubular stem, of an open-mouthed, inverted cup or bell-float mounted on said stem, and a perforated piston diaphragm moving in a central well and mounted and having limited vertical play upon the end of the tubular stem, substantially as described. 11th. In a fountain ink-stand, the combination, with a main reservoir having a central well, of a tubular stem rising and falling in a suitable bearing and having a fountain cup on its upper end, its lower end descending in the well, an open-mouthed inverted cup or bell-float, mounted on said stem and having its mouth lying in the well, and a piston diaphragm loosely mounted on the lower end of said stem, its edge fitting within the well, and its body provided with openings within the area enclosed by the mouth of the float, substantially as described. 12th. In a fountain ink-stand, a tubular stem carrying a fountain cup, an open-mouthed, inverted cup, or bell-float, mounted on said stem, an ink-reservoir having a central cup or well, in which said float rises and falls, and a piston diaphragm or valve, fitting within said well or cup, and rising and falling with the rise and fall of the float, substantially as described.

No. 35,250. Force Pump. *(Pompe foulante.)*

Mott B. Brooks, Hammond, New York, U.S.A., 18th October, 1890; 5 years.

Claim.—1st. In a pump for pails and other vessels, the casing A, having central cylinder B, and the plunger or piston C, in combination with cylinder E, valve G, and metal top D, said top and cylinder B, being open at their upper ends to form a space around the plunger or piston, substantially as and for the purpose set forth. 2nd. The combination with the casing A, passages F, F, and cylinder E, of the air vent and drip chamber S, central cylinder B, plunger C, and the several valves, substantially as and for the purpose set forth.

No. 35,251. Apparatus for Raising Dough.

(Appariel pour faire lever la pâte.)

John F. Case, Brooklyn, New York, U.S.A., 18th October, 1890; 5 years.

Claim.—1st. A bread-raiser, consisting of a dough-chamber, having a water-vessel set into and forming part of the bottom wall thereof, a permanent shelf immediately beneath the water-vessel, and a lamp or other equivalent source of heat upon said shelf, and beneath said vessel, and adapted to apply heat directly thereto. 2nd. A bread-raiser, consisting of a dough-chamber, having a water-vessel set into and forming a part of the bottom wall thereof, and so mounted therein that it is capable of being slid forward out of said wall for refilling or cleaning. 3rd. A bread-raiser, consisting of a dough-chamber, having a water-vessel set into and forming part of the bottom wall thereof, and so mounted therein that it is capable of being slid forward out of said wall, and a door adapted to close against such water-vessel and retain the latter in position. 4th. A bread-raiser, consisting of a casing divided by a closed horizontal partition into an upper dough-chamber, and a lower heating chamber, said partition having a water-vessel set thereinto, and constituting a portion thereof, a permanent shelf in the lower part of said heating-chamber immediately beneath said water-vessel, a lamp upon said shelf, and immediately beneath said water-vessel, and a door covering one side of said dough-chamber and extending down to and covering the front of said partition, but arranged to leave the front of the heating-chamber open, so that the lamp therein is accessible and the products of combustion may escape therefrom, while the dough-chamber is closed to the outer air. 5th. A bread-raiser, consisting of a casing open on one side, and divided by a closed horizontal partition into an upper dough-chamber and a lower heating-chamber, said dough-chamber having a door covering its front side, a water-vessel set into the bottom of the dough-chamber and forming part of the closed horizontal partition, and so mounted that it can be slid out of the dough-chamber, and adapted to be held in place by the said door, said heating-compartment being open at its front side and having openings in the lower part of its closed sides, a shelf in the heating-chamber immediately beneath said water-vessel, and a lamp on said shelf arranged directly under said water-vessel, and adapted to heat the latter. 6th. A bread-raiser, consisting of a casing open throughout its entire extent on one side, a horizontal closed partition dividing said casing into an upper dough-chamber and a lower heating-chamber, said dough-chamber having steam outlet apertures in its upper part, shelves in said dough-chamber for supporting the dough-pans, a removable water-vessel set into the bottom of the dough-chamber, and constituting a portion of the said closed horizontal partition, and mounted therein so that it can be slid out of the dough-chamber, a shelf in the heating-chamber immediately beneath the water-vessel, a lamp on said shelf directly under said water-vessel, whereby the water in said vessel is heated, and a door on the open side of said casing, said door closing the dough chamber entirely, and terminating just below said closed partition, whereby said heating-chamber is left open on one side, and said water-vessel is held in place.

No. 35,252. Brush. *(Brosse.)*

William H. Gates, Detroit, Michigan, U.S.A., 18th October, 1890; 5 years.

Claim.—1st. A brush, consisting of the body provided with a series of circular chambers, the bristles doubled once within said chambers, the binding wires having the right angle end portions, said wires crossing the bristles within the chambers, and having their ends clinched through the brush body, as and for the purposes specified. 2nd. In combination with the brush body, having a series of circular chambers and partitions between said chambers, the bristles doubled within said chambers the binding wires having right angle end portions, said wires crossing the bristles and the chambers both longitudinally and transversely of the brush body, their ends being clinched through the brush body, substantially as specified.

No. 35,253. Making and Applying Explosives. *(Fabrication et application de matières explosives.)*

Carl O. Lundholm and Joseph Sayers, Stevenston, Ayer, Scotland, 19th October, 1890: 15 years.

Claim.—1st. The process for mixing or incorporating together cellulose derivatives with organic substances, the said process consisting in suspending or diffusing either or both classes of ingredi-

ents in water or other suitable liquid, which is or has been rendered practically incapable of dissolving, then agitating them together in the liquid, and subsequently separating the liquid, all substantially as hereinbefore described. 2nd. In the making of sub-sensitive explosives, the combination of oxy or hydro cellulose nitro derivatives with nitro aromatic substances, such as binitro benzol or its equivalent, as in the examples hereinbefore specified, or according to the hereinbefore indicated modifications of such examples. 3rd. In the making of explosives, the combination of nitro oxy cellulose or nitro hydro cellulose, or both, with one or more organic substances, such as nitro glycerine, nitro benzol, or their equivalents, with or without one or more other cellulose derivatives, substantially as hereinbefore described. 4th. Charging explosive shells with two or more layers or thicknesses of explosives formed by combining cellulose derivatives with organic substances, the layers or thicknesses being of different degrees of sensitiveness, and each outer layer being less sensitive than the next inner one, substantially as hereinbefore described.

No. 35,254. Device for Injecting Air and Steam into Furnaces.

(Injecteur d'air et vapeur pour chaudières.)

Salyer R. Earle, Belleville, Ontario, Canada, 20th October, 1890; 5 years.

Claim.—The combination, with a furnace, of a tapering tube C, having at the smaller end a straight neck D, and flaring mouth E, the larger end closed by a cap G, and projecting from the outer face of the furnace wall, said projecting portion having peripherally a series of perforations B, for admission of air, and a steam pipe A entering the closed end of the tube and extending past said perforations, said tube built into the wall to discharge into the furnace below the fire bars, as set forth.

No. 35,255. Toy. *(Jouet.)*

Waldo V. Snyder, Canton, Ohio, U.S.A., 21st October, 1890; 5 years.

Claim.—1st. The combination of the body A, attached to the platform B, the platform B mounted on wheels, the pivoted legs a and a^1, the crank shaft c, the pitmans d^1, the connecting wires g, and the hoofs h, provided with weights h^1, substantially as and for the purpose specified. 2nd. The combination of the body A, attached to the platform B, by the posts or standards D, the platform B, mounted on wheels, the legs a and a^1, pivotally attached to the body A, the shaft c, provided with the crank d, the pitmans d^1, and the connecting wires g, substantially as and for the purpose specified. 3rd. The combination of the connecting wires g, provided with the loops f, attached to the legs a and a^1, the pitmans d^1, and the crank d, substantially as and for the purpose specified.

No. 35,256. Stuffing Box. *(Boîte à garniture.)*

Louis C. S. Frick, Buffalo, New York, U.S.A., 22nd October, 1890; 5 years.

Claim.—1st. A stuffing box for steam and other cylinders, consisting essentially of a metallic packing formed of two or more parts running parallel with the piston and encircling the piston-rod, said packing having a curved tapering outer surface, and resting within a corresponding recess formed in the stuffing box, the mouth or larger opening of said recess being of smaller diameter than the packing, substantially as shown. 2nd. A stuffing box for steam and other cylinders, consisting essentially of a metallic packing encircling the piston-rod within the stuffing box, and being subdivided, forming two identical parts having longitudinal and cross surfaces, said packing being held in a suitable recess by a spring-pressed follower, substantially as shown. 3rd. The combination, with the stuffing box A^1, of the glands C, provided with a tapering cavity, the tapering bushing loosely fitting all around its sides in said cavity so as to leave an annular space, the flanges d^1, the shoulder k, the oval-shaped packing E, fitting in an oval cavity in the bushing so as to leave a space d, between the two, and the ring j, resting in the retaining plate l, said retaining plate loosely fitting around the piston, whereby provision is made for the settlement of the piston by wear so as to preserve the fit of all parts, substantially as set forth.

No. 35,257. Safety Valve Attachments for Gauge or other Cocks.

(Disposition aux soupapes de sûreté pour robinets-jauge.)

Frank Mears, Cleveland, Ohio, U.S.A., 22nd October, 1890; 5 years.

Claim.—1st. In a valve, of the character described, the chambered body E, having neck e and e^3, and a partition having valve seat e^2, the valve stem F, having a valve f, and screw threaded portion f^2, playing in neck e, and cap G, and having its inner end pointed and playing in a lug b^5, of plug B, the handle H, and nozzle I, all constructed, combined and operating, substantially as described. 2nd. In combination, the hollow plug B, having nipple b^2, and valve seat b^3, the bail C, secured into nipple b^2, the valve D, having pointed stem d, and playing in bail C, and lug b^4, in plug B, the chambered body E, secured in plug B, by neck e, and having partition provided with valve seat e^2, and nozzle I, the valve stem F, having valve f, and screw thread f^2, playing in neck e, and cap G, and in lug b^5, of plug B, and having handle H, all constructed and arranged to operate, substantially as and for the purpose specified.

No. 35,258. Steam Valve for Steam Pumps, etc. *(Soupape pour pompes à vapeur, etc.)*

Dorr B. Burnham, (assignee of Elon A. Marsh), both of Battle Creek, Michigan, U.S.A., 22nd October, 1890; 5 years.

Claim.—1st. In a steam-actuated valve, the combination of a steam-chest provided with induction-ports, and a valve provided with passages and pre-admission-ports leading to, and chambers beyond the ends of the valve, whereby said valve and the engine may be started, notwithstanding the valve may have come to rest with the main induction-ports closed, substantially as described. 2nd. The combination, with the cylinder of an engine, of a valve-chest having chambers at each end, and relief-ports leading through the main steam-passages to the cylinder, substantially as described. 3rd. The combination of a cylinder of an engine, a valve-chest having ports or passages connecting the central and end chambers thereof, with the middle and the ends of the cylinder respectively, and an annularly-chambered piston, whereby live steam is admitted alternately in volume to the outer ends of the end chambers of the valve-chest, to promptly move the valve to reverse the engine, substantially as described. 4th. In an engine, the combination of a steam actuated valve, a cylinder, a central live-steam port communicating with the same ports leading from said cylinder to chambers in the valve-chest, and an elongated chambered piston, substantially as described.

No. 35,259. Compound for the Prevention of Rust in Tinware. *(Composition pour empêcher la ferblanterie de rouiller.)*

Frederick Dresch and Josiah S. Eby, both of Elmwood, Ontario, Canada, 22nd October, 1890; 5 years.

Claim.—A compound, composed of a mixture of zinc and silver, melted, and then cooled off in vinegar, substantially in the proportions and for the purposes set forth.

No. 35,260. Compound for Plastering.

(Composition pour crepir.)

Walter Robinson, Onondaga, and Schhuyler W. Terry, both of Syracuse both in New York, U.S.A., 22nd October, 1890; 5 years.

Claim.—1st. The herein described composition, consisting of sawdust having first been saturated with a solution of quick lime, alum, white lead, and water, plaster of Paris, sand, and glue, in substantially the proportions specified. 2nd. For the finishing coat, the herein described composition consists of whiting, plaster of Paris, sand, and glue, in substantially the proportions specified.

No. 35,261. Pulley Support.

(Support de poulie.)

Adelbert G. Lawrence, Motley, Minnesota, U.S.A., 22nd October, 1890; 5 years.

Claim.—1st. In combination, with the pulleys C, D, the shafts E, F, yoke A, A, arm B, and the boxes P, P, reduced at f, f, substantially as set forth. 2nd. In combination, with the fast and loose pulleys and the shafts, the yoke A, A, and an arm passing between the pulleys and provided with a box at one end for inclosing the meeting ends of the shafts, substantially as set forth.

No. 35,262. Automatic Boiler Cleaner.

(Nettoyeur de chaudière automatique.)

George R. Ford, Grand Rapids, Michigan, U.S.A., 22nd October, 1890; 5 years.

Claim.—1st. The combination with a steam boiler, of a cleaner, consisting of a central hollow hub, the three vertically arranged plates radiating horizontally in right lines in different directions direct from the hub, terminating in juxtaposition to the boiler-shell and partially submerged throughout their entire length, to deflect the water currents irrespective of their direction to the hollow hub, a basin supported beneath the bottom edges of the radiating vertically arranged plates, and a discharge pipe rising vertically from and communicating through the hollow hub with the water in the boiler, substantially as described. 2nd. The combination, with a steam boiler, of a cleaner, consisting of a central hollow hub having the three wings radiating direct therefrom, the three vertically arranged plates bolted respectively to the said wings radiating in right lines in the plane of the wings, and partially submerged to deflect the water currents irrespective of their direction to the hollow hub, and a discharge-pipe rising from and communicating through the hollow hub with the water in the boiler, substantially as described. 3rd. The combination, with a steam boiler, of a cleaner, consisting of a central hub having three wings radiating horizontally direct therefrom, the three vertically arranged plates respectively attached to the wings radiating horizontally therefrom, and partially submerged to deflect the water currents irrespective of their direction toward the central hub, a basin supported beneath the bottom edges of the vertically arranged plates, and a discharge-pipe, substantially as described. 4th. The combination, with a steam boiler, of a cleaner, consisting of a central hollow hub having pendent projections or brackets on its lower end, the three vertically arranged plates radiating in right lines in different directions from the hollow hub, and partially submerged to deflect the water currents irrespective of their direction to the hollow hub, a basin suspended beneath the bottom edges of the vertically arranged plates by the pendent projections or brackets on the said hub, and a discharge pipe rising vertically from and communicating through the hollow hub with the water in the boiler, substantially as described. 5th. The combination, with a steam boiler, of a cleaner, consisting of a central hollow hub, the three vertically arranged plates radiating horizontally in right lines in different directions direct from the hub terminating in juxtaposition to the boiler shell, and partially submerged throughout their entire length to deflect the water currents irrespective of their direction to the hollow hub, a basin supported beneath the bot-

tom edges of the radiating vertically arranged plates, and a discharge pipe rising vertically from a point near the junction of said plates, and communicating with the water in the boiler, substantially as described.

No. 35,263. Apparatus for Reducing Argentiferous Ores. (*Appareil pour reduire les minerais argentifères.*)

Octavius Lumaghi, St. Louis, Missouri, U.S.A., 22nd October, 1890; 5 years.

Claim.—1st. The combination, with a furnace having openings at the front and back walls, of the inclosure connected to a suction device and having a tight roof and doors, of the retorts having their butt ends perforated, and the condenser applied thereto, as described, and for the purposes specified. 2nd. The combination of the retort, the condenser, and the retort stopper, said retort at its upper end being perforated centrally and having an annular groove surrounding said perforation, and said condenser at its upper end being of a different diameter from that of said groove, and being applied to the upper end of said retort, and to said groove, substantially as described. 3rd. The combination of the retort, and the retort stopper, said stopper being inserted and luted in the lower end of the retort, and being in the shape of a disk notched at the periphery, and having an opening slightly above the center, so that when the stopper is placed in the retort one of the notches comes at or near the bottom, substantially as described, and for the purposes specified.

No. 35,264. Apparatus for Aerating Liquids. (*Aérateur pour liquides.*)

William Garrett, Tweed, Ontario, Canada, 22nd October, 1890; 5 years.

Claim.—1st. The method of aerating liquids by carrying the air beneath the surface by the use of a vessel similar to an inverted pail, and allowing the confined air to escape by degrees as desired, either through vents in the side, or top, or both, or by tilting the vessel to permit the air to escape from the open bottom of said vessel or air reservoir. 2nd. The combination of the inverted vessel or air reservoir A, with or without the said air vents F, F, and F^1, F^1, or either of said vents, with handle attached, with or without the ring B, and bridge B^1, also with or without the port D, and valve E, substantially as and for the purpose set forth.

No. 35,265. Damper Attachment.

(*Clé de tuyau de poêle.*)

Albert M. Mohrmann, Lumoni, Territory of Washington, U. S. A., 23rd October, 1890; 5 years.

Claim.—1st. In combination, a stove pipe having a slot therein, a plate affixed to the pipe, and having a corresponding slot, the said plate carrying a bearing for the damper-axle, a revolving damper having its axle resting on said bearing, and a cover for the said slotted plate. 2nd. A damper attachment for stove or furnace pipes consisting of a plate having a slot therein, and a bearing for the damper axle, said slotted plate being provided with a cover, substantially as and for the purpose set forth.

No. 35,266. Picker Shoe for Looms.

(*Chasse-navette de métier à tisser.*)

Louis Bredannaz, Toronto, Ontario, Canada, 23rd October, 1890; 5 years.

Claim.—1st. A picker-shoe, provided with an adjustable wearing plate, substantially as and for the purpose specified. 2nd. A shoe G, having a projection *a*, on which an annular toothed rack is formed, in combination with the plate H, having a correspondingly-formed annular toothed rack made on its inner surface to engage with the rack on the projection *a*, to which the said plate is held by the pinch-screw I, substantially as and for the purpose specified.

No. 35,267. Machine for Crimping the Heads of Metal Cans. (*Machine à ourler les têtes des boîtes métalliques.*)

Frederick A. Robbins, San Francisco, California, U.S.A., 23rd October, 1890; 10 years.

Claim.—1st. In a machine for crimping the heads of round metal cans, the combination, with the bed-plate having the straight crimping edges and guides mounted thereon, and adjustable toward and from each other, to accommodate cans of different length, of the conveyor running parallel with said crimping edges, and adjustably connected to the bed-plate, whereby cans of different diameters may be accomodated, substantially as described. 2nd. In a machine for crimping the heads of round metal cans, the combination of the longitudinal crimping edges, and the conveyor above the same independently adjustable toward and from each other at opposite ends, whereby the pressure on the cans may be gradually increased or *vice versa*, substantially as described. 3rd. In a machine for crimping the heads of round metal cans, the combination, with the longitudinal crimping surfaces over which the cans roll, of the conveyor above the crimping surfaces for engaging the cans mounted on an adjustable support at one end, whereby the same may be adjusted and the pressure on the cans increased as they move forward, substantially as described. 4th. In a machine for crimping the heads of round metal cans, the combination, with the longitudinal crimping surfaces, of the endless chain conveyor mounted on rollers above the crimping surface and arranged to press upon the cans, substantially as described. 5th. In a machine for crimping the heads of round metal cans, the combination, with the surfaces and endless chain conveyor between which the cans are passed, of the unbroken longitudinal supports for the chain, whereby the surface and chain are kept a regular distance apart, substantially as described. 6th. In a machine for crimping the heads of round metal cans, the combination, with the surface and conveyor between which the cans are passed, of the side guides and rollers for pressing the heads firmly on the cans, substantially as described. 7th. In a machine for crimping the heads of round metal cans, the combination, with the longitudinal crimping surfaces and the endless chain conveyor, of a roller therefor at one end mounted in fixed bearings, and a roller at the opposite end journaled in an adjustable support, substantially as described.

No. 35,268. Grain Separator.

(*Séparateur des grains.*)

Charles Closz, Saint Ansgar, Iowa, U. S. A., 23rd October, 1890; 15 years.

Claim.—1st. In a grain separator, the combination, with a longitudinally reciprocating box, of an upper separating platform, a hopper *n*, below said platform having a middle slot *p*, and hinged walls *q*, depending from the sides of said slot, and a foraminated tray *m*, having raised sides *s*, closed at each end and arranged beneath and in the described relation to said hinged hopper walls, substantially as described for the purpose stated. 2nd. In a grain separator, the combination, with a longitudinally reciprocating box, of an upper separating platform, a hopper *n*, below said platform having a middle slot *p*, and hinged walls *q*, depending from the sides of said slot and a foraminated tray *m*, arranged beneath said hinged hopper walls, and having adjustable sides *s*, provided with a lip at their upper edge extending above and overhanging said tray, and closed at each end, substantially as described for the purpose stated. 3rd. In a grain separator, the combination, with a longitudinally reciprocating box having a top hopper *b*, at one end, and a bottom chute *t*, an upper separating platform arranged to receive the grain from said hopper, along under hopper *n*, arranged to receive the grain from said platform, and having hinged depending walls *q*, in the hopper opening *p*, and a foraminated tray *m*, arranged beneath said hinged hopper walls, having a width less than the interior of the box, and provided with raised sides *s*, and a bottom chute *x*, substantially as described. 4th. The combination in a grain separator, of the longitudinally reciprocating box, the separating platform, and the hopper *n*, having the hinged bottom walls *q*, at its middle opening, with a foraminated tray *m*, having the raised sides *s*, a central raised longitudinal part, and a bottom chute *x*, substantially as described for the purpose stated. 5th. In combination in a grain separator, a top inclined separating platform having an end discharge, a horizontal bottom foraminated tray *m*, having both bottom and side discharges, an intermediate hopper *n*, having an under-flow into the middle of said tray, and a box inclosing said hopper and tray, and adapted to have an endwise shaking motion, for the purpose described. 6th. In a grain separating machine, a longitudinally shaking box *a*, having the hopper *b*, provided with the over-flow ridge c^1, and the swinging gate *c*, the bottom *d*, beneath said hopper, having the over-flow ridge d^1, and the corrugated separating platform having the openings *f*, and the inclined ridges *g*, intersected by said openings, substantially as described. 7th. A longitudinally shaking tray for grain separating machines, having a foraminated bottom *m*, inclined upward at each end, provided with vertically adjustable sides *s*, and a bottom chute *x*, as described. 8th. A longitudinally shaking tray for grain separating machines, having a foraminated bottom *m*, and a central longitudinal raised part dividing the bottom into two shallow side trays, and provided with vertical sides *s*, in combination, with a hopper *n*, forming closed ends for said tray, and having its opening *p*, equal in length to that of the tray, and provided with hinged depending walls *q*, *q*, co-operating with the said tray in the way, and for the purpose stated. 9th. A longitudinally shaking tray for grain separating machines, having a foraminated bottom and a longitudinally raised central part formed with transverse corrugations, in combination with a hopper, having a feed-slot arranged to deliver the grain along the longitudinal center of said raised corrugated surface, for the purpose stated. 10th. In a grain separating machine, the combination of a hopper, a longitudinally shaking tray having a foraminated bottom, a longitudinally raised central part formed with transverse corrugations, and laterally projecting wings standing vertically within the tray at each side of said raised part, for the purpose stated. 11th. A longitudinally shaking tray for grain separating machines, having a foraminated bottom, a raised central part formed with transverse corrugations, and having laterally projecting wings standing vertically within said tray at each side of said raised part, and vertical sides enclosing said foraminated bottom, for the purpose stated. 12th. A longitudinally shaking tray for grain separating machines, having a foraminated bottom, a raised central part formed with transverse corrugations and inclining from a central ridge to each side, and having laterally projecting wings standing within said tray at each side of said raised part, in combination with a hopper, having a delivery opening corresponding to the said central ridge of the corrugated raised tray part, for the purpose stated. 13th. A longitudinally shaking tray for grain separators having a foraminated bottom, a central raised part having transverse corrugations and laterally projecting wings at each side, and vertical sides enclosing said foraminated bottom, the said raised corrugated surface inclining outward and downward from a central longitudinal ridge, and the said tray surface inclining downward and inward from its enclosing sides, for the purpose stated. 14th. A screen for grain separators, constructed of sheet metal platform, corrugated and having approximate heart-shaped openings, standing crosswise ridges formed between these openings inclining upward from the outer edge of the middle of one opening, to the inner edge of the middle of the next opening, and terminating in the latter in spear-points, whereby to form inclines which slope from each side of said spear-point towards the inner end of the platform, and terminates in said openings, sub-

stantially as described for the purpose specified. 15th. A sheet metal platform for grain separators, formed with the longitudinal corrugations intermediate upwardly inclined spear-pointed ridges, and the openings having enlarged rounded ends, formed by the ridge spear-points, and extending on each side of the latter, as shown and described.

No. 35,269. Pillow Sham Holder.

(*Porte-garniture d'oreiller.*)

Lovenia E. Pease, East Saginaw, Michigan, U. S. A., 24th October, 1890; 5 years.

Claim.—1st. The combination, with the plate attached to the head board, and provided with flange lips upon one of its vertical edges, and the binding plate and cam actuating lever pivotally attached to said plate, of the standard A, adapted to be secured between said flange lips and the binding plate, substantially as specified. 2nd. A pillow sham holder, comprising a standard adapted to be secured to a bed frame, a spring catch on said standard, and a vertically sliding sham holder frame, having its lower end embracing the standard and adapted to be held in an elevated position by said catch, substantially as specified. 3rd. The frame, formed from a single piece of wire bent at or about midway of its length to form a vertically disposed loop, and having vertically disposed branches terminating in lateral arms, in combination with a standard adapted to be secured to the head board of a bed, and receive the loop of the wire frame, substantially as specified. 4th. The pillow sham holder described, comprising the standard, the spring catch secured thereto, the cushion also secured to said standard, the guide openings in said cushion, the wire frame having its lower end provided with a vertically disposed loop, and its upper ends terminating in lateral-looped branches, and horizontal bars for the attachment of shams secured to said branches, substantially as specified. 5th. In a sham holder the combination, with the standard, of a vertically movable frame mounted thereon, and laterally adjustable bars secured to the upper end of said movable frame, substantially as specified. 6th. The combination, with the standard, of the vertically movable frame having its upper end terminating in lateral loops, and the rectangular boxing upon the upper end of said movable frame, the horizontal movable bars overlapping each other and secured within the rectangular boxing, substantially as specified.

No. 35,270. Load Lifter. (*Monte-charge.*)

James White Provan, Oshawa, Ontario, Canada, 24th October, 1890; 5 years.

Claim.—1st. The combination, of a strap A, having elongated holes *a*, made in each end of it to respectively fit over the wheel axle B, and bolt C, a nut D, arranged, in connection with means to prevent the longitudinal movement of the strap when the said nut is tightened against it, substantially as and for the purpose specified. 2nd. The link G, pivoted in the end of the frame E, and designed to support the hook H, substantially as and for the purpose specified. 3rd. The pivoted releasing hook I, formed with two curved prongs, one prong designed to engage with the releasing latch, the other curved prong to form the releasing hook, substantially as and for the purpose specified. 4th. The pulley M, pivoted in the clevis N, immediately below the end of the tongue O, substantially as and for the purpose specified. 5th. The pulley M, pivoted in the clevis N, immediately below the end of the tongue O, in combination with a stop-block Q, substantially as and for the purpose specified.

No. 35,271. Display Box. (*Boîte d'étalage.*)

Sylvester E. Briggs, Toronto, Ontario, Canada, 24th October, 1890; 5 years.

Claim.—1st. In a display-box or case, the rear partial lid hinged at its rear edge to the corresponding edge of the box, and having its front edge beveled downward as a means, whereby it is maintained closed, substantially as shown and described. 2nd. In a display-box or case, the strips 4, hinged by one end to the body 1, and secured at the other end to the front partial lid, having an under beveled edge, substantially as shown and described. 3rd. In a display-box, the combination of the partial lid to cover the front of the box, the strips hinged at one end to the body of said box, and secured to the said partial lid at the other end with the body of the box, the rear partial lid hinged to the rear of the box, and the stop pieces secured on said box, substantially as shown and described.

No. 35,272. Gaff-Joint for Vessels.

(*Joint de pic pour vaisseaux.*)

Peter E. Frostad, La Conner, State of Washington, U. S. A., 24th October, 1890; 5 years.

Claim.—1st. The combination of the yoke, the guide-block secured between the arms of the same, the gaff, the strips secured to opposite sides of the latter, and a pivotal bolt connecting said strips with the arms of the yoke, substantially as set forth. 2nd. The combination of the yoke encircling the mast, the guide-block secured between the arms of said yoke, and having a curved inner surface bearing loosely against the side of the mast, the gaff, having strips secured to its opposite sides, a pivotal bolt connecting the projecting ends of said straps with the arms of the yoke that extend beyond the guide-block, and the throat-halyard connected to the latter, substantially as and for the purpose set forth.

No. 35,273. Potatoe Digger.

(*Arrache-patates.*)

Elias Tompkins Ford, Stillwater, New York, U. S. A., 24th October, 1890; 5 years.

Claim.—1st. In a potato digging machine, an earth penetrating, rotary digging wheel, constructed and operating, substantially as herein described. 2nd. In a potato digging machine, an earth penetrating, rotary digging wheel, having an inclined surfaced hub and penetrating points, or edge, substantially as described. 3rd. In a potato digging machine, an earth penetrating, rotary wheel, having inclined surfaced hub with discharging openings through it, substantially as described. 4th. In a potato digging machine, a rotary conveyor separator wheel, constructed and arranged, substantially as described. 5th. In a potato digging machine, in combination, a conveyor separator wheel, and a shielding and discharging director, substantially as described. 6th. In a potato digging machine, a rotary conveyor separator wheel having its entering point, or edge form a continuation from the digging wheel, for the purpose of receiving from said digging wheel the potatoes, vines and earth, and conveying them off laterally, in combination with a shielding and discharging director, substantially as described. 7th. In a potato digging machine, in combination, a driving gear V, a gear J, diagonal shaft H, a supporting frame C, and a rotary digging wheel F, having tines g^6, bent backward from their shank ends on curved inclines, and divergent in reverse direction to their rotation, and terminated in spirally twisted ends turned toward the line of draft of the machine, substantially as described. 8th. In a potato digging machine, in combination, the supporting frame C, hung to vibrate on the axle A, a diagonal shaft H, an oblique shaft I, a shaft J^1, inclined from its upper to its lower end, gears for operating said shafts a rotary digging wheel, and a rotary conveyor separator wheel, substantially as described. 9th. In a potato digging machine, a rotary conveyor separator wheel, a rotary digging wheel, and gearing for driving the wheel, and separator with relatively faster and slower revolutions, substantially as described. 10th. In a potato digging machine, in combination, the frame C, carrying plows and digging and separator wheels, and hung on the axle, and having pendent hangers made in two parts, and the pole or tongue Q, substantially as described. 11th. In a potato digging machine, in combination, the frame C hung on the axle A, compound lever S, S^1, one part pivoted on the axle and extended under the pole or tongue, and also forming a standard for the driver's seat, and the other part connected to said frame, digging and separator wheels, and plows, substantially as described. 12th. In a potato digging machine, in combination, the plow E, and a digging wheel F, on an inclined diagonal shaft, said wheel serving for clearing the plow standards and its mold board of vines and trash, substantially as described. 13th. In a potato digging machine, in combination, a conveyor separator wheel G, and a backwardly and laterally inclined revolving shaft J^1, on one side of the machine, carrying said separator, substantially as described. 14th. In a potato digging machine, in combination, the main rotary separator wheel G, and the auxiliary separator U, beneath it, substantially as described. 15th. The traction wheels having a serpentine rim *c*, and extended in diameter by a narrow serpentine flange *d*, substantially as described. 16th. In a potato digging machine, the plow E, having an adjustable sole plate e^2, whereby the frame with its attached parts is mainly sustained on the left side of the machine, and the plow and digging wheel and separator wheel can be adjusted to operate at different depths, substantially as described. 17th. In a potato digging machine, in combination, the axle A, supporting wheels B, vibrating supporting frame C, pivoted tongue Q, vine gatherers, plows D, and E, digging and conveyor separator wheels F, G, shielding and discharging director T, gearing for operating said wheels and levers and clutch for controlling the parts, substantially as described. 18th. In a potato digging machine, in combination, a vibrating frame C, hung upon and in rear of the transverse axle A, a tongue or pole pivoted to said frame supporting wheels, one or two of which are capable of actuating the driving mechanism of the machine, a diagonal shaft H, gear V, on the axle, and gear J, on the shaft H, and a rotary digging wheel which penetrates the earth to a sufficient depth for digging the potatoes out of the row, and discharges the potatoes, vines and other adhering substances obliquely on one side of the machine, and two plows D, E, preceding the digging wheel for plowing respectively, under the right and left sides of the potato row, substantially as described.

No. 35,274. Cover for Organ Pedals.

(*Couverture pour pédales d'orgue.*)

Hommo Buikema, Chicago, Illinois, U. S. A., 24th October, 1890; 5 years.

Claim.—1st. The combination, with an organ case, provided with a pedal opening, of a pedal cover for the same, a bent operating lever pivoted to the said cover, and a guide arm pivoted at one end to the case and at the other end to the cover, at or near its lower end, substantially as described. 2nd. The combination with an organ case, provided with a pedal opening, of a pedal cover for the same, a bent operating lever pivoted to the said cover, and a guide arm pivoted at one end to the case and at the other end to the cover at or near its lower end, the fall board and operating mechanism, substantially such as described, connecting said fall-board and the bent lever, all substantially as described and for the purposes set forth.

No. 35,275. Neck Tie Fastener.

(*Agrafe de cravate.*)

Louis Greenwald, Leadville, Colorado, U.S.A., 24th October, 1890; 5 years.

Claim.—A neck tie fastener, concealed within the body of the tie and having the neck band passing therethrough, and being operated by external pressure upon the tie, said fastener consisting of the elongated rectangular casing 1, open at the ends only, and through which the end of the neck band passes, and the clamping plate 4 arranged longitudinally within the casing, along one side of the same, and adapted to engage the band, the loop 6, connected with the plate and the externally-operated spring arranged upon the outside of the casing and connected with the loop, substantially as described.

No. 35,276. Kiln for Drying Grain.

(*Four pour sécher les grains.*)

Louis Borland, Peterboro, Ontario, Canada, 24th October, 1890; 5 years.

Claim.—1st. The particular construction of the building or kiln, being built with outer and inner walls, forming chambers, air tubes I, I, built in the side walls A, A, for the admission of air to regulate the temperature to each of the columns a^1, and b^2, the furnaces S, S, when the heat is generated and distributed through the arches W, W, in the walls C, C, to the grain in the columns a^1, and b^2, the cast iron girders G, G, placed in the front and back walls at the required heights to form each section, the iron plates p, p, placed on the girders G, G, and walls C, C, to form the spaces in each section, the plate iron covering for the top section, as shown, all in combination for the reception of the machinery, and for the purposes above set forth. 2nd. The combination of the rotary stirrers H, H, with the concave sides of metal girders G, G, and the elevators N^1 and N^2, which moves and revolves the grain continually in its passage down the columns in manner to expose all parts to the required heat, and make it uniform in color and flavor, as shown and described for the purposes set forth. 3rd. The combination of the heating from the furnaces O, O, and ventilating and tempering the heat with the tubes 1, 1, 2, 2, 3, 3, in the various compartments through which the hot and cold air is directed, as indicated by the arrows to the grain in the columns a^1 and b^2, between the wire screens F, F, and the exhaust fan X, as shown and described, substantially as and for the purposes hereinbefore set forth.

No. 35,277. Road Cart. (*Désobligéante.*)

John McFarlane, Otterville, Ontario, Canada, 24th October, 1890; 5 years.

Claim.—In combination, a road cart, with the seat A, body E, springs B, C, C, and D, and the connecting clevises and rings, substantially as and for the purpose hereinbefore set forth.

No. 35,278. Vise. (*Etau.*)

John Ernst, Bay City, Michigan, U.S.A., 24th October, 1890; 5 years.

Claim.—1st. In a vise, the combination, with the movable and stationary jaws, provided with openings for the screw, a screw passed through the said openings and the nut sections m and n pivotally secured by their lower ends to the rear portion of the stationary jaw, below the screw, and with their upper ends extending above on opposite sides of the screw, and provided with threaded recesses fitting over and engaging with the threads of the screw, of a tie plate pivotally secured to the upper end of one of the said nut sections, and provided on the under side of its opposite free end with a notch, as described, reaching over and engaging the upper end of the other nut section, and devices for raising the free end of the plate to release the notch, substantially as set forth. 2nd. The combination of the stationary and movable jaws of a vise, a screw passed through the jaws, a two-section nut with the lower ends of the sections pivotally secured to the rear side of the stationary jaw, below the screw, and with their upper ends extending above on opposite sides of the screw, and provided on the inner side of their middle portions with threaded recesses engaging with the threads of the screw, a tie plate, with one end pivoted to the upper end of one of the nut-sections and having on the under side of its opposite free end a notch catching over the upper end of the other nut section, with a sleeve f^1, journalled to the stationary jaw in rear of and transversely with the nut sections, and provided with ear pieces e^1, projecting from its side, a lifting rod d^1, with its lower end pivoted to the said ear-pieces, and with its upper end pivoted to the outer free end of the said tie plate, and a lever for oscillating the said sleeve, substantially as set forth. 3rd. In a vise, the combination, with the stationary and movable jaws, and the screw passed through the said jaws, of the nut sections in rear of and pivotally secured by their lower ends to the stationary jaw, and with their upper portions extending above on opposite sides of the jaw, and provided on their rear side edges with the flanges p^1 and q^1 having the sloping portions s^1 and the straight portions r^1, as described, a tie-plate a^1, pivoted by one end to the upper end of one of the nut sections, and having a notch on the under side of its opposite end, catching over the upper end of the other nut-section, a sleeve f^1, journalled to the stationary jaw transversely with and below the screw, and provided with the arms l^1, l^1 and m^1, m^1 projecting from its side and on the opposite sides of the said flanges p^1 and q_1 respectively, and means for oscillating the said sleeve, substantially as set forth. 4th. In a vise, the combination of the rigid jaw a, provided with an offset a^{11}, having a curven rear wall b^{11}, and a groove c^{11}, a piece d^{11} in the said offset, and provided with a curved rear side e^{11}, and a curved lip f^{11}, within the groove c^{11}, and provided with transverse horizontal slots i^{11}, the bolts j^{11}, passed through the said slots, and tapped into the jaw a, and the spring actuated bolt l^{11}, passed through the jaw a and reaching into the piece d^{11}, substantially as and for the purpose set forth. 5th. The combination of a vise, having a base b, provided on its periphery with notches x^{11}, with a base plate p^{11}, pivoted to the under side of the base b, and a portion projecting beyond the base b, and provided with a chamber s^{11}, the bolt t^{11} within the chamber, and provided on its rear end with a handle w^{11} and a spring v^{11}, for actuating the bolt forwardly, substantially as set forth.

No. 35,279. Aerator for Milk.

(*Garde-lait aérateur.*)

William John Mallet, township of Brighton, Ontario, Canada, 24th October, 1890; 5 years.

Claim.—The perforated receiver, in connection with the truncated cone-shaped cooler, the strainer placed on the top of the receiver, allowing the milk to pass into the receiver in a clear liquid condition, without foam, the anti-splashing ring or collar and the adjustable feet or legs and the feet sockets.

No. 35,280. Churn. (*Baratte.*)

Charles William Smith, Strathroy, and John Kinleyside, Hamilton, both of Ontario, Canada, 24th October, 1890; 5 years.

Claim.—1st. The iron churn rim C, with its flush flange C^2, and head X, in connection with the cushion M and head B, as described. 2nd. The head B, rim D and hinge F, in connection with the rim C and churn A, as described. 3rd. The head B, lugs G, and handle H, in connection with the fastening device I, W, and the churn A, as described. 4th. The churn A, in connection with the link P, and the upright frame O and trunnion S, as described. 5th. The funnel U, in connection with the trunnion T and the churn A, as described. 6th. The discharge pipe R, as described, in connection with the churn A, all operating substantially as and for the purposes herein set forth.

No. 35,281. Aerator for Wort for Malt Liquors. (*Aérateur de mout pour boisson d'orge brassée.*)

Charles Dottiver Stanford, Boston, Massachusetts, U. S. A., 24th October, 1890; 5 years.

Claim.—1st. A spraying device, consisting of a delivery tube, open at one end and provided with a seat extending part way around the said open end, combined with a plug held against the said seat, and constituting with the unseated portion of the mouth of the delivery tube, a narrow orifice for the delivery of the liquid, substantially as described. 2nd. A spraying device, consisting of a delivery tube, open at one end, and provided with a seat extending part way around the said open end, combined with a plug held against the said seat, and constituting with the unseated portion of the mouth of the delivery tube, a narrow orifice for the delivery of the liquid, and a hood or shield depending from said delivery tube around the seat portion thereof, substantially as and for the purpose described.

No. 32,282. Spraying Device or Atomizer.

(*Lance et pulverisateur de liquide.*)

Charles Dottiver Stanford, Boston, Massachusetts, U. S. A., 24th October, 1890: 5 years.

Claim.—1st. In a spraying device for liquids, a nozzle or discharge tube having an orifice, which may be adjusted to control the spray it produces, and to allow the liquid to flush or clean out the said nozzle, and a movable bar co-operating therewith, and adapted, when it is moved, to adjust the orifice of said spraying device to flush the same and to control the spray, substantially as and for the purpose described. 2nd. A spraying device or nozzle, adapted to be attached to a liquid delivery pipe, and being provided with a tapering spray producing plug and support therefor, combined with a movable flushing bar co-operating with said plug-support for adjusting the said plug by the motion of said bar, thereby controlling the spray and flushing the said spraying device, substantially as and for the purpose described. 3rd. The combination of the main portion, having an unobstructed passage through it, an outlet opening at the end of the said passage, diverging extension on the said outlet provided with a screw thread, a plug controlling the said outlet, and a threaded ring connected with the said threaded extension, and provided with a bridge piece that supports the said plug, the ring being provided with gear teeth and a rack co-operating therewith, substantially as and for the purpose set forth. 4th. In a spraying device for liquids, the combination of the main portion or delivery tube adapted to be attached to a delivery pipe, and having an unobstructed passage through it, an outlet opening at the end of the said passage with a tapering plug at the mouth and controlling the outlet of said delivery tube, and a support for said plug connecting with said main body and longitudinally adjustable with relation thereto, said support being provided with a bridge piece, V-shaped in cross-section with its apex towards the outlet, substantially as and for the purpose described. 5th. In a liquid spraying apparatus, the combination of the main body or delivery tube adapted to be attached to a liquid delivery pipe, a tapering plug supported at the mouth of said delivery tube, and a support for said plug connected with the said main delivery tube and adjustable thereon by a screw thread, said plug support being provided with gear teeth, and a rack meshing with said gear teeth and longitudinally movable with relation to the spraying device for the purpose of adjusting the plug support and plug with relation to the outlet thereof, substantially as described.

No. 35,283. Steam Hammer for Forging Steel Wheels. (*Marteau-pilon pour forger les roues d'acier.*)

James Aubra Facer, Philadelphia, Pennsylvania, U. S. A., 24th October, 1890; 5 years.

Claim.—1st. In a steam hammer for forging wheels, the combination of the hammer-die, and anvil-die, having recessed surfaces corresponding to the shape of the sides of the finished wheel, a projection upon one side of said hammer-die, and supporting devices to support the blank in an upright position against the vertical face of the anvil-die, and under the projection on the hammer-die, substantially as and for the purpose specified. 2nd. In a steam hammer for forging wheels, the combination of a hammer, and an anvil-die having their surfaces formed to correspond to the shape of the finished wheel when the dies are in contact, a projection carried by said hammer-die, and supporting devices to support the blank in an upright position under said projection. 3rd. Dies for forging steel wheels, consisting of the combination of an anvil-die, having a large depression or recessed portion upon its face, adapted to receive the entire wheel-blank including the flange, in combination with a hammer-die formed with a small depression upon its face, corresponding only to the side of the wheel, and corresponding with the

recessed portion in the anvil-die to shape the blank into a finished wheel, and provided on its front part with a projecting hammer part arranged above the support on the anvil-die, and shaped to correspond to the tread and flange of the wheel. 4th. Dies for forging steel wheels, consisting of the combination of an anvil-die having a large depression or recessed portion upon its face adapted to receive the entire wheel-blank, including the flange, and a support in front and at a lower level than its face and formed to correspond to the tread of the wheel, including a groove for the flange, and also with a lateral support for the wheel when resting upon the front supports, and removable pin or part detachably connected with the anvil-die opposite to the lateral support to hold the wheel-blank in position while being turned, in combination with a hammer-die formed with a small depression upon its face, corresponding only to the side of the wheel, and corresponding with the recessed portion in the anvil-die to shape the blank into a finished wheel.

No. 35,284. Cold Storage House.

(*Réfrigerateur.*)

Albert Wodson Black, St. Louis, Missouri, U. S. A., 24th October, 1890; 5 years.

Claim.—1st. In a cold-storage house, the combination of the outer walls, and canopy provided with air passages, and an inner ice-box and storage-room closed from communication with the outside atmosphere, said ice-box and storage-chamber having parallel inclined tops with a space between them, substantially as set forth. 2nd. In a cold-storage house, an ice-box having an inclined floor provided with a lining composed of overlapping diagonally-arranged strips, and a trough at the lower side of said floor, substantially as and for the purpose set forth. 3rd. In a cold-storage house, the combination of the outer walls and canopy, an ice-box and storage room located within the outer walls and canopy, said ice-box having a roof or top inclined in but one direction, and forming an inclined air-passage between the top of the ice-box and the canopy of the housing, substantially as and for the purpose set forth. 4th. In a cold-storage house, the combination of the outer walls and canopy, forming a housing, and an ice-box and storage-room located within the housing, the ceiling of said housing having rounded corners 14, and both the ceiling of the housing and the top of the ice-box being inclined in but one and the same direction, substantially as and for the purpose set forth. 5th. In a cold-storage house, the combination of the outer walls having air-inlets at bottom and top, respectively, an inclined canopy or roof arranged on said walls, the inner walls arranged at a distance from the outer walls, and provided with a closed bottom or floor, and a closed top or roof inclined in but one direction, forming an inner room or chamber having no communication whatever with the space between the inner and outer walls, or with the external atmosphere, the independent framing 5, arranged wholly within the said inner chamber, the cross-beams 6, resting upon and supported solely by said framing, and an ice-box supported on said framing in the upper part of the inner chamber, and having its top inclined in a single direction and the side openings 11, the inner upper corners of said ice-box, and inner chamber being rounded, and said ice-box being completely closed against communication with the said inner chamber save through the said side opening 11, substantially as and for the purposes set forth.

No. 35,285. Method of Making Cigar Bunches. (*Méthode de fabriquer les cigares et les mettre en bottes.*)

Bernhard Heinrich Meyer, City of New York, New York, U. S. A., 25th October, 1890; 5 years.

Claim.—The herein described method of making cigar bunches, consisting in first spreading a series of leaves flat one upon another, secondly, rolling the series of leaves into a filler of convolute form, and then placing a binder around the filler, substantially as set forth.

No. 35,286. Screen Shutter.

(*Fermeture de fenêtre.*)

Charles R. Isard, Hamilton, Ontario, Canada, 25th October, 1890; 5 years.

Claim.—In a slatted window shutter, the shutter A, provided with horizontal slats B, attached to their vertical rod O, in combination with the screen C, secured to the outer face of said shutter, as hereinbefore described, and the moulding D, secured thereto, substantially as and for the purposes set forth.

No. 35,287. Washing Machine.

(*Machine à blanchir.*)

Philip Vollmar, Chatham, Ontario, Canada, 25th October, 1890; 5 years.

Claim.—1st. The combination of the tub A, and the rubbers B, and C, substantially as and for the purpose hereinbefore set forth. 2nd. The combination, with the rubbers B, and C, the oscillating arms I, I, substantially as and for the purpose hereinbefore mentioned. 3rd. The combination of the rubbers B, and C, oscillating arms I, I, and the spiral springs M, M, substantially as specified. 4th. The combination of the oscillating arms I, I, having the riveted joints O, O, as connections to the stiff arms H, H. 5th. The combination of the tub A, rubbers B, and C, oscillating arms I, I, spiral springs M, M, and the connections and mechanism for operating same, substantially as hereinbefore specified and shown.

No. 35,288. Wire Fence Post.

(*Pieu pour clotures en fil de fer.*)

William Longden, Holland, Manitoba, Canada, 25th October, 1890; 5 years.

Claim.—1st. A wire fence post, consisting of a pointed ground section A, and a tapering web section B, fitting endwise together, and a series of graduated clamps C, having a central aperture, a jaw c, provided with a V-groove, and a screw c^1, and sleeve 1 on said post section B, to hold the fence wires, as set forth. 2nd. The combination, with the tapering post section B, clamps C, sleeved thereon, and wires D, of the clamp E, fitted to the top of section B, and provided with a horn *d*, and screw *f*, and the top board rail F, held by said horn, as set forth. 3rd. The combination of the tapering post section B, and clamps C, having a jaw c, and provided with a screw c^1, as set forth.

No. 35,289. Lock and Fastening for Doors.

(*Serrure et fermeture de portes.*)

James Matthew Matthews and Frank Buckland, both of South Tottenham, Middlesex, England, 25th October, 1890; 5 years.

Claim.—1st. In a lock or fastening for railway carriage and other doors, the combination, with the bolt A, having a chamfered projecting part *a*, of the removable spring C, engaging with the tail a^1, of the bolt, the stud E, secured in the front plate B, of the lock, and the striking plate D, formed with an incline *d*, and a slot d^1, substantially as and for the purposes set forth. 2nd. In a lock or fastening for railway carriage and other doors, the employment, for securing an actuating spring such as C, in position, of a removable stud E, formed with side slots *e*, *e*, for enabling the stud to pass projections *b*, *b*, in the front plate B, of the lock, and with a face slot e^1, for the reception of a turn-screw or similar instrument, and for engaging with the projections *b*, *b*, substantially as herein described. 3rd. In a lock or fastening for railway carriage and other doors, the employment of a helical actuating spring surrounding the spindle of the handle, and secured at one end against rotation upon the spindle and engaging at the other end with the escutcheon, or with the lock case, substantially as herein described, and whereby the spindle and surrounding spring may be withdrawn without disturbing the lock.

No. 35,290. Bag Lock. (*Serrure de sac.*)

Frederick F. Ingram, Detroit, Michigan, U.S.A., 25th October, 1890; 5 years.

Claim.—1st. In a lock, substantially as described, the combination of a case, a catch 24, a latching-bolt adapted to automatically engage with said catch, and to be disengaged from said catch by drawing upon said latching bolt in a direction at right angles to one of the sides of said case, substantially as shown and described. 2nd. In a lock, substantially as described, the combination of a case 3, a catch 24, a latching bolt 4, adapted to reciprocate in said case, a pivoted spindle 16, provided with a lug 18, said lug being adapted to pass into a slot at one position of said lug to permit the raising of said latching bolt, and to prevent the raising of said latching bolt at other positions of said lug, substantially as shown and for the purpose described. 3rd. The combination of a case, a latching bolt adapted to reciprocate in said case, a key, a moveable piece adapted to be actuated by said key, and carrying a lug, said moveable piece being arranged so that said lug shall be interposed mediately or immediately between said bolt and said case, at one end of the travel of said moveable piece to lock said latching bolt, and shall leave said bolt free at the other end of the travel of said moveable piece, substantially as shown and described. 4th. The combination of a case, a latching bolt adapted to reciprocate in said case, a key, a key-post 19, pivoted in said case, and extending in a direction parallel to the motion of said latching bolt, and restrained from longitudinal motion, said key-post being provided with a lug 22, the pivoted bell-crank lever carrying a lug 12, upon the end of one of its arms, the lug 12, being adapted to pass under the lug 22, and lock said latching bolt at one end of the travel of said bell-crank lever, substantially as and for the purpose described. 5th. The combination of the locking spindle 16, and a case 3, the head 17, having a point extending from said head beyond the side of said case, when said spindle is turned to a position at which the lug 18, registers with the slot into which said lug is adapted to pass when the latching bolt is raised. 6th. The combination of the case 3, provided with the aperture 26, in its side, the latching bolt adapted to reciprocate vertically in said case, and the catch 24, and shoulder 27, extending from that part of the catch 24, which comes within the aperture 26, when said catch is secured in place, substantially as shown and described.

No. 35,291. Shaft Hanger and Belt Shifter.

(*Support d'arbre de couche et embrayage de courroie.*)

John W. Fisher and Watson A. Kinney, both of Bridgetown, Nova Scotia, Canada, 25th October, 1890; 5 years.

Claim.—1st. A shaft hanger, comprising a bracket or hanger B, having bifurcated arms B^1, B^2, the arm B^2, provided with a bearing box b^2, adapted to receive the loose pulley supporting sleeve, the arm B^1, provided with a bearing box to receive the shaft, substantially as and for the purpose described. 2nd. The combination, with the hanger B, provided with bifurcated arms B^1, B^2, a sleeve *d* journaled in the lower end of said arm B^2, adapted to support the idler or loose pulley D, of the bearing box E, formed of two parts *e*, e^1, centrally adjustable in the lower end of the arm B^1, substantially as and for the purpose described. 3rd. The combination, with the hanger arm B^1, provided with the side arms b^5, b^5, having horizontal members or extensions b^6, of a sleeve like bearing box E, formed of the upper and lower sections *e*, e^1, the lower section provided with recesses 1, arranged at right angles to the shaft screws 2, 2, extended up through the horizontal extension of the arms b^5, b^5, entering said recesses 1, and supporting the bearing box, substantially as and for the purpose described. 4th. The combination, with the arm B^1, provided with hanger arms b^5, b^5, and horizontal members b^6, b^6, of the bearing box E, centrally pivoted between said hanger arms b^5, b^5, consisting of the two sections *e*, e^1 formed with side wings or exten-

sions E^2, lapping the members b^6, b^6, the lower section provided with recesses 1, arranged at right angles to the shaft screws held in the members b^6, b^6, entering said recesses 1, screws 3, passed down through the arms b^5, and engaging the top of said box, said screws 2, 3, horizontally adjusting said box, and screws 4, 4, engaging said box at the sides, and adjusting same laterally, substantially as and for the purpose described. 5th. A hanger or shaft support, consisting of the bracket or hanger B, having lateral arms B^1, B^2, said arms formed with extensions or boxes adapted to receive and support the shaft bearings, and the loose pulley sleeve, said extensions or boxes provided with longitudinal slots in their lower faces, of slightly greater width than the shaft, substantially as and for the purpose described. 6th. The combination, with the hanger having lateral arms B^1, B^2, a sleeve *d*, adjustably secured with the lower end of the arm B^2, a loose pulley D, mounted on said sleeve, of a shaft bearing pivotally and adjustably supported in the lower end of the arm B^1, and means for adjusting said bearing, substantially as shown and described. 7th. A belt shifting apparatus, consisting of the hanger B, having bifurcated arms B^1, B^2, provided with a sleeve *d*, which supports the loose pulley D, the sleeve taking all the strain of the belt when a machine is not in motion, substantially as shown and described.

No. 35,292. Horse Spreading Device.

(*Appareil d'écarquillement pour chevaux.*)

Luke Glass Hague, and William Paddock Bolees, both of Bloomington, Illinois, U.S.A., 25th October, 1890; 5 years.

Claim.—The combination, with a horse-boot, of a spreader, consisting of solid rubber, or solid leather, or of a wire coil secured to the boot, a solid head secured to the free end of said coil, and a jacket inclosing the coil and head, substantially as set forth.

No. 35,293. Nail Driving Tool.

(*Machine à chasser les clous.*)

William Brooklin Brady, Austin, Texas, U.S.A., 25th October, 1890: 5 years.

Claim—The combination, with the shell, of the tool formed with recesses, and a guide-groove, as described, the driving-bar provided with notch 14, die 12 and roller *e*, spline 4, guided in the groove 9, of the shell and the returning spring, of the levers 2, 3, having toes *a*, *b*, the former of said levers bearing normally upon the roller *e*, the spring 5 secured to said shell bearing by its ends upon the ends of the said levers, and the magazine obliquely attached to the shell provided with an opening 25 and a spring-closing device 17, as and for the purpose set forth.

No. 35,294. Car Truck. (*Chassis de char.*)

Thomas Henry Bowles, New Orleans, Lousiana, and Gothlieb Alfred Aenchbacher, Atlanta, Georgia, both of U.S.A., 25th October, 1890; 5 years.

Claim.—1st. In a device of the class described, the combination of the casing D, having bearings *d*, the journal bearing brass C, having projections *c*, seated in said bearing points *d*, the axle A, the butting ring B, the bridge, consisting of the longitudinal supports F and G, connected at their ends by the transverse supports K, carried on said casing F and movable longitudinally on the same, the buffers O and springs N, carried on the lugs *n*, between the ends of the bridge and the casing D, for confining the movement of the bridge on said casing, substantially as and for the purpose set forth. 2nd. In a device of the class described, consisting of the casing D, carried on the axle A, and having bearing points *d*, the journal bearing brass C, having projections *e* seated on said bearing points *d*, the butting ring B, carried in grooves in the sides of the casing, the slides e^1 and e^{11}, sliding in suitable recesses in the casing spring e^{111}, for retaining the lower of said slides in place, the bridge, consisting of the longitudinal supports F and G, connected at their ends by the vertical transverse pieces K, carried on said casing, and having longitudinal play on the same, the springs N and buffers O, carried on the lugs *n*, between the casing and the bridge for confining the play of the same on the casing, the springs L surrounding said pins, substantially as and for the purpose set forth.

No. 35,295. Phonograp . (*Phonogrvphe.*)

James P. Magenis, North Adams, Mass., U.S.A., 25th October, 1890; 5 years.

Claim.—1st. In a phonograph, the combination, with the diaphragm cell and recording devices, of two independent diaphragms, and two record cylinders arranged to be acted upon by the recording devices. 2nd. In a phonograph, the combination, with the diaphragm cell and recording devices, of two independent diaphragms, and two record cylinders arranged to be acted upon by the recording devices, and means, substantially as shown and described, for moving the diaphragm cell forward. 3rd. In a phonograph, the combination, with the diaphragm cell and recording devices, of two independent diaphragms and two record cylinders arranged to be acted upon by the recording devices, and means, substantially as shown and described, for raising and lowering the record cylinders. 4th. In a phonograph, the combination, of the record cylinders B, B^1, the diaphragm cell G, furnished with the diaphragms *l*, l^1, having recording points *m*, and means, substantially as shown and described, for moving the diaphragm cell forward. 5th. In a phonograph, the combination of the record cylinders B, B^1, the comparted diaphragm cell G, furnished with the diaphragms *l*, l^1, having recording points *m*, and means, substantially as shown and described, for moving the diaphragm cell forward. 6th. In a phonograph, the combination, of the record cylinders B, B^1, the diaphragm cell G, furnished with the diaphragms *l*, l^1, having tracing points *m*, the arm F, provided with the half-nut *i*, the rod D, the track C, adapted to support the diaphragm cell in the position of use, and the feeding screw E, substantially as specified.

No. 35,296. Milk Bottle. (*Bouteille à lait.*)

The Thatcher Manufacturing Company, assignees of Harvey Patten Barnhardt and Samuel Lindsey Barnhardt, all of Potsdam, New York, U.S.A., 25th October, 1890; 5 years.

Claim.—1st. The bottle, having the internally shouldered neck, substantially as described, in combination with a thin sealing disk or wafer seated in said neck and retained solely by its peripheral friction. 2nd. The bottle, having its neck formed internally with the shoulder, the cylindrical walls above the shoulder, and the flared or enlarged opening above the cylindrical portion. 3rd. The combination, with a bottle having a neck with an internal shoulder and smooth walls above the shoulder, a sealing disk seated in the neck under radial compression and slightly depressed at the centre, whereby it is caused to expand against and finally engage the walls.

No. 35,297. Brick Machine.

(*Machine à brique.*)

Robert Knickerbocker and Charles Frederick Wardell, both of Chicago, Ill., U.S.A., 25th October, 1890; 15 years.

Claim.—1st. A brick machine, having an upper and lower set of reciprocating dies, a stationary base and top plate, said base having a circular cam track, whereon the lower dies have a bearing, said cam track extending with a uniform upward inclination throughout the greater part of its length, and having at one point therein a raised portion adapted to lift the lower dies, whereby to eject the brick, and said top plate having on its lower surface a circular cam track on which the upper dies have a bearing, said cam track being inclined at one point therein toward the lower cam track, and oppositely inclined throughout a portion of its length, but at a less degree than the corresponding portion of the lower cam track, whereby the lower dies are caused to move faster than the upper dies during the act of forming the brick, and thus moving the brick under pressure within the mold box, substantially as described. 2nd. In a brick machine, having a stationary base and top plate, a revolving platen, and an upper lower set of reciprocating dies rotatable with said platen, said top plate and base having removable sections to permit of the insertion and removal of the dies, substantially as described, 3rd. In a brick machine, the combination of a stationary base and top plate, a rotary platen, an upper and a lower set of reciprocating dies, cam tracks on the base, and top plate on which the respective sets of dies have a bearing, and an upper auxiliary cam track on which the upper set of dies also have a bearing, said upper auxiliary track having a raised portion therein, whereby to lift the dies at one point of their revolution, and a lower auxiliary cam track, whereby said lower dies are positively depressed at one point of their revolution, substantially as described. 4th. In a brick machine, having a stationary feed box, the combination, with a rotary platen, having mold boxes therein, a feed spout, whose upper end delivers over the path of the mold boxes, reciprocating bed dies, a circular cam track, upon which the bed dies have a bearing, upper dies having a sliding bearing in a rotatable frame, a cam track upon which the upper dies have a bearing, and a second cam track upon which the upper dies also bear, said second track having a raised portion adapted to lift said upper dies at one point of their revolution over said stationary feed box, substantially as described. 5th. In a brick machine, having a rotary platen provided with mold boxes reciprocating bed dies having extended shanks, and a cam track upon which said shanks have a bearing, said cam track having an adjustable section mounted upon screws toward either end thereof, and gearing for rotating said screws to adjust said section, whereby the movement of the bed dies may be regulated, substantially as described. 6th. The combination in a brick machine of a rotary platen, having a series of mold boxes therein, reciprocating bed dies entering the bottoms of said mold boxes, and a feed spout, having an opening of greater width than said mold boxes, and adapted to discharge material passed through said spout into said boxes, substantially as described. 7th. The combination in a brick machine, of a rotary platen, having a series of mold boxes therein, reciprocating bed dies entering the bottoms of said mold boxes, a feed spout having an opening of greater width than said mold boxes, and adapted to discharge material passed through said spout into said boxes, said feed spout having a hinged wall section, substantially as described. 8th. In a brick machine, having a rotary platen provided with mold boxes, and reciprocating dies adapted to discharge the brick from said boxes, in combination therewith, a knock-off device, comprising rotatable arms, having pivoted blocks thereon adapted to bear respectively upon the end and side of the finished brick, substantially as described.

No. 35,298. Machine for Corking Bottles and for Wiring the Corks. (*Machine pour boucher les bouteilles et y assujétir les bouchons avec du fil métallique.*)

Sol Wile, assignee of Henry La Casse, both of Rochester, New York, U.S.A., 25th October, 1890; 5 years.

Claim.—1st. The combination of a compressor for compressing the cork, a wire-carrier, having jaws for applying the wire to the cork and bottle, a plunger for forcing the cork into the bottle, and connected mechanism for actuating the several devices in their due order, substantially as and for the purpose set forth. 2nd. The combination of the compressor plunger wire carrier, having jaws and hammer N, and connected mechanism for actuating the several devices in their due order, substantially as and for the purpose set forth. 3rd. The combination of the compressor, plunger, wire carrier having jaws, bottle-support, and jaws M, M, for grasping the neck of the bottle, and connected mechanism for actuating the several devices in their due order, substantially as and for the purpose set forth. 4th. The combination of the plunger, wire-carrier, and its jaws, jaws M, M, for holding the two strands of wire together while the bottle is revolved to twist them onto the cork, the rotating bottle support J, and connected mechanism for actuating the several de-

vices in their due order, substantially as and for the purpose set forth. 5th. The combination of the bottle-support, wire-carrier, having jaws, jaws M, M, and hammer N for cutting off the wire after it has been twisted onto the cork, and connected mechanism for actuating the several devices in their due order, substantially as and for the purpose set forth. 6th. The rotating wire-carrier I, having jaws a, a, and shaft b, sliding endwise in the pivoted hanger U, and oscillating on the hub U^1, journaled on the shaft F, substantially as and for the purpose set forth. 7th. The wire-carrier I, provided with jaws a, a, and shaft b, adapted to move endwise in a hanger U, and to oscillate on the hub U^1, in combination with the elbow-bearing Z^1, the gears g, g^1, and the pivoted actuating shaft H, all substantially as and for the purpose set forth. 8th. The wire-carrier I, having jaws a, a, and shaft b mounted in the hanger U to oscillate therewith, in combination with the cam h on the shaft F, and the pivoted lever V, substantially as and for the purpose set forth. 9th. The hanger U, provided with the hub U^1, journalled on the shaft F, and the projecting bearing d^1, in combination with the rods f, f^1, sliding bearing d, carrying the shaft b, of the wire carrier, the cam i for impelling the bearing d and shaft forward, and the cord 3 and weight Y, for retracting it, substantially as and for the purpose set forth. 10th. The combination of the wire-carrier I and its jaws, with the shaft b, elbow-bearing Z^1, gears g, g^1, shaft H, sleeve o, slotted post X^1, swiveled bearing Z, gears G, G^1 and collar H^2, setting in a cut-out in the bearing Z, for rotating the wire-carrier and permitting it to oscillate, substantially as and for the purpose set forth. 11th. The bottle support J, having screw-shaft J^1, in combination with the collar J^2, pinion 44, clutch 45 and rack K, operated by rod L^2, connected to lever L, actuated by cam J, substantially as and for the purpose set forth. 12th. The combination, with the bottle-support J and its shaft J^1, of the loosely-mounted pinion 44, actuated by the forward movement of the rack K, to engage the clutch 45, and revolve the support J, and disengaged from the clutch by the rearward movement of the rack, substantially as and for the purpose set forth. 13th. The compressor S^1, mounted movably in the bracket support S, composed of a semi-tubular section, and a pivoted section, in combination with the rod s, and its actuating cam u, substantially as and for the purpose set forth. 14th. The bracket-support S, provided with the curved slot or recess 29, in combination with the vertically-moving compressor S^1 hinged on pin 21, to the compressor rod s and its actuating mechanism, substantially as and for the purpose set forth. 15th. The combination, with the bracket-support S, of the compressor S^1, having a hinged section or segment, the pivoted locking lever K^1, having the projecting end 27 in the path of the finger P^1, carried by the plunger P and the finger P^1, substantially as and for the purpose set forth. 16th. The combination, with the plunger P, of the vertically-movable compressor S^1, having the bulb or swell 52 near its exit, substantially as and for the purpose set forth. 17th. The combination, with the hammer N, having spring-shank N^1, secured to pinion N^2, of the rack N^3, rod k^2, lever k^1, having stud 38, the cam k, having notches 39 and 40 and the spring 41, substantially as and for the purpose set forth. 18th. The combination of the jaws M, M, mounted on the shafts M^1, M^1, gears 32, crank M^2, rod 33, eccentric lever j^2, the cam j for actuating the lever j^2, and a spring on the rod 33, for restoring the jaws M, M, to their normal position, substantially as and for the purpose set forth. 19th. The combination of the wire-carrier I, having jaws, the main shaft C, and intermediate mechanism for operating the jaws with the gear G, having notches 14, the lever H^1, having pawl-hook 15, a clutch p^1 and the pivoted lever F^1 carried by the sliding section of the clutch p^1, to force the pawl or lever H^1 from engaging the notches in gear G, and the spring 51 for forcing the lever H^1 toward the gear for stopping the wire-carrier in its normal position after twisting the wire, substantially as and for the purpose set forth.

No. 35,299. Land Roller. (*Rouleau d'agriculture.*)

Roth Brothers, assignees of William Kint, all of Alpena, South Dakota, U.S.A., 25th October, 1890; 5 years.

Claim.—1st. A land roller, consisting of the frame, having front and rear beams B^1, B^2, the two transverse horizontally-aligned rollers I, I^1, each having bearings at its ends, chains connected to said bearings and to the front and rear beams of the frame, and the third transverse roller I^2, suspended at its ends by chains, in rear of and between the rollers I, I^1, substantially as set forth. 2nd. A land roller, consisting of the connected front and rear beams B^1, B^2, the platform connecting said beams at their middle portions, and provided with a seat D, the transverse horizontally aligned rollers I, I^1, between the beams at opposite sides of the platform, and provided with end bearings and chains connected to said bearings and beams, the beam J connected by braces K to the rear beam B^2, and the transverse intermediate roller I^2, suspended at its ends by chains E^2, from the beams B^2, J, substantially as set forth.

No. 35,300. Lamp Extinguisher.

(*Eteignoir de lampe.*)

Joseph Miller and Edward Troy, both of Olean, New York, U.S.A., 25th October, 1890; 5 years.

Claim.—1st. The combination of a lamp, having inwardly-extending annular shoulder or flange, a loose disk resting upon said shoulder or flange, and a pendulum weight secured rigidly to the centre of the disk with a movable extinguisher on the burner tube and a rod depending therefrom and operated by the tilting of the disk, substantially as set forth. 2nd. The combination, with a lamp provided with a vertical tube attached to the bottom of the body, a disk loosely supported in the lamp below the said tube, and a sleeve adjustably held upon the wick tube above the body tube, of a pendulum weight attached to the under side of the disk, and a jointed rod connecting the disk and the wick-tube and passing upward from the body-tube of the lamp, all combined for operation as and for the purpose specified.

No. 35,301. Clothes Pin. (*Epingle à linge.*)

Edward M. Watson, Jersey City, Hudson County, N. J., and Lyman Brown, of New York, both of U.S.A., 25th October, 1890, 5 years.

Claim.—1st. A clothes pin, formed with a head-piece or cross-bar, and three arms projecting therefrom in about a right line, and provided at their extremities with enlargements or heads, which project laterally from each side of a line drawn through the arms and head piece, substantially as herein set forth. 2nd. As an improved article of manufacture, a clothes pin made from one piece of material, preferably metal wire, and with a sectional head-piece or cross-bar a, a, formed by bends in the wire-producing arms a^1, which range about in a right line parallel with the head-piece, and are provided at their extremities with eyes or loops a^2, which project laterally each side of a line drawn through the arms and head-piece, substantially as herein set forth.

No. 35,302. Dental Matrix.

(*Matrice dentaire.*)

Milton C. Marshall, Oxford, Mississippi, 25th October, 1890; 5 years.

Claim.—1st. A clamp for dental purposes, consisting of a screw-threaded shaft, having a shoulder at one end, two L-shaped carriers thereon, one of which is screw-threaded, and the other one fits loosely and bears against the shoulder, the lower portion of each of said carriers being provided with or formed into a wedge, substantially as described. 2nd. The combination of a clamp, consisting of two wedges and a screw shaft extending through the same, and a plate thickened to fit the contour of the tooth, substantially as described. 3rd. The combination of the wedges, carriers, screw and plate or strip having an enlargement at each end formed out of soft material, substantially as described. 4th. The combination, with the carriers of the detachable and interchangeable wedge pieces, substantially as described. 5th. The combination, with the clamp having wedge pieces of the thin flexible strips of alloy, or other soft material, substantially as described.

No. 35,303. Inhaler. (*Inhalateur.*)

Frederick H. Glew, London, Eng., 29th October, 1890; 5 years.

Claim.—1st. The process of manufacturing absorbents or porous bodies for use in inhalers, in which absorption or evaporation at low temperatures is required, which consists in dusting and pressing upon a cohesive base, such as thin sheets of gutta-percha, granules of coke, pumice, or like porous material, heating and pressing same to secure adhesion, and finally rolling or moulding the whole into form, as set forth. 2nd. The process of manufacturing absorbents or porous bodies for use in inhalers, in which absorption or evaporation at high temperatures is required, which consists in sprinkling upon a cohesive base, such as sheets of plastic porcelain, or clay-granules of coke, pumice or like porous material, pressing same to secure adhesion, rolling or moulding same into form, and finally baking the whole, as set forth. 3rd. Absorbents or porous bodies for inhalers, consisting of a base, such as gutta percha, porcelain or clay, containing or carrying granules of coke, pumice, or the like, as set forth.

No. 35,304. Electric Battery.

(*Pile électrique.*)

Charles Willms and Gustav A. Liebig, both of Baltimore, Maryland, U.S.A., 29th October, 1890; 5 years.

Claim.—1st. A seal or stopper for an electric battery, consisting of a mass of adherent material in a viscous or semi-fluid condition, in which the battery wires are embedded, a superimposed solid stopper, and a hard substance arranged below the adherent material, forming the foundation for the stopper, as and for the purposes described. 2nd. A seal for an electric battery, consisting of a foundation of insulating material, a layer of some hard substance which is introduced into the cells, when in a semi-fluid condition, a viscous fluid and a superimposed solid stopper, as and for the purpose described. 3rd. In an electric battery, the combination of a zinc plate, a mass of fused chloride of silver, having a conducting wire embedded therein, a solution or paste of zinc sulphate, in which the elements are immersed, and an insulated piece between the chloride of silver and the zinc, as and for the purpose described. 4th. In an electric battery, the combination of a glass cell, having its internal surface roughened or its neck constructed, and a stopper or sealing composed of some material which possesses the property of hardening, after being applied to the cell, as plaster-of-paris, as and for the purposes described. 5th. In an electric battery, the combination of a glass cell, a metal casing therefor and a cushion between the glass cell, and metal casing, composed of material which has the property of adhering to the glass cell and metal casing, as and for the purposes described. 6th. In an electric battery, the combination of a glass cell, a metal casing therefor projecting beyond the top of the cell, and absorbent material placed within the casing above the said cell, as and for the purposes described. 7th. In an electric battery, the combination of a glass cell, a metal casing therefor, a projection beyond the top of the cell, and a pin crossing the interior of the said casing, and securing the cell in position, as and for the purposes described. 8th. In a chloride of silver battery, battery plates, as herein described, immersed in a viscous or gelatinous material, mixed with sulphate of zinc.

No. 35,305. End Gate for Waggons.

(*Arrière paneau de tombereau.*)

Warren Beckwith, Lake Geneva, Wisconsin, U.S.A., 29th October, 1890; 5 years.

Claim.—1st. The combination of the side boards A, A^1, the end gate extending between the same, the vertical rock shaft, the dogs

fixed thereon and adapted to engage the end gate, the arm E, also fixed to the rock shaft and the lever to engage the arm. 2nd. The combination in a waggon, of the side-board A^1, provided with the slots or openings, the rock-shaft mounted in bearings on the side board, the dogs D, D^1 and the arm F, fixed in position to extend respectively in the slots, and the locking device for the arm. 3rd. The combination, with the side-board A^1, of the vertical rock-shaft mounted in bearings thereon, the dogs D, D^1, to engage the end gate and the arm F extending at substantially right angles to the dogs, and the locking device to hold the dogs in operative position against the gate.

No. 35,306. Steam Boiler.

(*Chaudière à vapeur.*)

Florens Kitten, Ferdinand, Indiana, U.S.A., 29th October, 1890; 5 years.

Claim.—1st. The combination, of the fire-box, with a fire-shield formed of a plate or water-bars, and which is placed in the box above the door, so as to cause the products of combustion to first move toward the front end of the boiler, then backward under the crown sheet, and then through the flues to the front of the boiler, substantially as shown. 2nd. In a boiler, the combination of the crown sheet, having its ends secured directly to the shell of the boiler, and provided with a series of holes for the passage of the water to and from the water-leg, substantially as shown. 3rd. In a boiler, the combination of the crown sheet, having its ends secured directly to the shell of the boiler, the front wall U, having its upper edge secured to the front edge of the crown-sheet, the flue-head P, the flues and the crown-sheet F, substantially as described. 4th. In a boiler, the combination of the fire-box, the crown-sheet E, having its ends secured directly to the shell of the boiler, and provided with perforations L, the front and side sheets of the water-leg secured at their upper edges to the crown-sheet, the flue-head, the flues, the crown-sheet F and the fire-shield C, substantially as specified.

No. 35,307. Glove. (*Gant.*)

Annie M. Young, Providence, Rhode Island, U.S.A., 29th October, 1890; 5 years.

Claim.—A glove, constructed with an opening in the palm portion, from near the base of the fingers to the top, with means for closing the same, said opening being formed by the removal of a piece of the material, whereby the fullness of the glove in the palm of the hand is removed, and the strain of the material opposite the thumb is obviated, substantially as shown and described.

No. 35,308. Flexible Wire Fabric.

(*Toile metallique flexible.*)

George Kelly, Chicago, Illinois, U.S.A., 31st October, 1890; 5 years.

Claim.—1st. The combination, with a wire fabric, having transverse rods B, of the border E, when said border is secured to the fabric by the engagement with the coils of the border, and the eyes *b* upon the transverse rods, substantially as set forth. 2nd. A flexible wire fabric, comprising, in combination, the body of the fabric formed of a series of flattened spirals A, connected together by transverse tie-rods B, the ends of which are formed with eyes or loops *b*, and side borders consisting of cylindrical spirals E, engaged in the eyes *b*, of the transverse tie-rods B, essentially as herein described. 3rd. A flexible wire fabric, comprising, in combination, the body of the mat formed of a series of flattened spirals A, connected together by transverse tie rods B, the ends of which are formed with eyes or loops *b*, rigid end borders formed of spirals, enclosing transverse rods D, and side borders consisting of cylindrical spirals E, engaged in the eyes *b*, of the transverse tie rods B, and having at their ends longitudinal eyes *e*, engaging over the ends of the rods D, and secured in place by washers *d*, and an upset on the ends of said rods, essentially as herein described.

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

1938. HAMILTON DEAN WAITE, 2nd five years of No. 22,582, from the 3rd day of October, 1890. Improvements in Snow Shovels, 1st October, 1890.

1939. SAMUEL BURBANK, 2nd five years of No. 22,586, from the 6th day of October, 1890. Improvements in Stone and Stump Lifters, 1st October, 1890.

1940. WILLIAM STEPHENSON, 2nd five years of No. 22,619, from the 10th day of October, 1890. Improvements in Pulleys, 2nd October, 1890.

1941. CARL STUART, 2nd five years of No. 25,252, from the 23th day of October, 1891. Improvements in Elastic Rail Supports, 2nd October, 1890.

1942. HARVEY B. YARYAN, 2nd five years of No. 22,618, from the 9th day of October, 1890. Improvements on Fifth Wheels, 7th October, 1890.

1943. PETER STUART, 3rd five years of No. 26,234, from the 23rd day of April, 1891. Improvements on the Manufacture of Composite Pavements, Floors, Platforms, Landings, Stair Steps and the like and of Ornamental Work in Imitation of Stone, and on Composition therefor, 10th October, 1890.

1944. THE BELL TELEPHONE COMPANY (assignee), 2nd five years of No. 22,774, from the fifth day of November, 1890. Improvement in Telephone Instruments, 8th October, 1890.

1945. JOHN CARRUTHERS, 2nd five years of No. 22,697, from the 29th day of October, 1890. Improvements in Journal Bearings, 14th October, 1890.

1946. JACOB NEFF BARR, 2nd five years of No. 22,784, from the 7th day of November, 1890. Improvements in Contracting Car Wheel Chills, 17th October, 1890.

1947. THE BELL TELEPHONE COMPANY (assignee), 2nd 5 years of No. 22,780, from the 5th day of November, 1890. Improvements in Telephone Transmitters, 17th October, 1890.

1948. HENRY HAMMOND, 2nd five years of No. 22,676, from the 23rd day of October, 1890. Improvement in the Manufacture of Axes, 18th October, 1890.

1949. WILLIAM CONBY DOUGHERTY, 2nd five years of No. 22,665, from the 21st day of October, 1890. Improvements in Devices for Holding Horses, or other Animals, to be Shod or Treated Medically or Surgically, 20th October, 1890.

1950. EDWARD MURBY, 2nd five years of No. 22,673, from the 23rd day of October, 1890. Improvements in Looping Attachments for Knitting Machines, 20th October, 1890.

1951. JOHN WILLIAM SLATER, 2nd five years of No. 22,772, from the 4th day of November, 1890. Improvements in the Preparation of an Agent for use in the Treatment of Sewage and other Semi-Liquid Putrescent, or Putrescible Matter, and improvements in the Treatment of such Matters, 23rd October, 1890.

1952. NELSON McPHERSON and EPHRAIM A. McPHERSON, 2nd five years of No. 22,690, from the 28th day of October, 1890. Improvements in Load Elevators, 23rd October, 1890.

1953. ZEPHANIAH S. LAWRENCE and HIRAM A. LAWRENCE, 3rd five years of No. 11,924, from the 2nd day of November, 1890. Combination Sap Spout, 23rd October, 1890.

1954. CHARLES H. SCHOOLEY, 2nd five years of No. 22,686, from the 26th day of October, 1890. Improvements in Oil Cans, 23rd October, 1890.

1955. JULIA A. COVEL, 2nd 5 years of No. 22,887, from the 26th day of November, 1890 Improvements in Saw Swages, 23rd October, 1890.

1956. SARAH A. PHILLIPS, 2nd five years of No. 22,813, from the 16th day of November, 1890. Improvements in Fastenings for Boot and Shoe Uppers, 27th October, 1890.

1957. WILLIAM T. DOREMUS, 2nd five years of No. 22,760, from the 4th day of November, 1890. Improvements in Checks, Drafts, and other Money Orders, 27th October, 1890.

1958. THE NATHAN MANUFACTURING CO. (assignee), 2nd five years of No. 22,721, from the 2nd day of November, 1890. Improvements in Injectors, 27th October, 1890.

1959. THE NOXON BROS. MANUFACTURING COMPANY (assignee), 2nd five years of No 22,843, from the 18th day of November, 1890. Improved Spring Locking Device for Drill Hoes and Cultivator Teeth, 27th October, 1890.

1960. THE NOXON BROS. MANUFACTURING COMPANY (assignee), 2nd five years of No. 22,844, from the 18th day of November, 1890. Improved Spring Locking Device for Drill Hoes and Cultivator Teeth, 27th October, 1890.

1961. THE NOXON BROS. MANUFACTURING COMPANY (assignee) 2nd five years of No. 22,927, from the 2nd day of December, 1890. Improvements in the Feed Operating Gear of the Grain and Grass Seed Hoppers of Seeding Machines, 27th October, 1890.

1962. THE NOXON BROS. MANUFACTURING COMPANY (assignees), 2nd five years of No. 22,928, from the 2nd day of December, 1890. Improvements in Seeding Machines, 27th October, 1890.

1963. LOUIS J. HERARD, 2nd five years of No. 22,740, from the 3rd day of November, 1890. Improvement in Machines for Making Stove Pipe Elbows, 28th October, 1890.

1964. EDWARD M. ELLIS, 2nd five years of No. 22,803, from the 14th day of November, 1890. Improvements in Machines for Scraping and Splitting Cane, 31st October, 1890.

1965. JAMES MILNE, JOSEPH JAY MILNE and HECTOR A. MILNE, 2nd five years of No. 22,972, from the 10th day of December, 1890. Improvements on Capstans for Stump Extractors, 31st October, 1890.

1966. JOSEPH L. RAUB, 2nd five years of No. 22,763, from the 4th day of November, 1890. Improvements on Traps for Throwing Targets for Trap Shooting and also in Targets specially adapted for such purposes, 31st October, 1890.

1967. THE CHICAGO SAFE AND LOCK COMPANY (assignee), 2nd five years of No. 22,701, from the 2nd day of November, 1890. Improvements in Lock Mechanism for Safes, 31st October, 1890.

1968. THE CHICAGO SAFE AND LOCK COMPANY (assignee), 2nd five years of No. 22,702, from the 2nd day of November, 1890. Improvements in Lock Mechanism for Safes, 31st October, 1890.

1969. FRANCIS A. WALSH, 2nd 5 years of No. 22,712, from the 2nd day of November, 1890. Improvements on Sheet Metal Cans, 31st October, 1890.

1970. MANLY D. BRONNER, 2nd five years of No. 22,771, from the 4th day of November, 1890. Improvements on Harrows, 31st October, 1890.

OCTOBER LIST OF TRADE MARKS.

Registered at the Department of Agriculture—Copyright and Trade Mark Branch.

3836. } J. S. FRY & SONS, de Bristol, Angleterre.
3837. } Chocolat, 2 Octobre, 1890.

3838. BENJAMIN TOOKE, of Montreal, Que., trading under the name and style of TOOKE BROTHERS. Shirts, Collars, Cuffs, etc., made of linen or cotton, 2nd October, 1890.

3839. RICHARD J. HICKSON, of Toronto, Ont. Umbrellas, 2nd October, 1890.

3840. DAVID WATSON ALEXANDER, of Toronto, Ont. Sole Leather, 2nd October, 1890.

3841. WILLIAM CLARK, of Montreal, Que., trading as The Johntson Fluid Beef Company. General Trade Mark, 3rd October, 1890.

3842. JOHN EASTON, of Brockville, Ont. Medical Compounds, 3rd October, 1890.

3843. EDOUARD MAILHOT, de Trois Rivières, Que. Cigares, 4 Octobre, 1890.

3844. FINLAYSON, HIRSCH & CO., of Montreal, Que. Gin, 4th October, 1890.

3845. JOHN McEWAN, of No. 13 Fenchurch Avenue, London, England. Tea, 9th October, 1890.

3846. JOHN H. WOODBURY, of New York, N.Y., U.S.A. Toilet Soaps and Preparations for the Skin, etc., etc., 13th October, 1890.

3847. DANIEL HOCTOR and JOHN McNALLY, of Montreal, Que., trading under the name and style of the Havana Cigar Company. Cigars, 14th October, 1890.

3848. MARKAR G. DADIRRIAN, of New York, N.Y., U.S.A. Medical Preparations, 15th October, 1890.

3849. GUST HOLMES, of Astoria, Oregon, U.S.A., President British American Packing Company. Canned Salmon, 15th October, 1890.

3850. JOHN BROWNING GOODE, of Montreal, Que. Cutlery, 15th October, 1890.

3851. GEORGE S. MOORE, of St. John, N.B. Cough Preparations, 17th October, 1890.

3852. NEVADA T. OSGOODBY, of Toronto, Ont. Monthly Periodical named "The Canadian Queen," 20th October, 1890.

3853. HARRIET EMILY ROWELL, Individually as well as Tutrix for ALICE MAY ROWELL and HARRIET ELNORA ROWELL, of Frelighsburg, Que. Medicine, 21st October, 1890.

3854. THOMAS DEAN, of Toronto, Ont. Babbit Metal, 29th October, 1890.

3855. ARTHUR BOAKE and FREDERICK G. ADAIR ROBERTS, trading as A. BOAKE, ROBERTS & CO., in Stratford, London, England. An Ale and Beer Preservative, 29th October, 1890.

3856. SAMUEL ROMAN, of Montreal, Que. Cigars, 29th October, 1890.

3857. BRENER BROTHERS, of London, Ont. Cigars, 31st October, 1890.

3858. WALLACE DAWSON, of Montreal, Que. Medicine, 31st October, 1890.

3859. } BISSELL CARPET SWEEPER COMPANY, of Grand Rapids, Michigan, U.S.A.
3860. } Carpet Sweepers, 31st October, 1890.

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5564. ST. JOHN EXHIBITION GUIDE, Sept.,24, 1890, Oct. 4. Plans of Ground and Buildings, Daily Programme, Map of City, Places of Interest, etc. John R. Hamilton, St. John, N.B., 1st October, 1890.

5565. NOUVËAU MANUEL DU TRÈS PRECIEUX SANG DE NOTRE SEIGNEUR, JÉSUS CHRIST OU LE LIVRE DES ELUS. Les Soeurs du Precieux Sang, St. Hyacinthe, Que., 1st October, 1890.

5566. A MARRIAGE AT SEA, by W. Clarke Russell, (book). The National Publishing Co., Toronto, Ont., 1st October, 1890.

5567. WORLDLY CONFORMITY IN DRESS. Compiled by Rev. Albert Sims, Otterville, Ont., 2nd October, 1890.

5568. LESSONS IN ENGLISH. Elementary Course—Pupils Edition. James P. O'Reilly, Toronto, Ont., 3rd October, 1890.

5569. THE ART OF PIANOFORTE TEACHING, by T. C. Jeffers, Toronto, Ont., 4th October, 1890.

5570. MILITARY LANCERS, by E. Corlett. The Anglo-Canadian Music Publishers' Association, (L'd)., London, England, 4th October, 1890.

5571. JUSTICE AUX CANADIENS-FRANÇAIS, par le Vicomte Bouthillier-Chavigny. Cadieux & Derome, Montreal, Que., 6 Octobre, 1890.

5572. THE BILLS OF EXCHANGE ACT, 1890, together with AN INTRODUCTION, EXPLANATORY NOTES AND AN INDEX, by Robert Stanley Weir, B.C.L. R. S. Weir, and A. Periard, Montreal, Que., 6th October, 1890.

5573. INSURANCE PLANS OF TORONTO VOL IV. Charles Edward Goad, Montreal, Que., 8th October, 1890.

5574. SUPPLEMENT DU MEDAILLIER DU CANADA. Ou Supplement to the Canadian Coin Cabinet, par Joseph Leroux, M. D., Montreal, Que., 8 Octobre, 1890.

5575. LITTLE HUNTSMEN. Waltz, by Otto Roeder. The Anglo-Canadian Music Publishers' Association, Ld., London, England, 8th October, 1890.

5576. RUSTIC DANCE. Piano Duet, by C. R. Howell. I. Suckling & Sons, Toronto, Ont., 10th October, 1890.

5577. THREE MEN IN A BOAT. Song. Words by Clifton Bingham. Music by H. Trotère.
5578. ACROSS THE STILL LAGOON. Vocal Duet. Words by Clifton Bingham. Music by Henry Logé.
5579. LA CRÉOLE. Waltz.
5580. CHAPPIES. Polka. } by Florence Fare.
5581. PICK ME UP. Polka.
The Anglo-Canadian Music Publishers' Association, Ld., London, England, 11th October, 1890.

5582. PHOTOGRAPH OF THE JURY ON THE BIRCHALL TRIAL, WOODSTOCK, SEPTEMBER, 22—29, 1890. Andrew Pattullo and Andrew Laidlaw, 13th October, 1890.

5583. AVE MARIA. (O God the Lord of Hosts). Solo for Contralto or Bass, by J. A. Fowler.
5584. MENUET ROYALE, par F. J. Hatton.
5585. THE KETTLEDRUM, Military Parade, Piano Duet, by Paul Sohmer.
5586. IDYLL, by Emma S. Mellish.
I. Suckling & Sons, Toronto, Ont., 13th October, 1890.

5587. GARLAND'S BANKS, BANKERS AND BANKING IN CANADA, WITH LIST OF BANK SOLICITORS AND COMMERCIAL LAWYERS. Nicholas Surrey Garland, Ottawa, Ont., 13th October, 1890.

5588. PROGRESSIVE FRENCH READER. First Part, Containing Selected Pieces with Questions, Notes and Vocabulary. Edited by H. H. Curtis and L. R. Gregor, B.A. W. Drysdale & Co., Montreal, Que., 14th October, 1890.

5589. HEART OF GOLD, by L. T. Meade.
5590. RUFFINO, by Ouida.
John Lovell & Son, Montreal, Que., 14th October, 1890.

5591. DOMINION CATHOLIC READING CHARTS. James A. Sadlier, Montreal, Que., 14th October, 1890.

5592. PHOTOGRAPH OF THE CELEBRITIES OF THE BIRCHALL TRIAL, WOODSTOCK, SEPTEMBER 22-29, 1890. Andrew Pattullo and Andrew Laidlaw, Woodstock, Ont., 15th October, 1890.

5593. A REAL ROBINSON CRUSOE, which is now being preliminarily published in separate articles in "THE EMPIRE," TORONTO. (Temporary Copyright). John Atwater Wilkinson, Toronto, Ont., 17th October, 1890.

5594. REPORTS OF CASES DECIDED IN THE COURT OF APPEAL FOR ONTARIO DURING PARTS OF THE YEARS 1889 and 1890. Reported under the Authority of The Law Society of Upper Canada, Vol. XVII. The Law Society of Upper Canada, Toronto, Ont., 17th October, 1890.

5595. THE BELL TELEPHONE COMPANY OF CANADA, TORONTO EXCHANGE, SUBSCRIBERS' DIRECTORY, ONTARIO DEPARTMENT, SEPTEMBER 1890. The Bell Telephone Company of Canada, Montreal, Que., 17th October, 1890.

5596. DIVISION OF PROFITS, (pamphlet). The Free Press Printing Co., London, Ont., 17th October, 1890.

5597. McPHILLIPS BROTHERS' MAP OF THE CITY OF WINNIPEG AND VICINITY. George McPhillips, Windsor, Ont., Frank and Robert Charles McPhillips, Winnipeg, Man., 17th October, 1890.

5598. THE BLACK-BOX MURDER. BY THE MAN WHO DISCOVERED THE MURDERER, by Maarten Maartens.
5599. FAMOUS OR INFAMOUS, by Bertha Thomas.
John Lovell & Son, Montreal, Que., 20th October, 1890.

5600. PLAN OF MINING DISTRICTS WEST OF PORT ARTHUR, CANADA. Russell & Co., Port Arthur, Ont., 20th October, 1890.

5601. PICTURE OF PRESIDENT LINCOLN AND THE MEMBERS OF HIS CABINET, considering the Question of Emancipating the Slaves, and entitled: "SHALL THEY BE FREE?" Matthias B. Eaton, Montreal, Que., 20th October, 1890.

5602. MY OWN CANADIAN HOME. Poem, by Edwin G. Nelson, St. John, N. B., 20th October, 1890.

5603. ST. ANN'S MANUAL. Mrs. James Delaney, Toronto, Ont., 20th October, 1890.

5604. TRAITÉ THÉORIQUE ET PRATIQUE DE LA RESPONSABILITÉ DES ARCHITECTES ET DES ENTREPRENEURS, par L. E. Pelissier. A. Périard, Montreal, Que., 22 Octobre, 1890.

5605. IN THE AUTUMN. Gavotte, by H. Morey. Whaley, Royce & Co., Toronto, Ont., 23rd October, 1890.

5606. ARITHMETICAL PROBLEMS FOR SENIOR CLASSES, by W. H. Armstrong. The Grip Printing and Publishing Company, Toronto, Ont., 25th October, 1890.

5607. TRAVELING MEN'S WEEKLY REPORT. Norbert François Guertin, Montreal, Que., 27 Octobre, 1890.

5608. MISS DEE DUNMORE BRYANT, by Pansy. Wm. Briggs, (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 27th October, 1890.

5609. BUSINESS TIPS. A Mercantile Dictionary containing explanation of Technical Terms, Business Forms and Office Work. Compiled by Alec Thomson. W. Drysdale & Co., Montreal, Que., 27th October, 1890.

5610. BLIND FATE, by Mrs. Alexander.
5611. THE STORY OF THE GADSBYS. A Tale without a Plot, by Rudyard Kipling.
The National Publishing Company, Toronto, Ont., 27th October, 1890.

5612. ARCHBISHOP LYNCH'S ANSWERS TO QUESTIONS AND OBJECTIONS CONCERNING CATHOLIC DOCTRINE AND PRACTICE, REVIEWED, by Rev. T. Fenwick, Elder's Mills, Ont., 27th October, 1890.

5613. BIRCHALL, THE STORY OF HIS LIFE, TRIAL AND IMPRISONMENT, AS TOLD BY HIMSELF, which is now being preliminarily published in separate articles in "THE TORONTO DAILY and EVENING MAIL." (Temporary Copyright). The Mail Printing Company, Toronto, Ont., 27th October, 1890.

5614. DOMINION CLASSIFIED BUSINESS DIRECTORY AND INCLUDING NEWFOUNDLAND, 1890-91. Might & Co., Toronto, Ont., 28th October, 1890.

5615. THE FIRST PRINCIPLES OF AGRICULTURE, by James Mills, M. A., and Thomas Shaw. The J. E. Bryant Co., Ld., Toronto, Ont., 28th October, 1890.

5616. THE DUDE'S GALOP. Jersey, by R. Gerdler. Whaley, Royce & Co., Toronto, Ont., 29th October, 1890.

5617. OUR DEAR OLD HOME. Song and Music by Michael Watson.
5618. PRISCILLA. A Rustic Dance, by Carl Martens.
5619. SING ABOUT JACK. Words by Philip Dayson. Music by Edward M. Chesham.
The Anglo-Canadian Music Publishers' Association, Ld., London, England, 30th October, 1890.

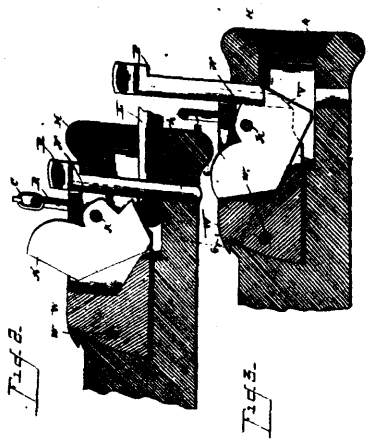
5620. FACTS, FIGURES AND INSTRUCTIONS ON LIFE INSURANCE, also Explanations of the Plans and Workings of the COSMOPOLITAN LIFE ASSOCIATION. John Braithwaite Carlile, Toronto, Ont., 31st October, 1890.

THE

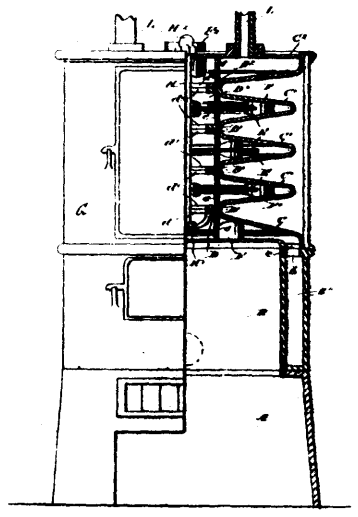
CANADIAN PATENT OFFICE RECORD

ILLUSTRATIONS.

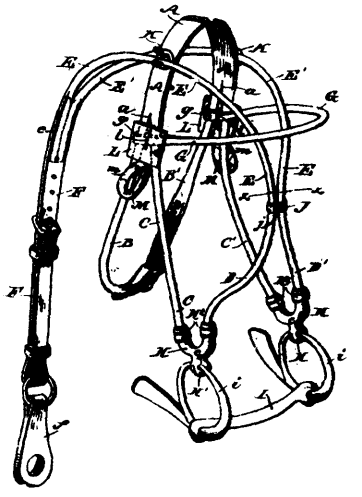
Vol. XVIII. OCTOBER, 1890. No. 10.



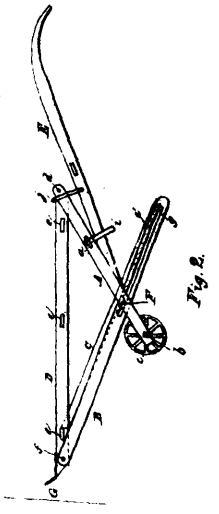
35080 Burpee's Car Coupler.



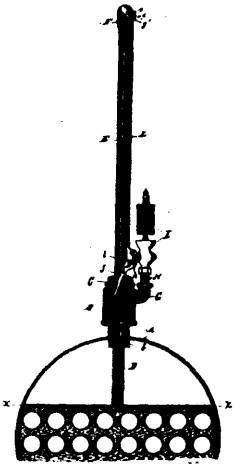
35081 Dwinnell's Hot Water Boiler.



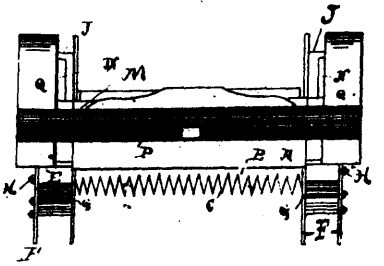
35082 Rafferty's Combined Bridle and Check.



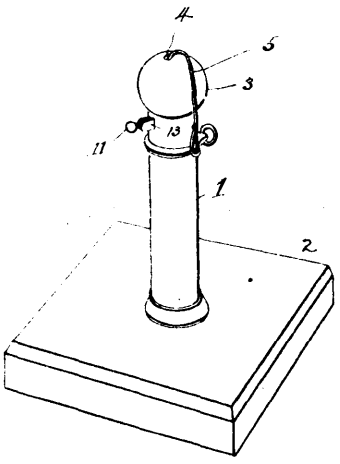
35083 Walker's Warehouse Truck.



35084 Sims' Low Water Alarm.



35085 Rogers' Subsoiler and Bush Puller.



35086 Farish's Hitching Post.

FIG. 2.

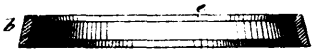
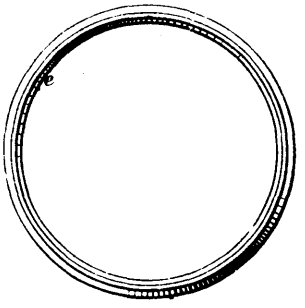
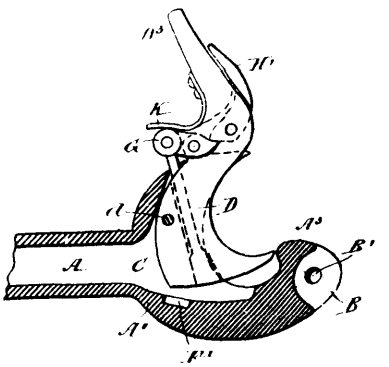


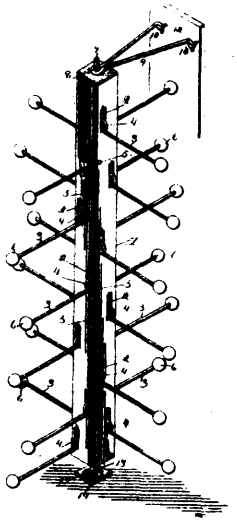
FIG. 3.



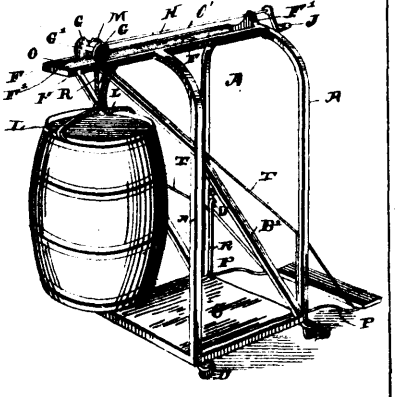
35087 Roth's Truss Hoop.



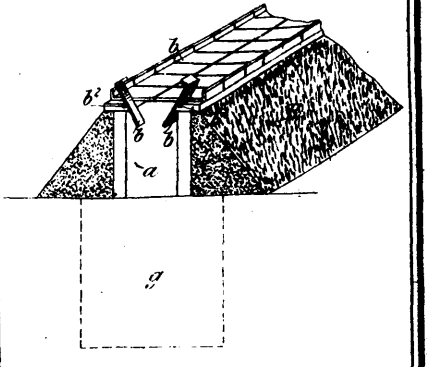
35088 McRae's Car Coupler.



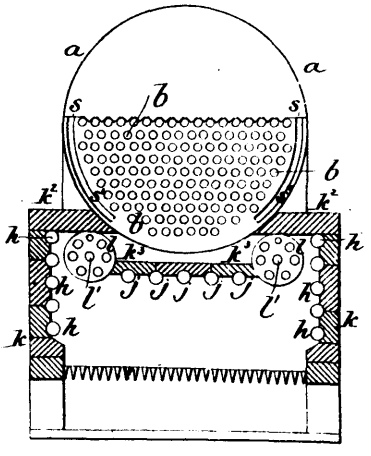
35089 Foster's Clothes Dryer.



35090 Kiltz's Truck.



35091 Edmonds' Vermin Trap.



35092 Baird's Steam Boiler.

FIG

FIG. 2.

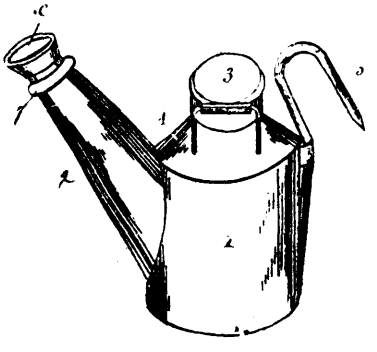
FIG. 3.

FIG. 4.

FIG. 5.

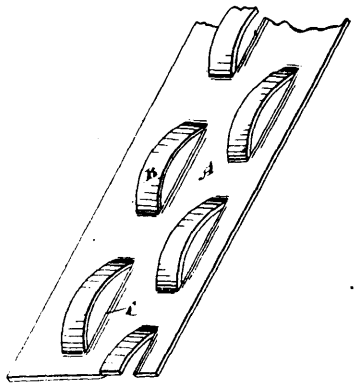
FIG. 6.

35093 O'Connor's Extension Foot.

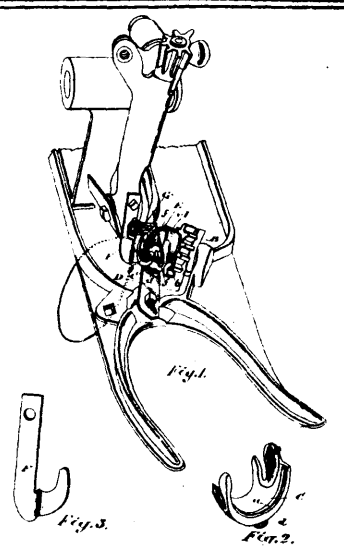


35094 Miller's Mine Lamp.

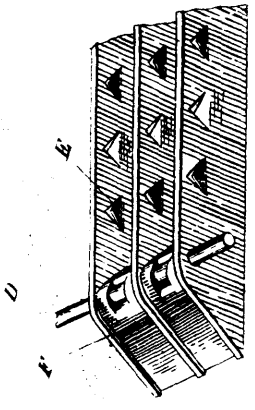
35095 Martinot's Wash Boiler.



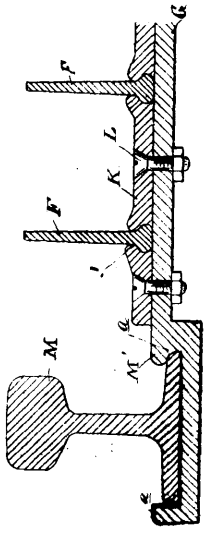
35096 Bostwick's Metal Lathing



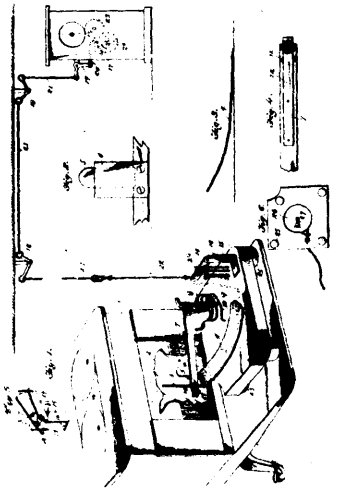
35097 Noxon's Cord Holder for Harvester Binder Knotters.



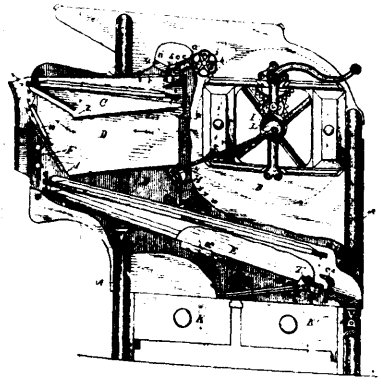
35098 Hall's Surface Cattle Guard.



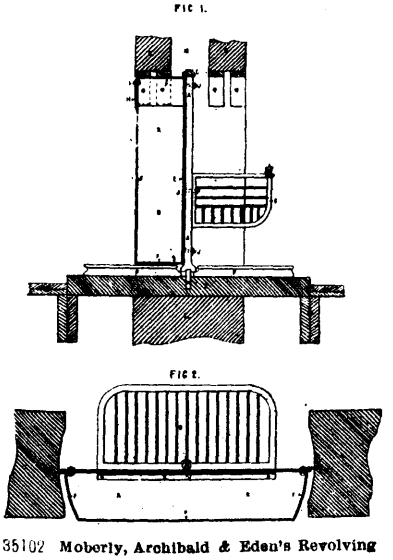
35099 Hall's Surface Cattle Guard.



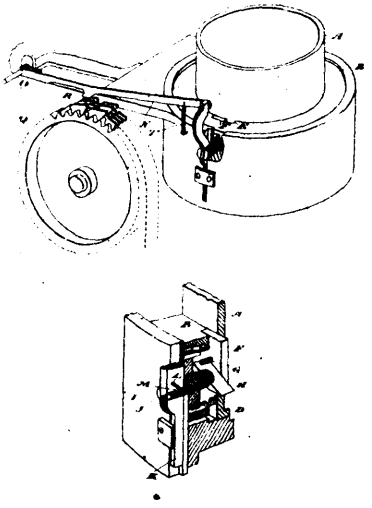
35100 McOmber's Fire Kindler.



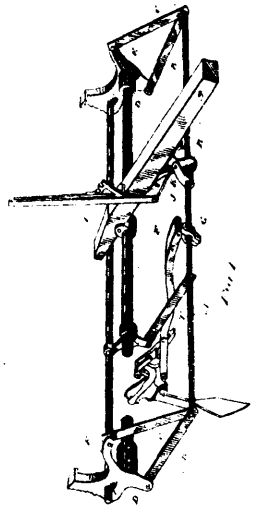
35101 Wood & Freeland's Grain and Seed Separator, etc.



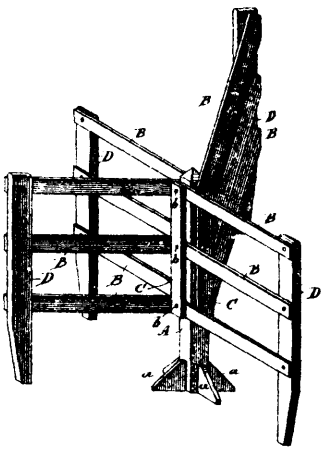
35102 Moberly, Archibald & Eden's Revolving Grate, etc.



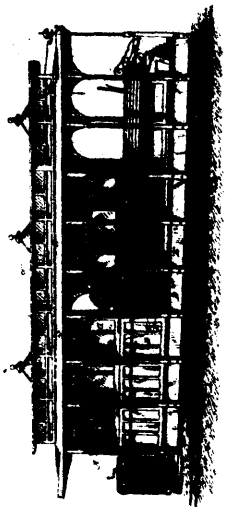
35103 Kay's Knitting Machine.



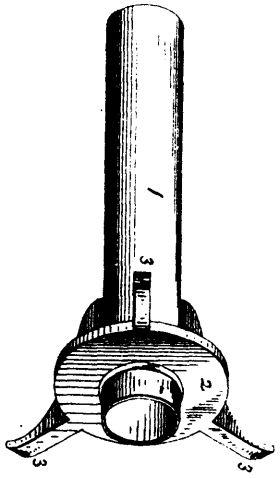
35104 Noxon's Seeding Machine.



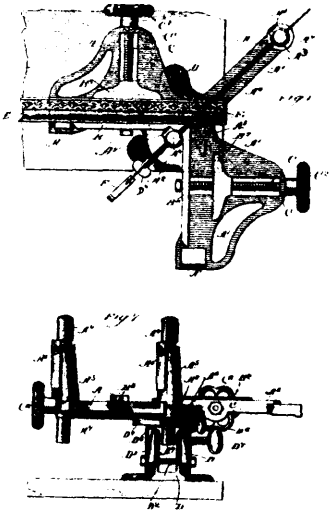
35105 Sear's Clothes Dryer.



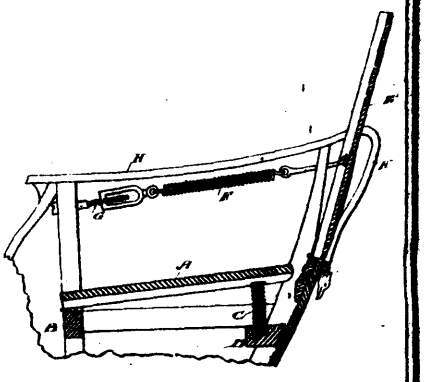
35106 Low's Railway Car.



35107 Nicol's Curling Iron Heater.



35108 Marsh's Combined Clamp and Miter Box.



35109 Kaufman's Seat for Road Vehicles.

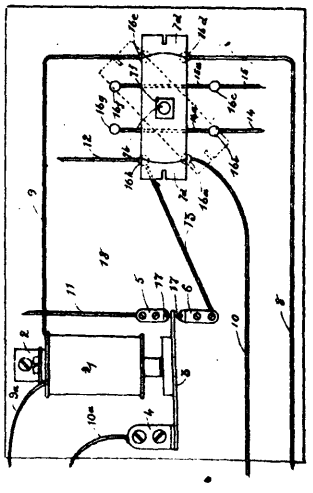
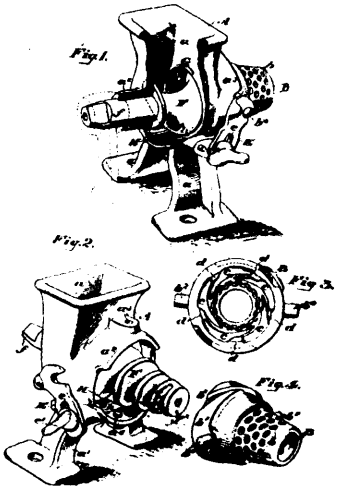
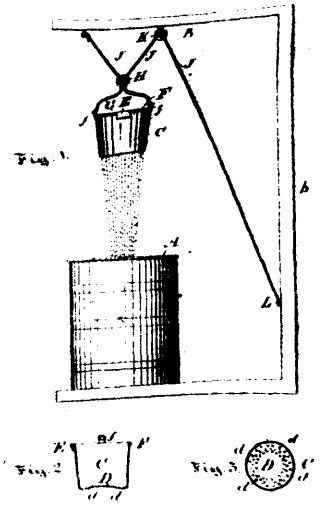


Fig 1.

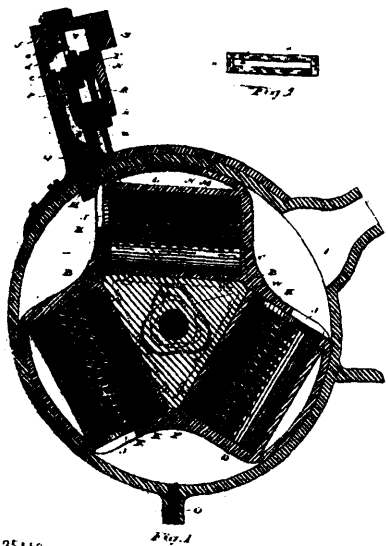
35110 Cann's Cut-off for Telephones.



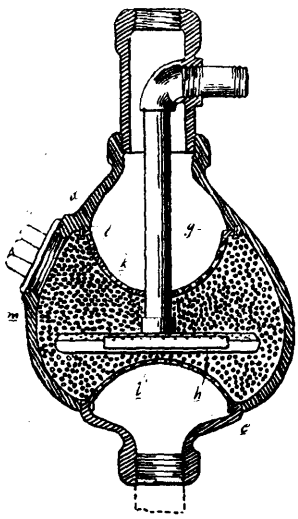
35111 Albrecht's Machine for Cutting Meat, etc.



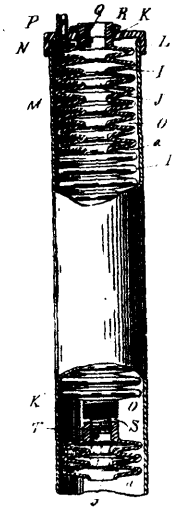
35112 Alford's Milk Aerator.



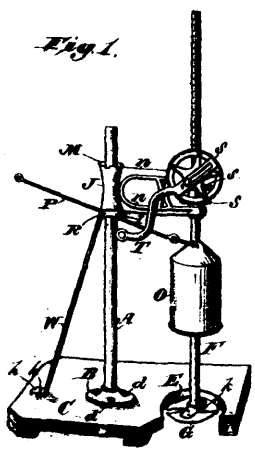
35113 Avis' Rotary Engine.



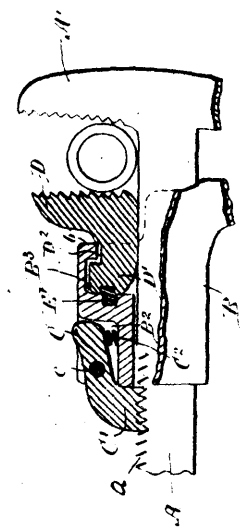
35114 McElroy's Water Heater.



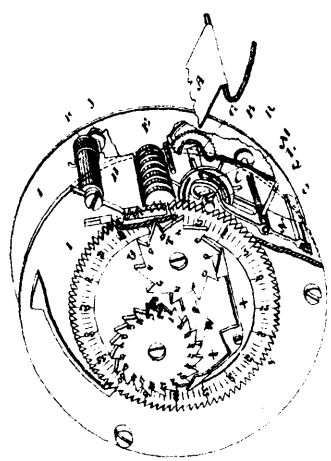
35115 McElroy's Water Heater.



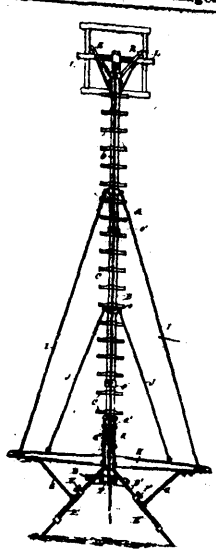
35116 Beagle's Post Hole Auger.



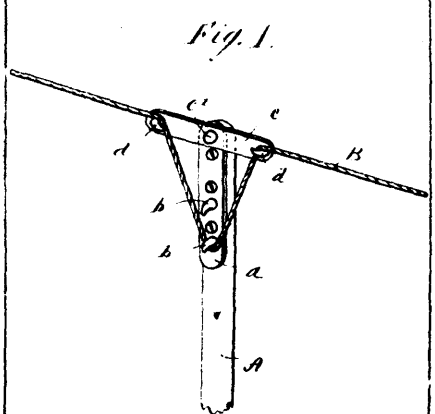
35118 Stanley's Wrench.



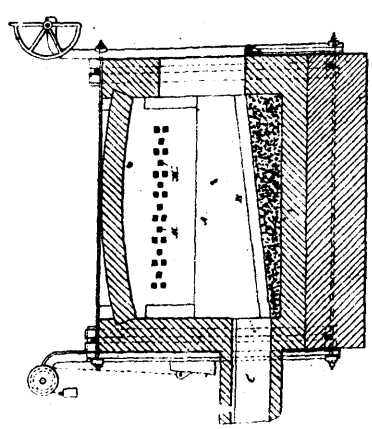
35119 Cruickshank's Lumber Measure.



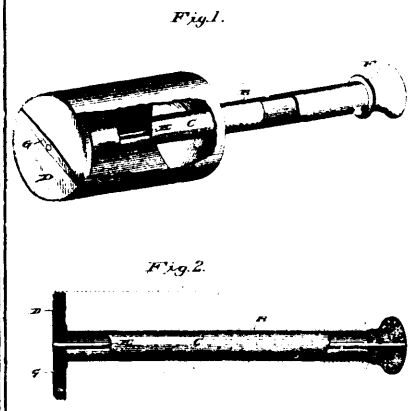
35121 Vieregg's Fire Escape.



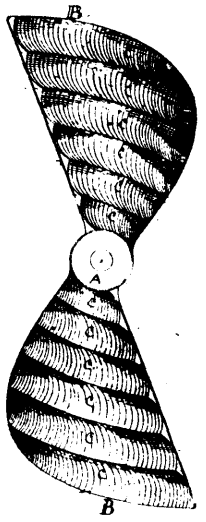
35122 McClaughry's Clothes Line Prop and Stretcher.



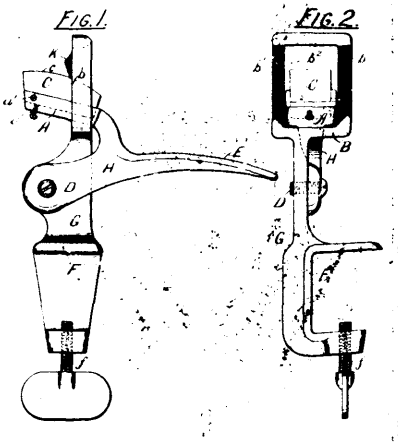
35124 Lauth's Metallurgical Furnace.



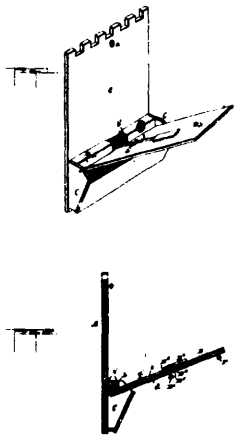
35125 Shaw's Scoop.



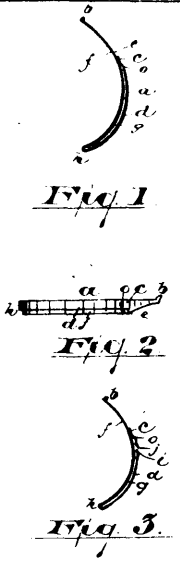
35126 Pond's Propeller Wheel.



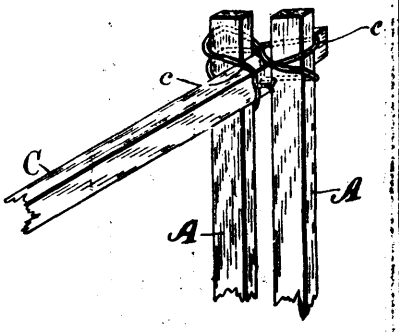
35127 Johnson's Tool Sharpener.



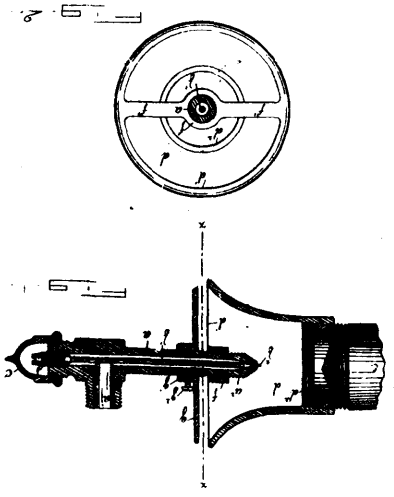
35128 Mee's Paper Holder.



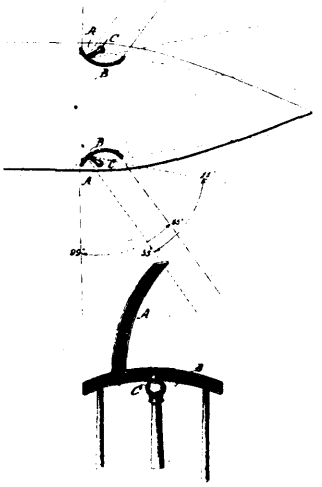
35129 Fleming's Watch Case Spring.



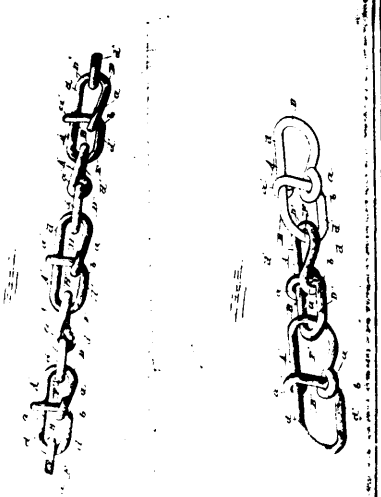
35130 Kilgore's Loop-fastening for Fences.



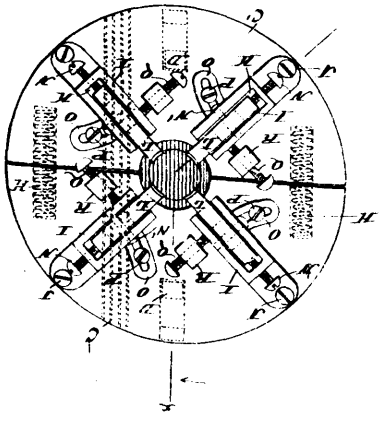
35131 Darforth and Clark's Gas and Air Mixer.



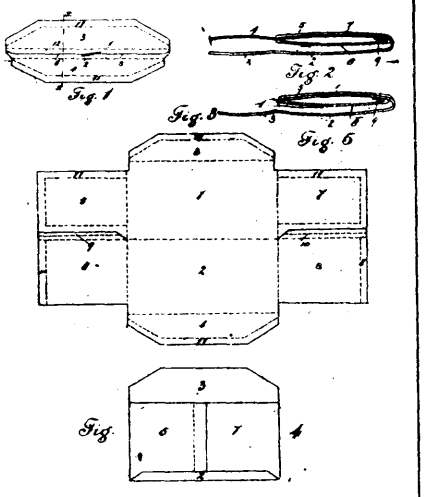
35132 Keyl and Hancock's Signal Light for Vessels.



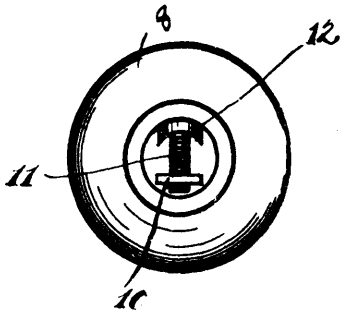
35133 Garland's Chain Link.



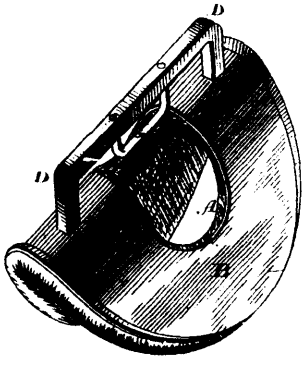
35134 Westbrook and Burns' Screw Cutting Device.



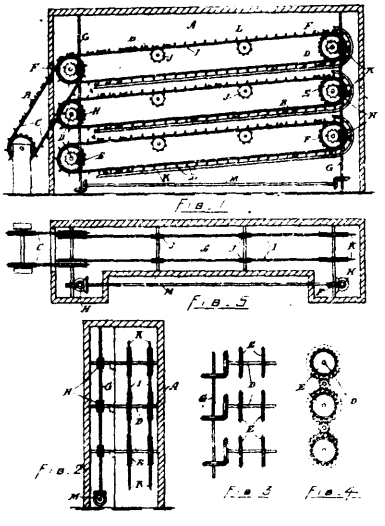
35135 Minton's Duplex Safety Envelope.



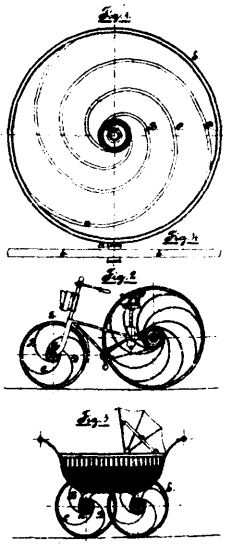
35136 Clow's Nut Wrench.



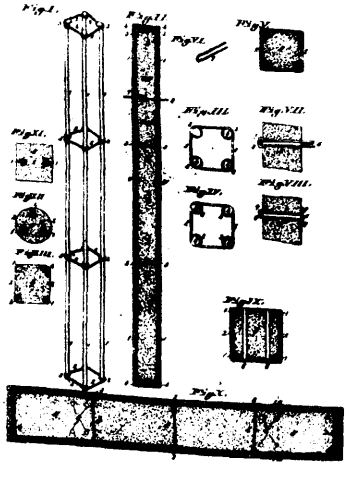
35137 Buckles' Horse Collar Pad.



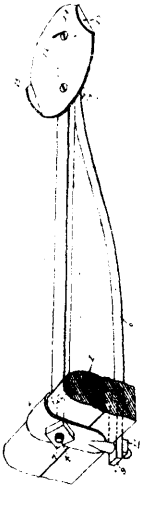
35138 Mayo's Drying Kiln.



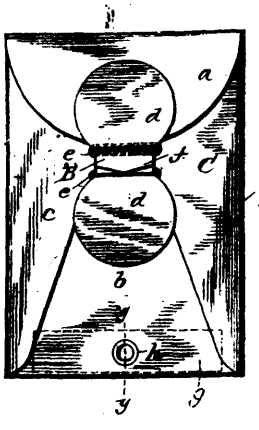
35139 Butscher and Finzel's Carriage Wheel.



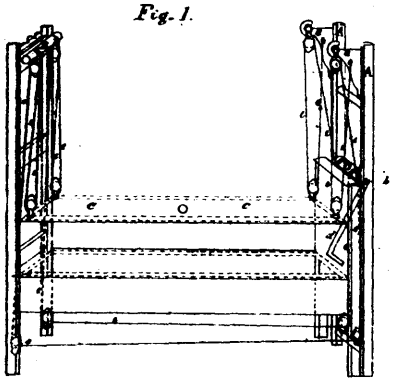
35140 Stempel and Meyrose's Post, Rail-tie, Beam, etc.



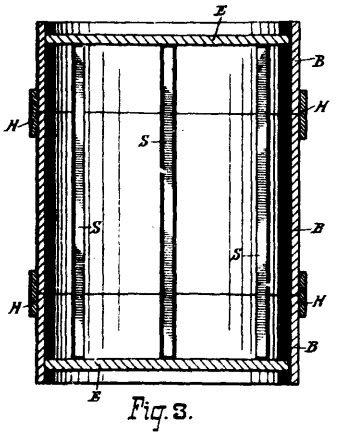
35141 Lewis' Vehicle Step.



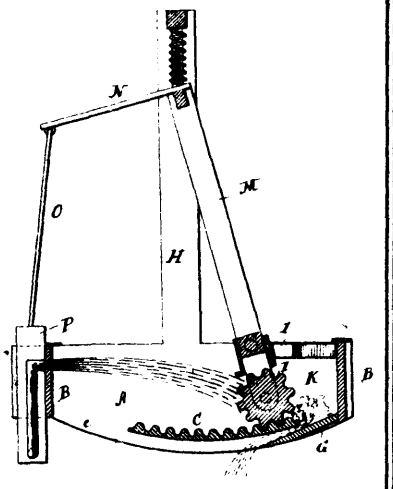
35142 Sewell's Clasp and Tag for Envelopes.



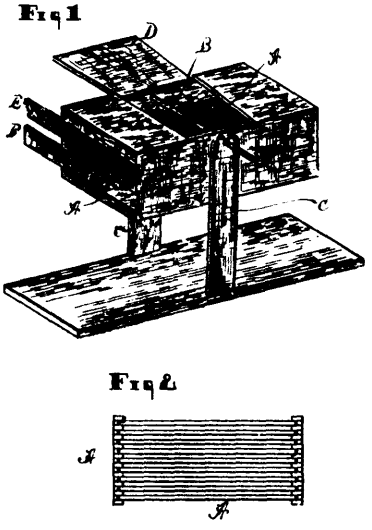
35143 Kaiser and Wilkinson's Sick Bed Appliance



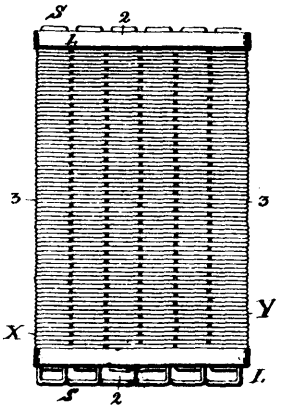
35144 Magee's Barrel, or Keg.



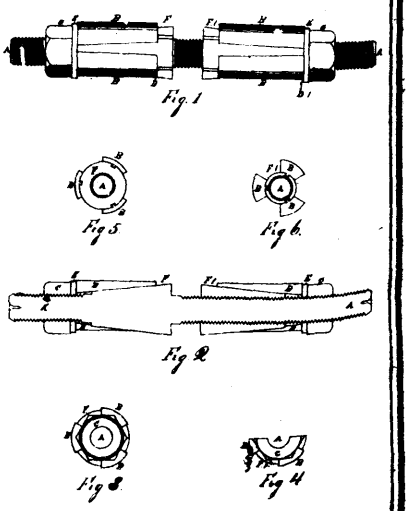
35145 Harding's Washing Machine.



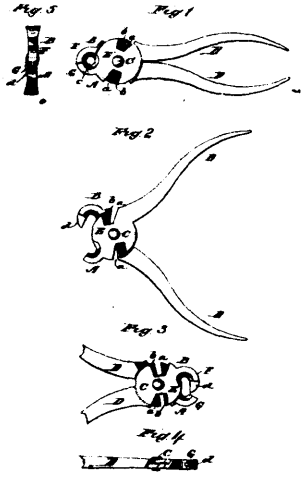
35146 Newton's Cinder Shaker.



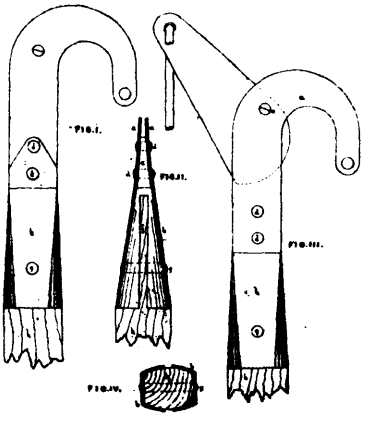
35147 Whittier's Secondary Battery Plate.



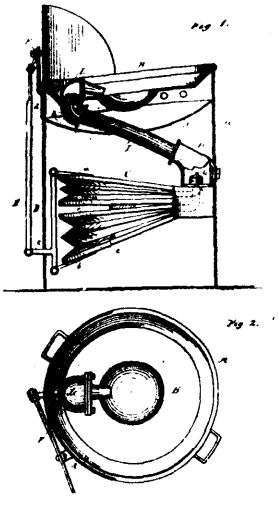
35148 Dubrule's Expansion Mandrel.



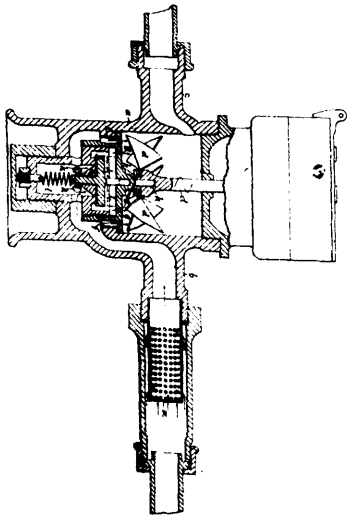
35149 Moodey's Fuse Cap Fastener.



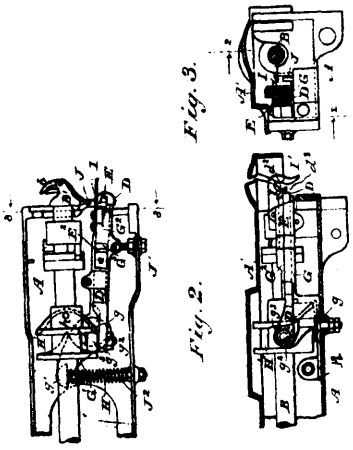
35150 Woodyatt's Tree Pruner Head.



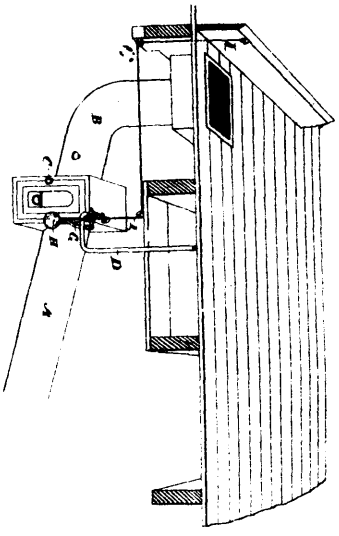
35151 Dalu's Portable Forge.



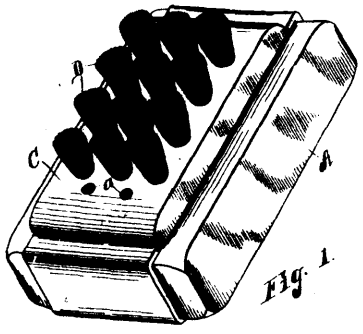
35153 Sporton and White's Fluid Meter.



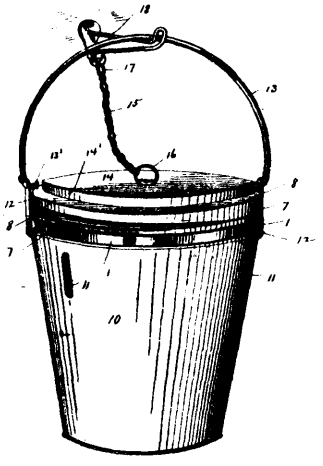
35159 Davis' Band Securing Mechanism.



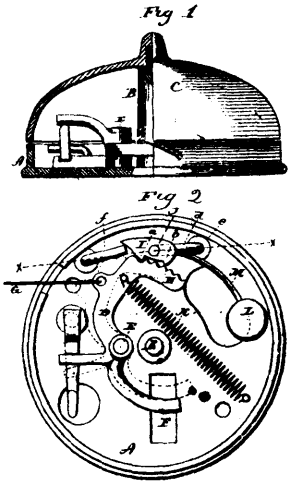
35160 Evans' Heating Device.



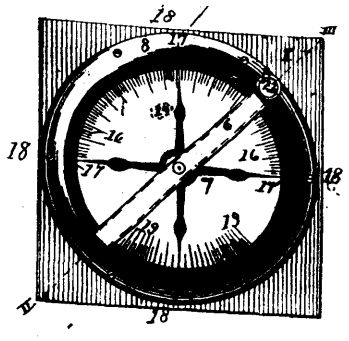
35161 Rich's Brush.



35162 Macomber's Fire Extinguishing Apparatus.

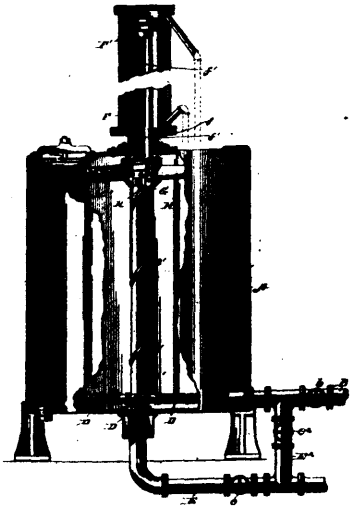


35163 Starr's Gong Bell.

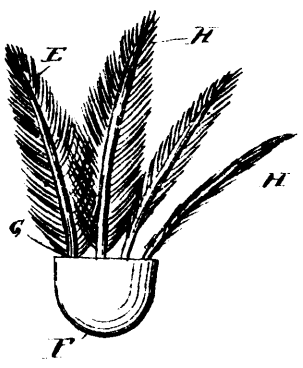


35164 Mellich's Clinometer.

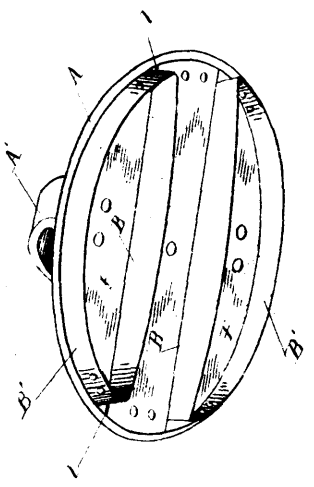
35165 Conboy's Carriage Top Back-Stay.



35166 Davis and Riddell's Water Filter.



35167 Cousen's Game.



35168 Stapleton's Curry Comb.

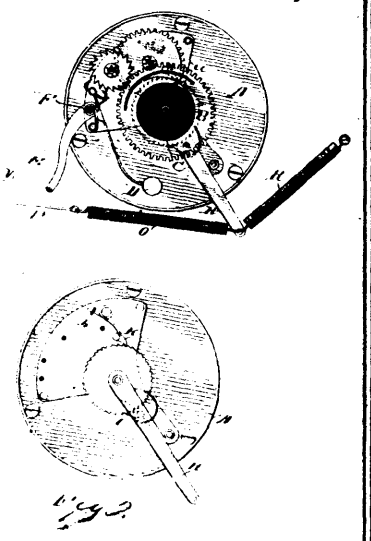
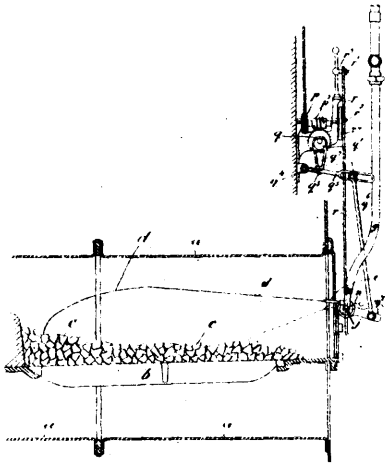
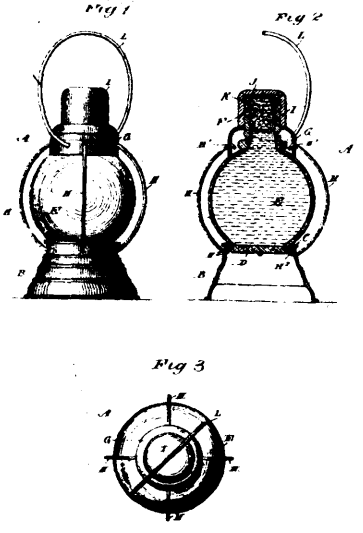


Fig 2.

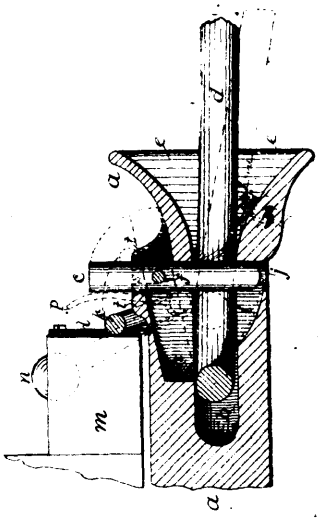
35169 Rockwell's Door Bell.



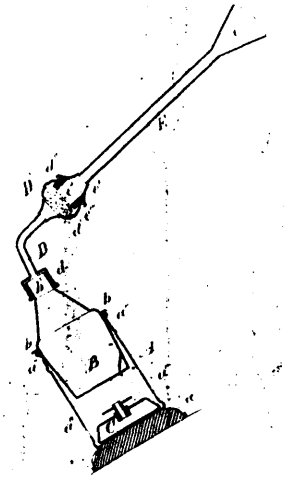
35170 Bliss, Bradbury and Gibson's Apparatus for Burning Liquid Fuel.



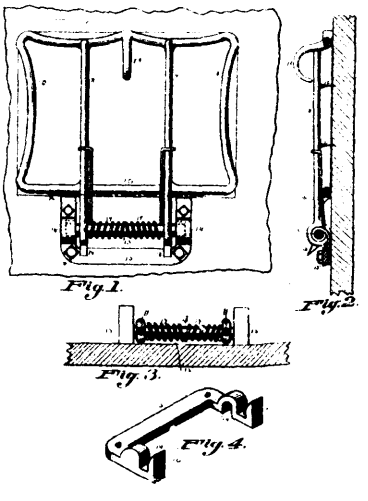
35171 Tappan's Perfume Holder.



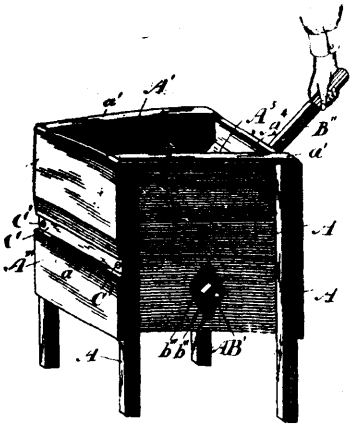
35172 Vaughn's Car Coupling.



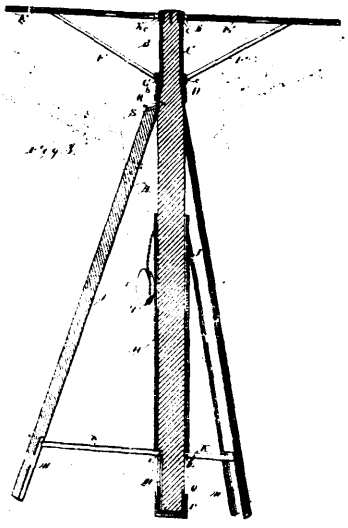
35173 Coulter's Vaporizer and Inhaler.



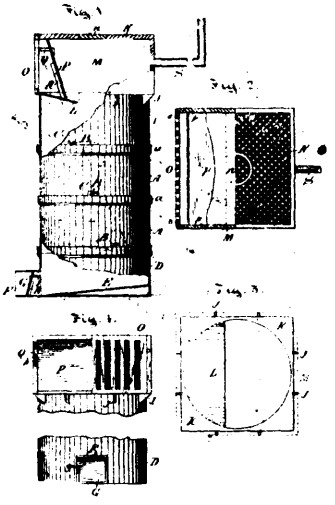
35174 Thurber's Card Holder.



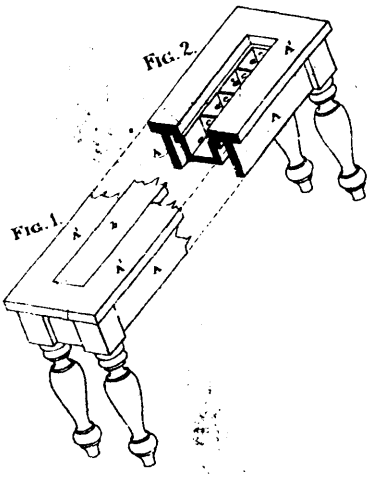
35175 Burr's Turnip Cutter.



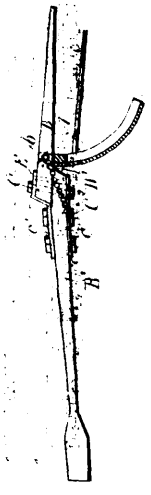
35176 Hendrickson's Combined Cane and Camp Stool.



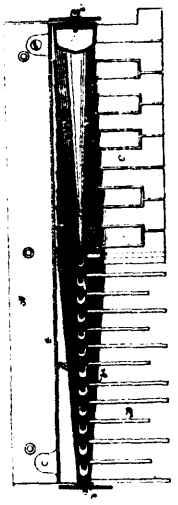
35177 Colas' Draining Well.



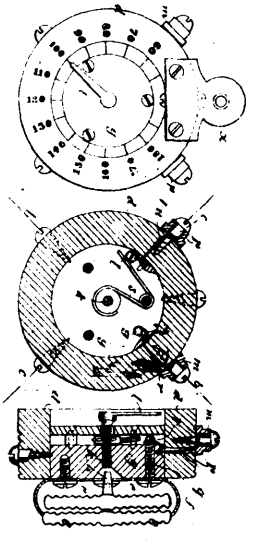
35178 Barlow's School Number Table.



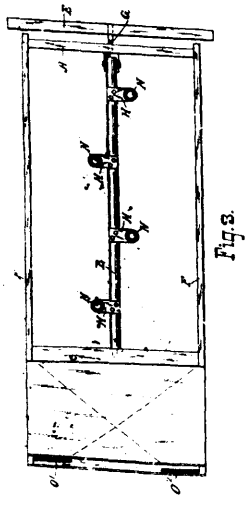
35179 Eldrege's Oar.



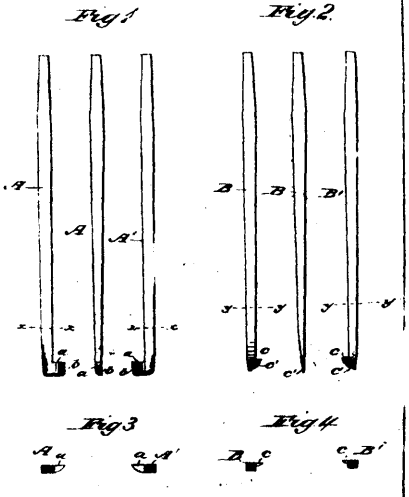
35181 Blomquist's Coupling Key Board for Organs.



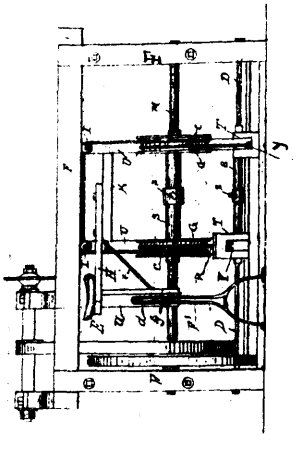
35182 Summerskill's Fire Alarm.



35183 Caslick and Clark's Fanning Mill Shoe.



35184 Siddall's Dental Elevator.



35185 Hunter's Mechanical Power.

Fig. 2.

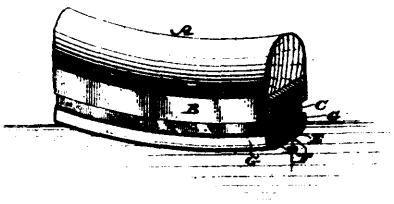
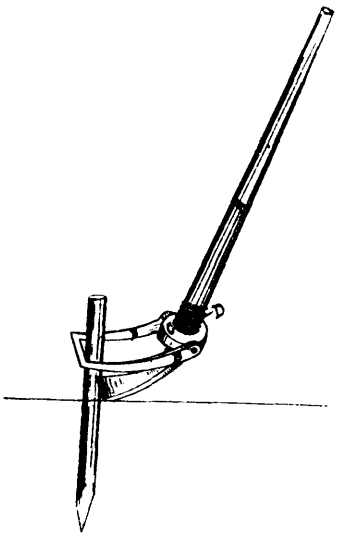


Fig. 3.

35185 DuBois' Tire.



35187 Hannah's Apparatus for Extracting Bolts, etc.

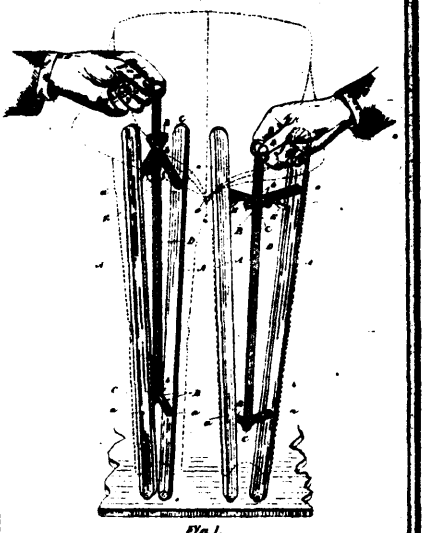
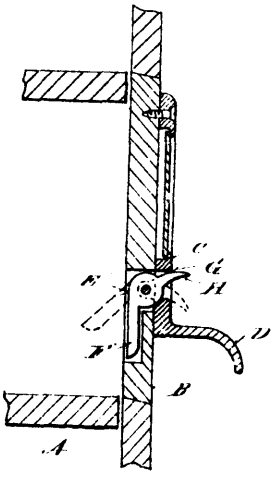


Fig. 1.

35188 Draper's Pants Stretcher.



35189 Ohmer's Catch for File Cabinets.

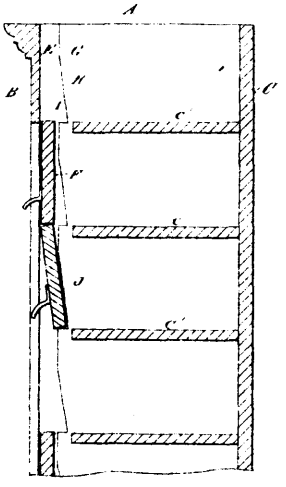


Fig. 1.

35190 Ohmer's Cabinet.

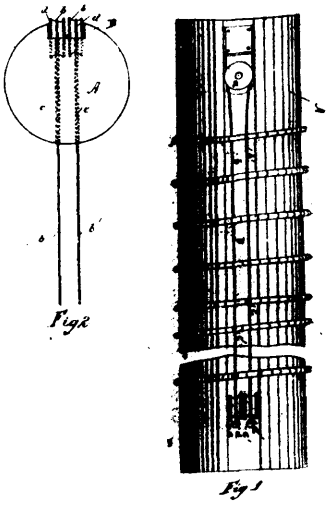
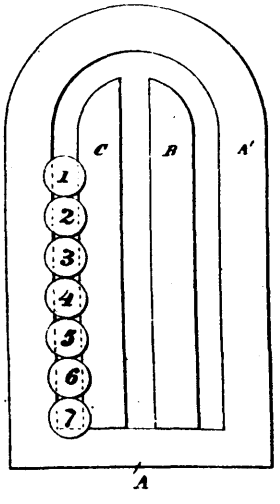


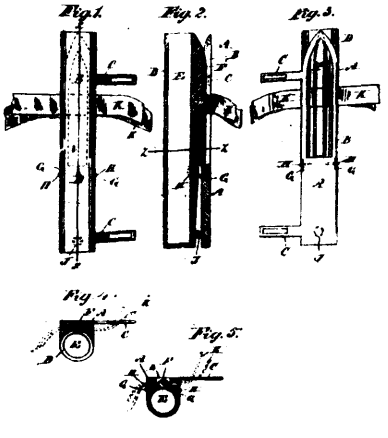
Fig 2

Fig 1

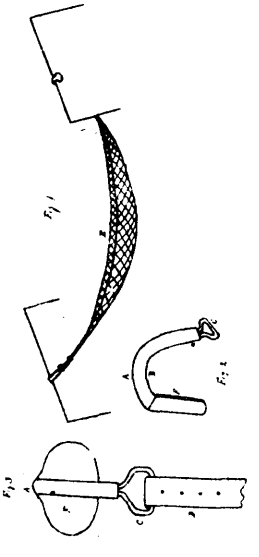
35191 Feher's Curtain Pole.



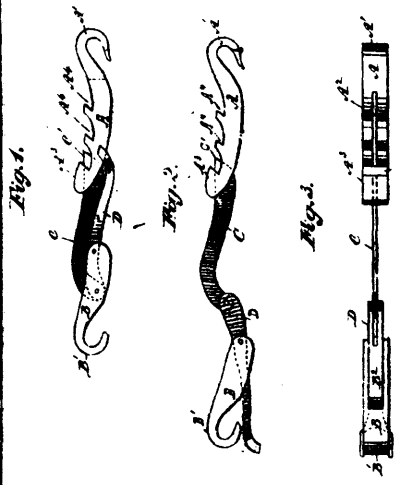
35192 Eno's Game or Puzzle.



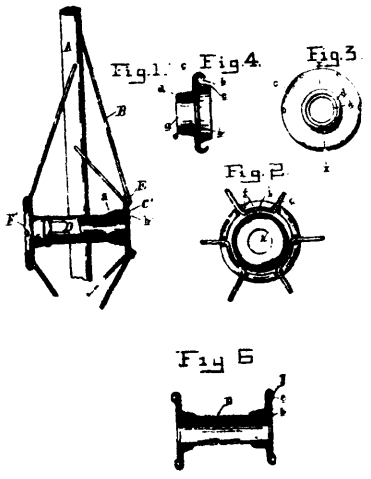
35193 Redmond's Whip Socket and Rein Holder.



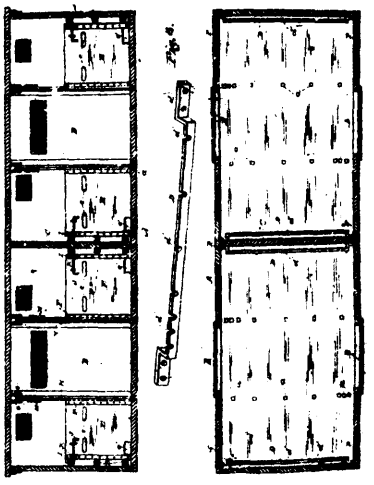
35194 Dion's Children's Travelling Hammock.



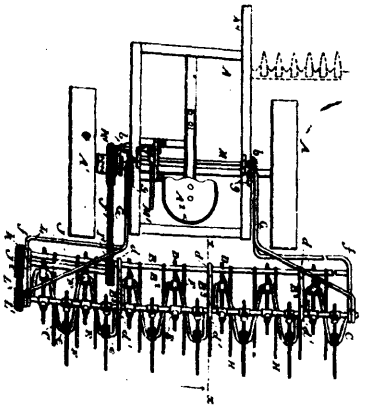
35195 Wood's Hame Fastener.



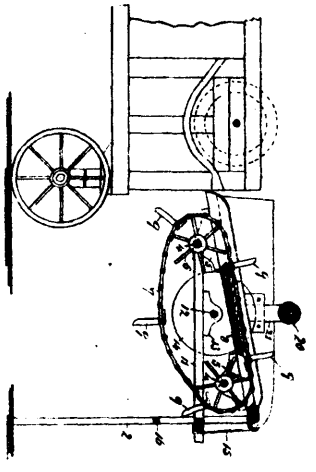
35196 Gendron's Vehicle Wheel.



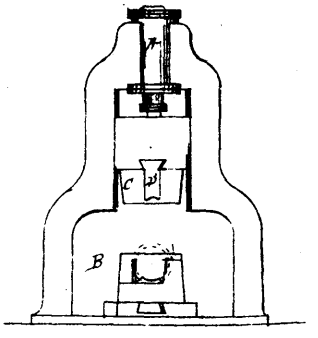
35198 Kimball's Stock Car.



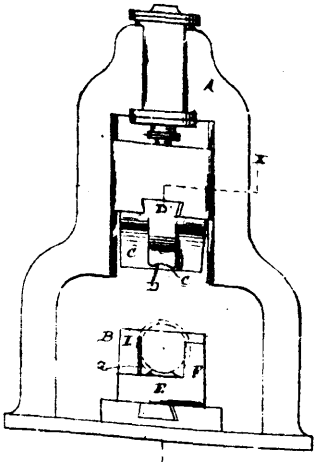
35199 Saurer's Mower and Hay Tedder.



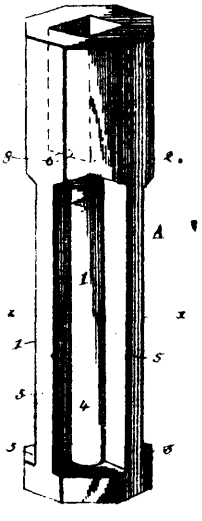
35200 Brintnell's Band Cutter and Feed Attachments to Threshing Machines.



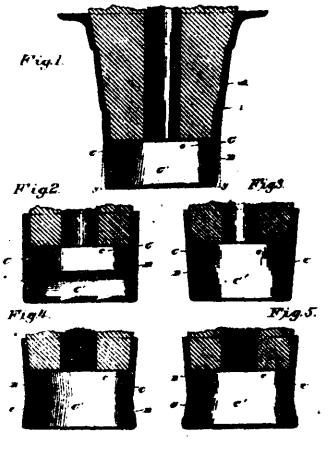
35201 Facer's Method of Manufacturing Steel Wheels.



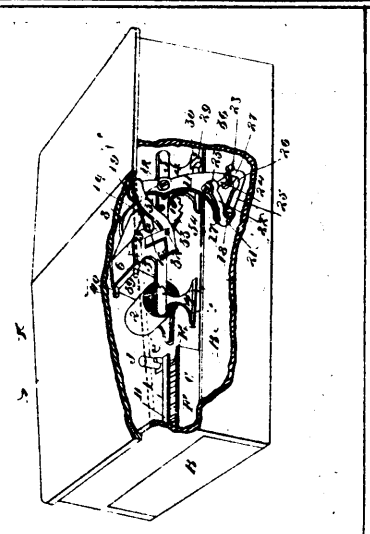
35202 Facer's Steam Hammer.



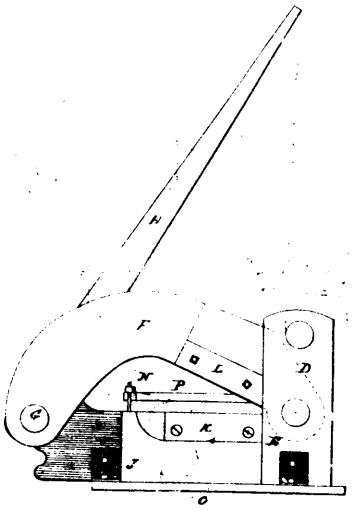
35203 Helland's Fence Post Holder.



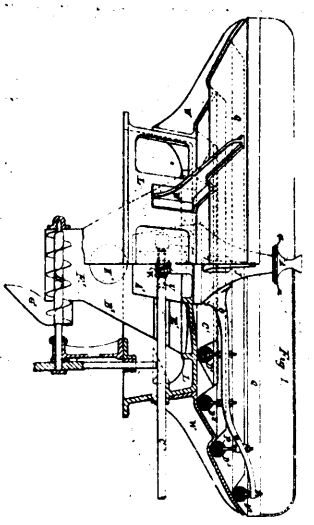
35204 Reid's Hub Band.



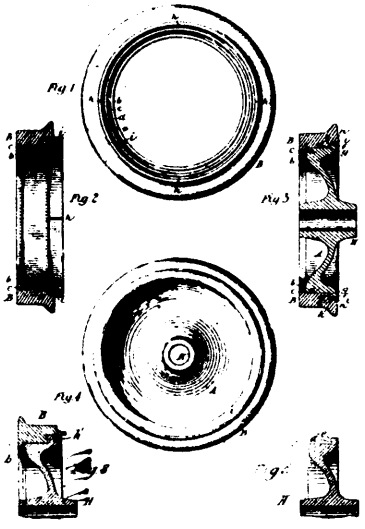
35205 **Peck's Recorder and Combination Lock.**



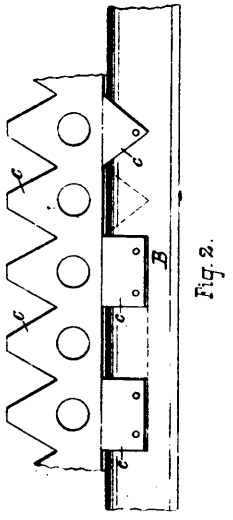
35207 **Irvine's Metal Cutter.**



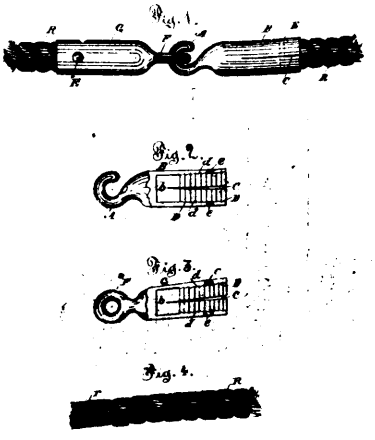
35208 **Stanfield and Clarkson's Apparatus for Separating Minerals from Ores, etc.**



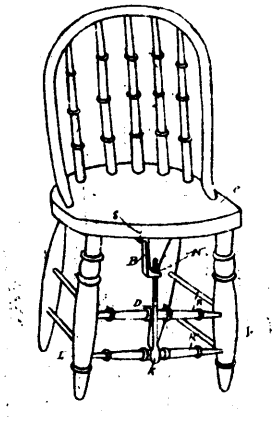
35209 **Rigby's Car Wheel.**



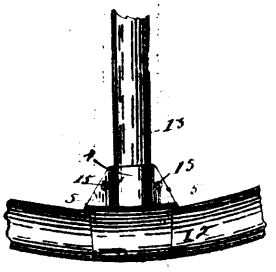
35210 **Hewitt's Roof Cresting.**



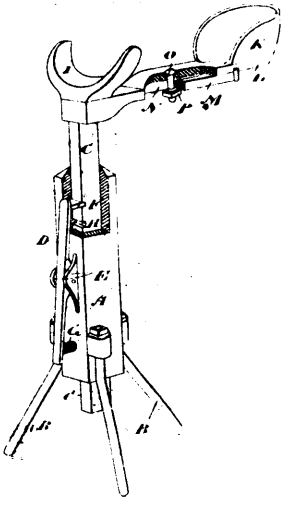
35211 **Davidson's Rope Coupling.**



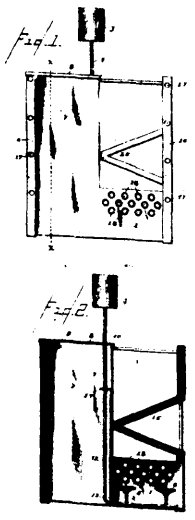
35212 **Virtue's Chair Brace.**



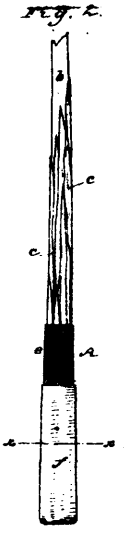
35213 **Watson's Spoke Socket.**



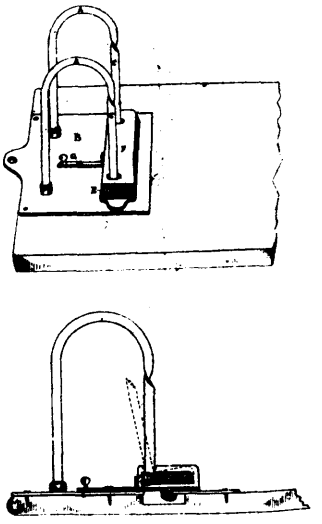
35214 **Allen's Horse Shoeing Jack.**



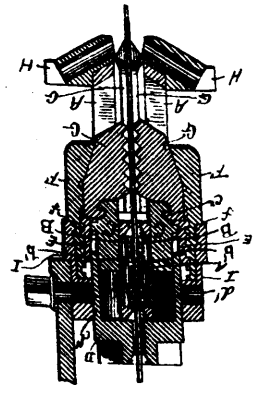
35215 Brandt's Heater.



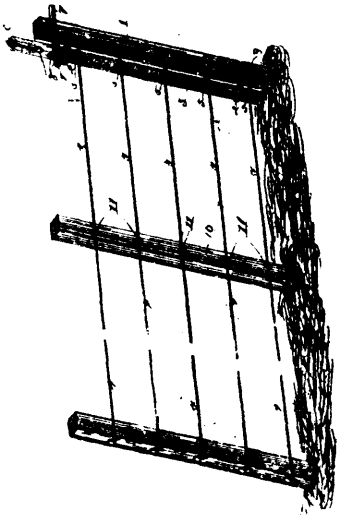
35216 Warren's Whip.



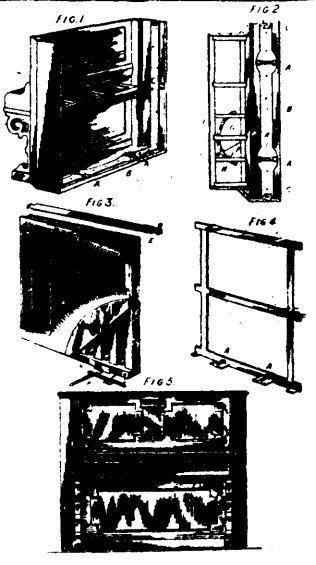
35217 Stone's Paper File.



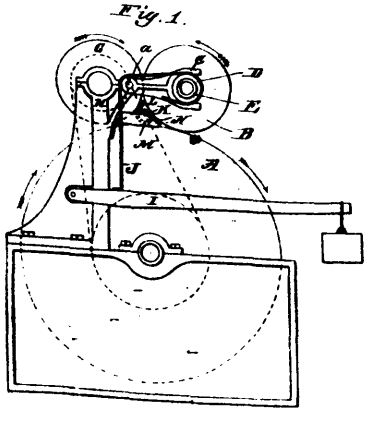
35218 Robinson and Watt's Machine for uniting Soles and Uppers of Boots.



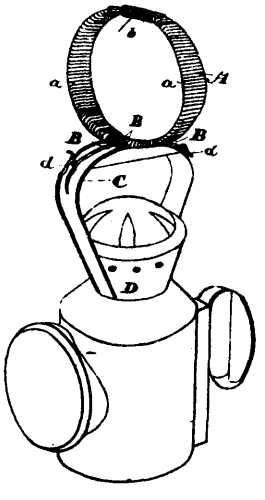
35219 Klopfenstein's Wire Stretcher.



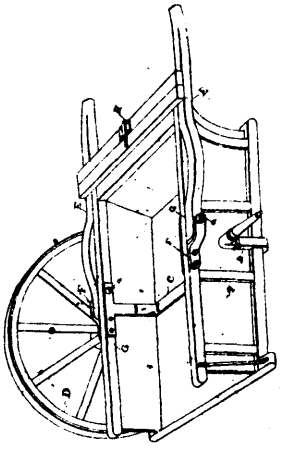
35220 Schallehn's Transposing Pianoforte.



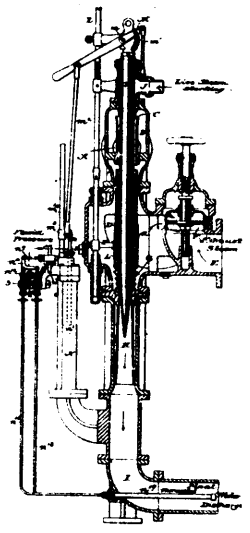
35221 Fairbanks and Parker's Machine for forming Bodies from Successive layers of Pulp.



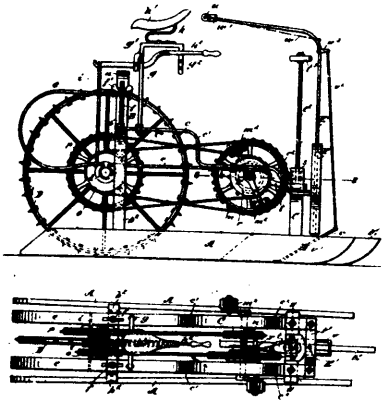
35222 Brady's Handle for Brakesmen's Lamps.



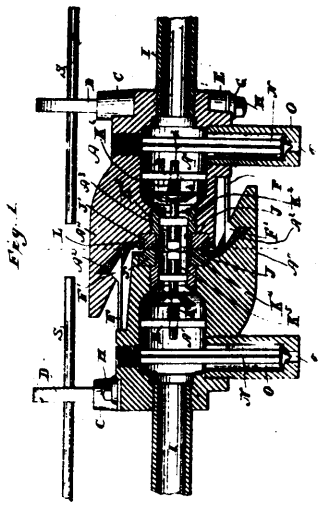
35223 McCraney's Dump Cart.



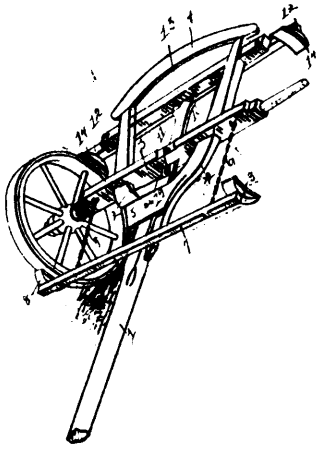
35224 Schutte's Automatic Condenser.



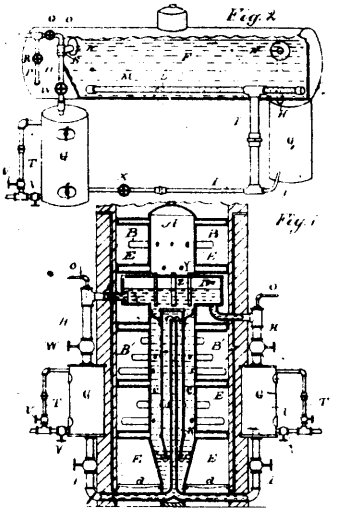
35225 Stanford's Sled Propeller.



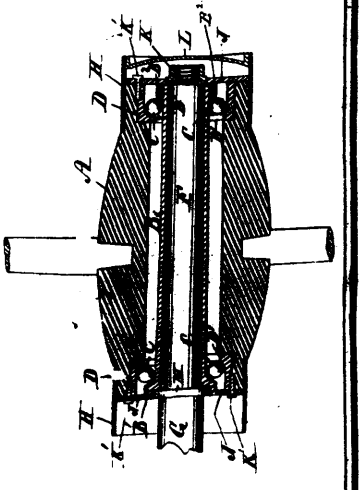
35226 Walker's Automatic Coupling for Steam Pipes.



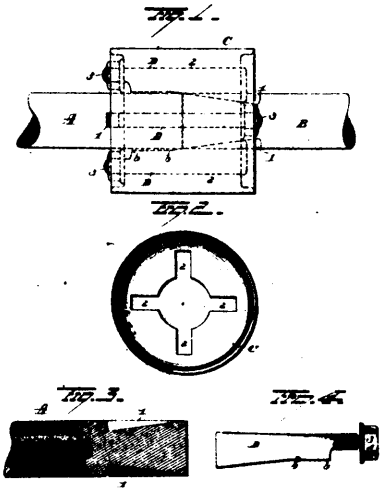
35227 Grant's Wagon Brake.



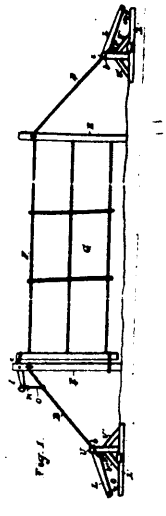
35228 Grant's Circulator and Purifier for Steam Boilers.



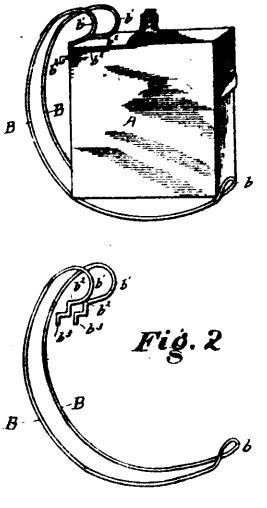
35229 Bristow's Axle Bearing.



35230 Boorman's Shaft Coupling.



35231 McDougall's Wire Tightening Device.



35232 Stevenson's Stand for Carboys.

Fig. 1.

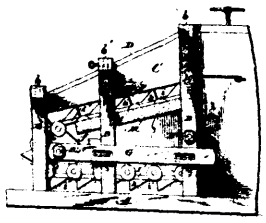
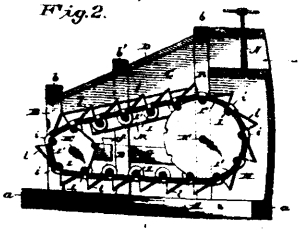
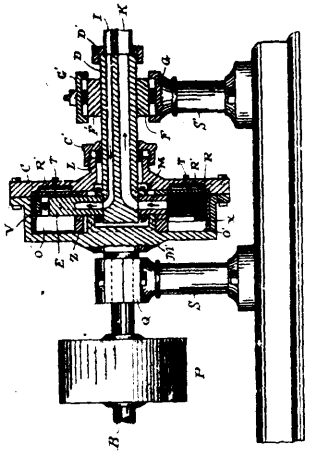


Fig. 2.



35233 Van Kleek's Water Wheel.



35234 Bentley's Rotary Engine.

Fig. 1

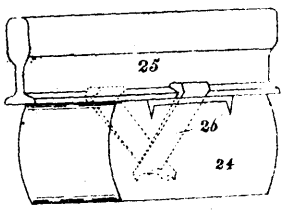


Fig. 3.

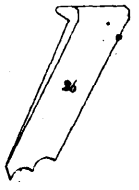
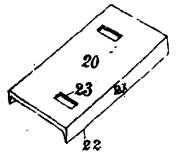


Fig. 2.



35235 Churchward's Wear Plate for Railway Ties.

Fig. 2

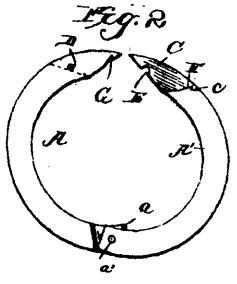
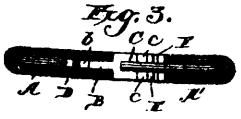
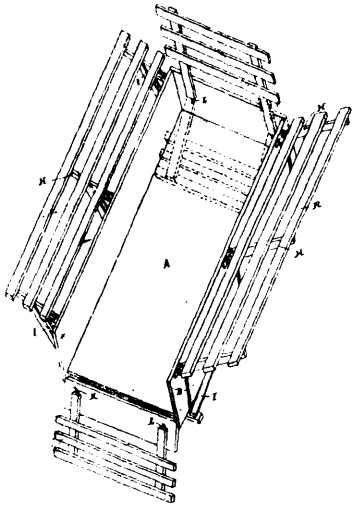


Fig. 3.



35236 Rea's Nose Ring for Cattle.



35237 Avery's Convertible Hay and Stock Rack.

Fig. 1.

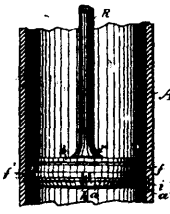


Fig. 3.

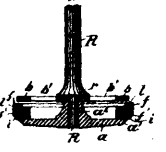


Fig. 2

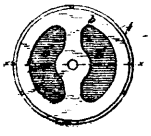


Fig. 4.

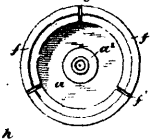
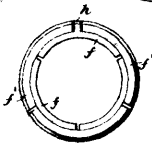
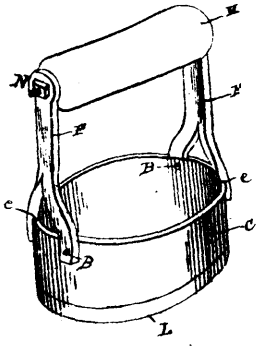


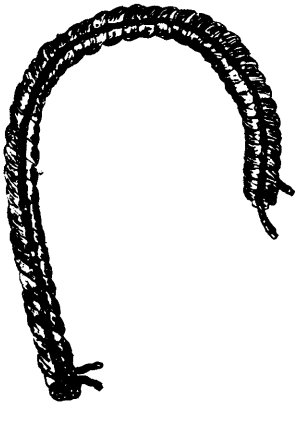
Fig. 5



35238 Weils' Pump Piston.



35239 Maranville's Chopping Knife.



35240 Watkins' Twine for Binding Grain.

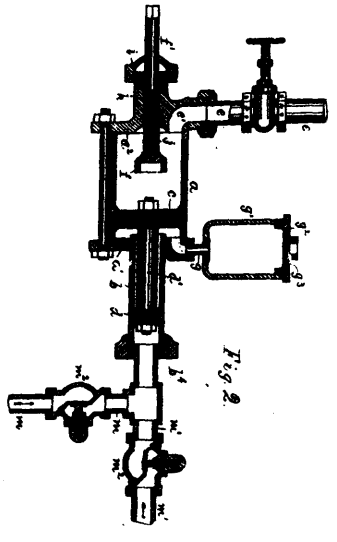
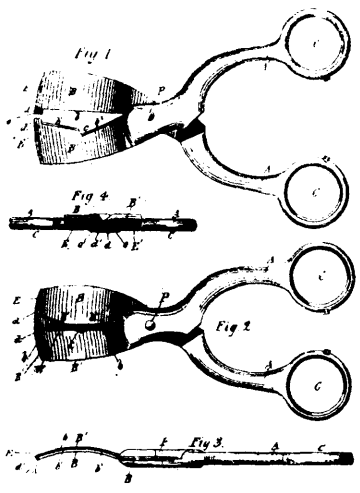
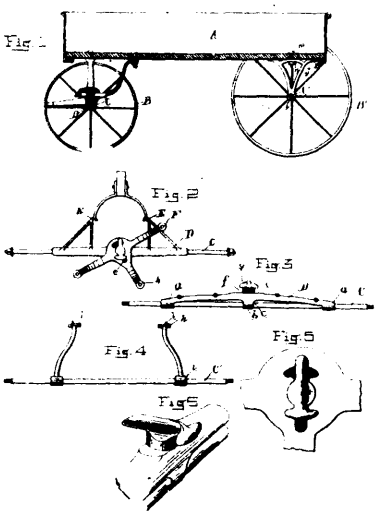


Fig. 6

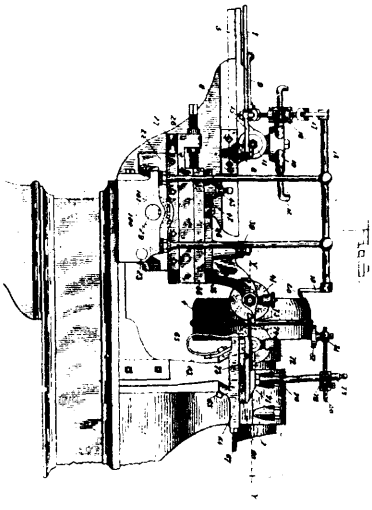
35241 Hendrick's Coagulant Feeder.



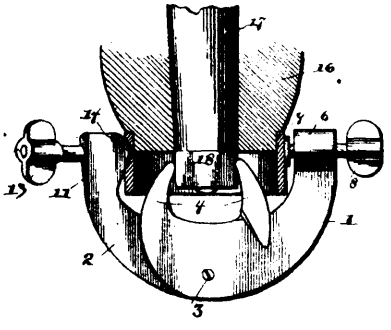
35242 Sanford's Wick Trimmer.



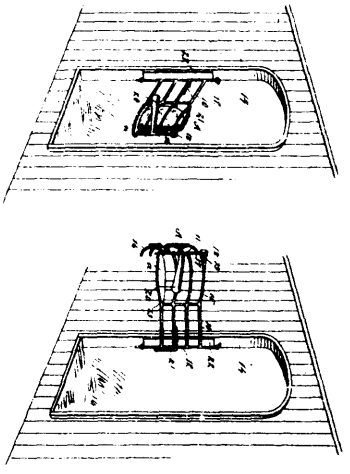
35243 Gendron's Waggon Running Gear



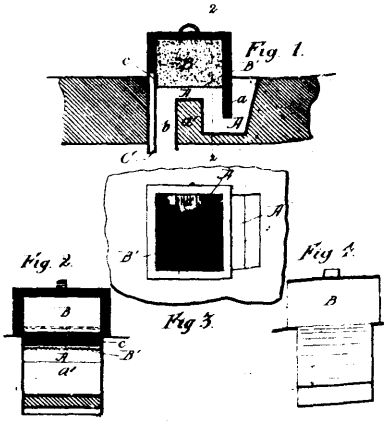
35244 Gendron's Machine for Trueing Tires.



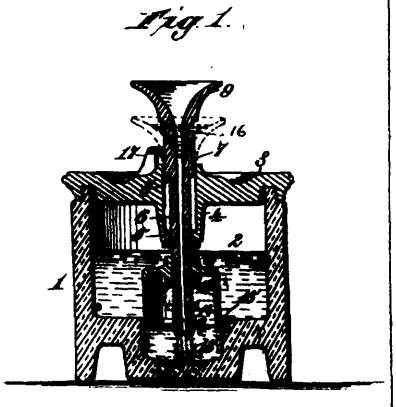
35245 Beach's Wrench.



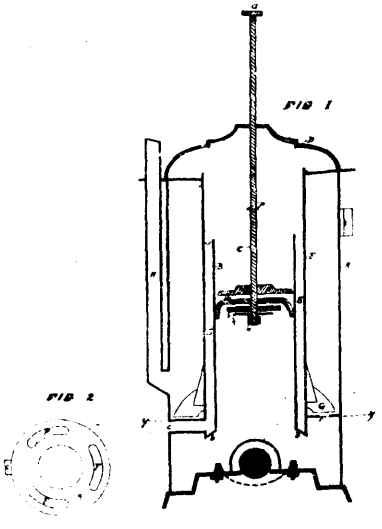
35246 Hatlestad's Mail Pouch Catcher.



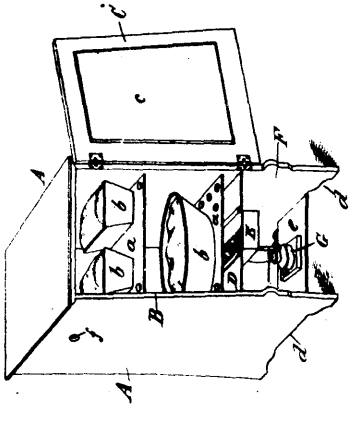
35247 Wood's Drain for Refrigerator Cars.



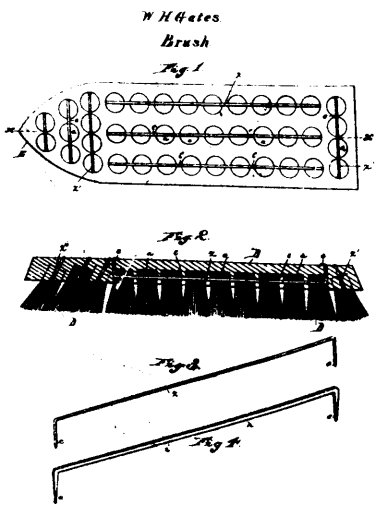
35249 Heberling's Fountain Ink Stand.



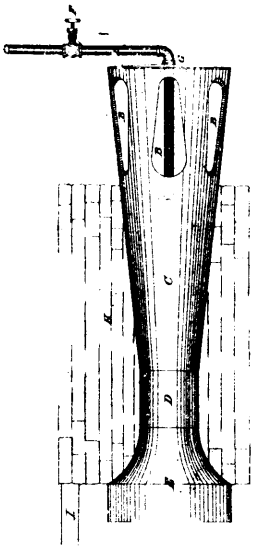
35250 Brooks' Force Pump.



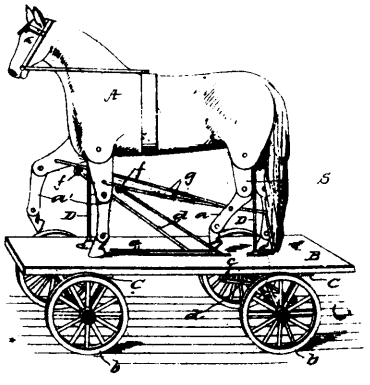
35251 Case's Apparatus for Raising Dough.



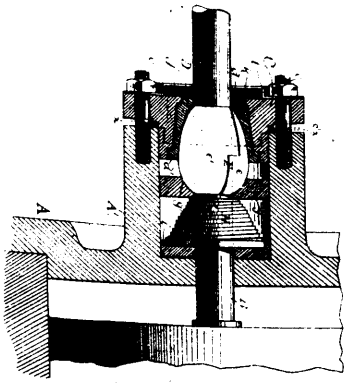
35252 Gates' Brush.



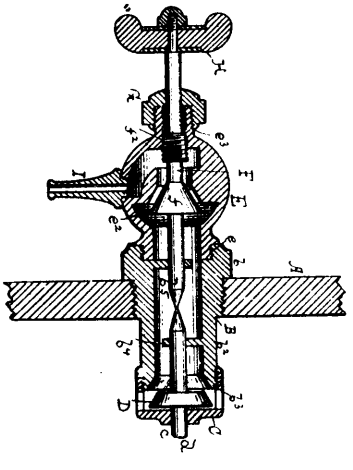
35254 Earle's Device for Injecting Air and Steam into Furnaces.



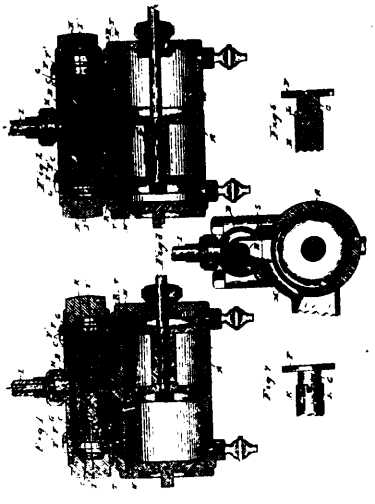
35255 Snyder's Toy.



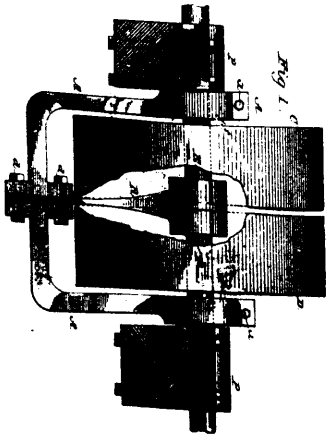
35256 Frick's Stuffing Box.



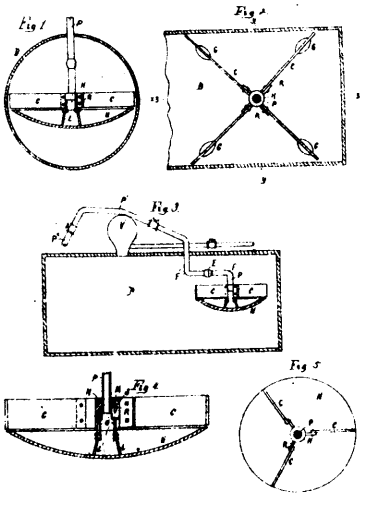
35257 Mears' Safety Valve Attachments for Cocks.



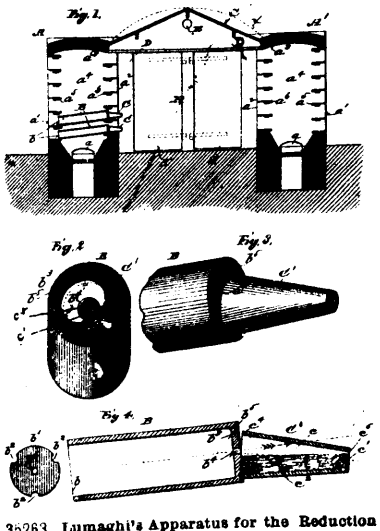
35258 Burnham's Actuated Valve for Steam Engines.



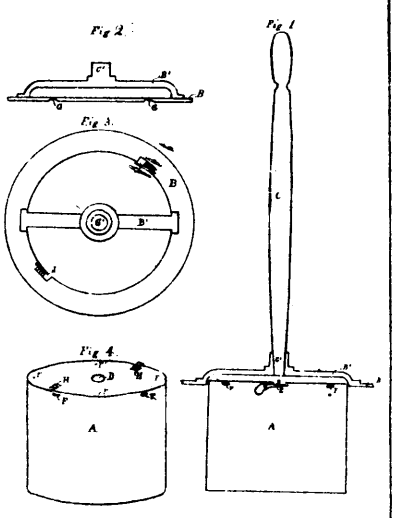
35261 Lawrence's Pulley Support.



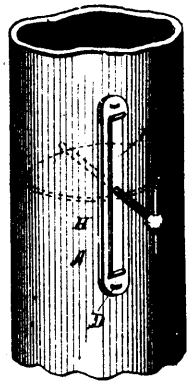
36262 Ford's Automatic Boiler Cleaner.



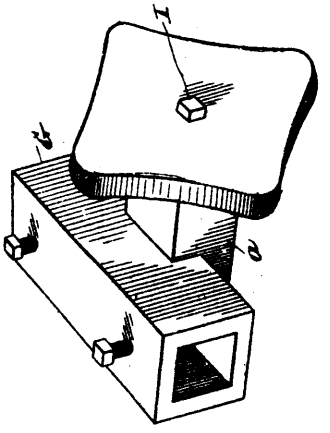
35263 Lumaghi's Apparatus for the Reduction of Argentiferous Ores.



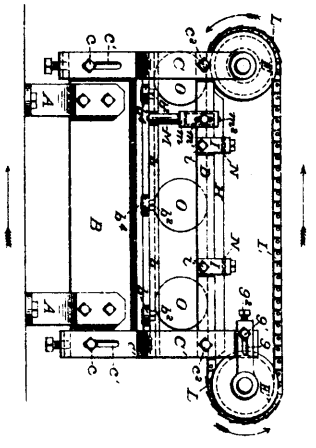
35264 Garrett's Milk Aerator.



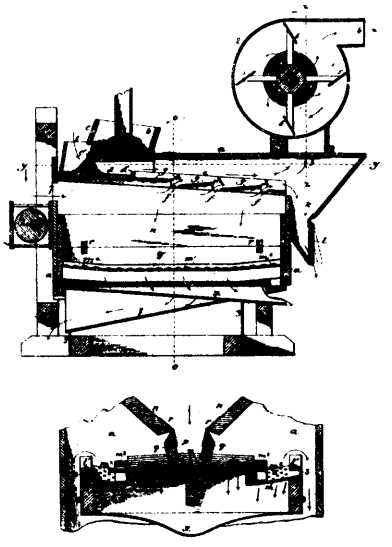
35265 Mohrmann's Damper Attachment.



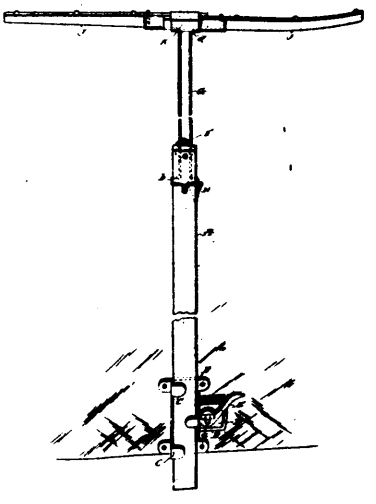
35266 Bredannaz's Picker Shoe for Looms.



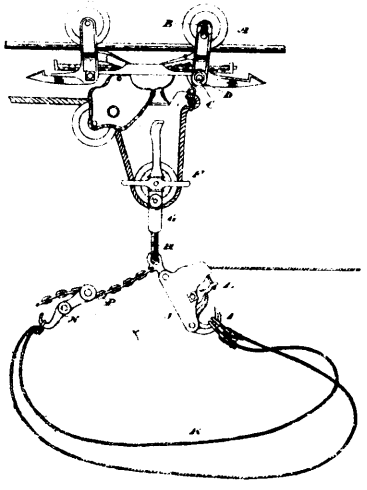
35267 Robbins' Machine for Crimping the Heads of Metal Cans.



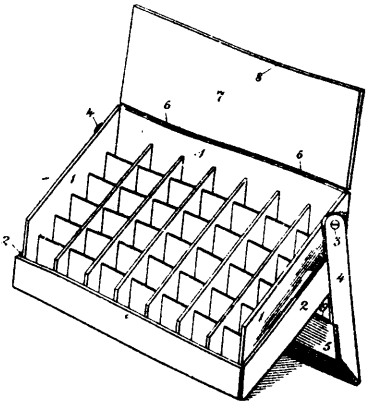
35268 Closz's Machine for Separating Grain.



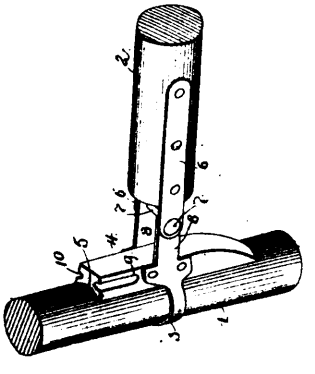
35269 Pease's Pillow Sham Holder.



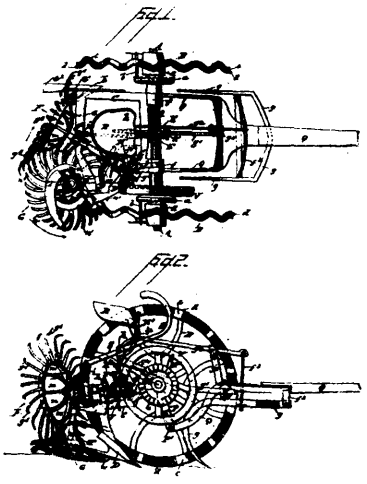
35270 Provan's Load Lifter.



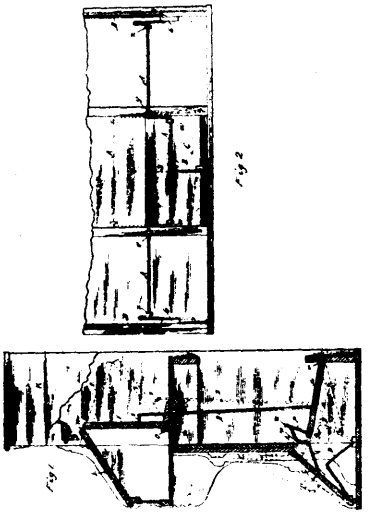
35271 Briggs' Display Box.



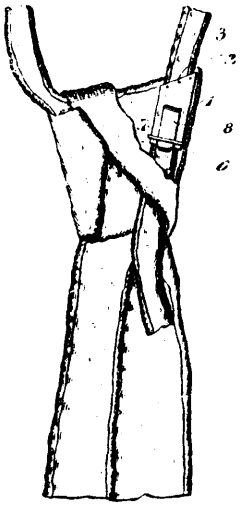
35272 Frostad's Gaff-Joint for Vessels.



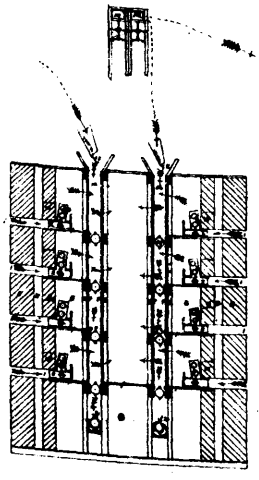
35273 Ford's Potato Digger.



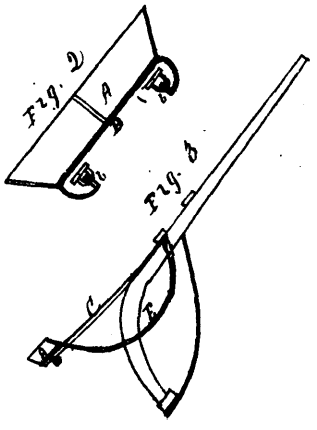
35274 Bulkema's Organ Pedal Cover.



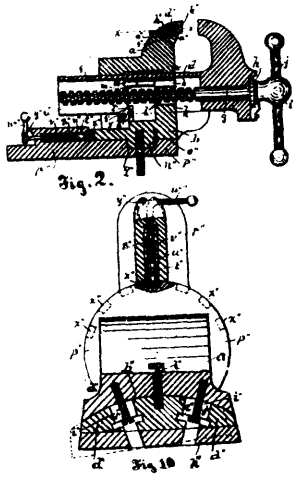
35275 Greenwald's Neck-tie Fastener.



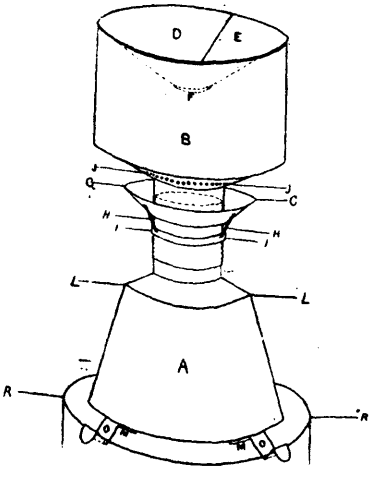
35276 Borland's Kiln for Drying Grain.



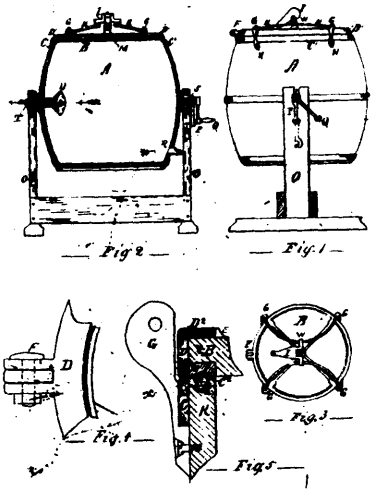
35277 McFarlane's Road Cart.



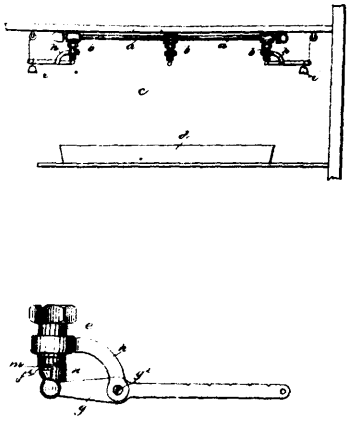
35278 Ernst's Vise.



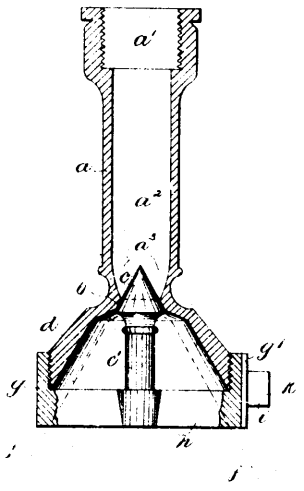
35279 Mallet's Aerator for Milk.



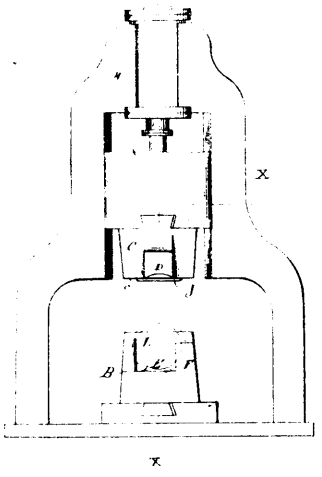
35280 Smith & Kingleyside's Churn.



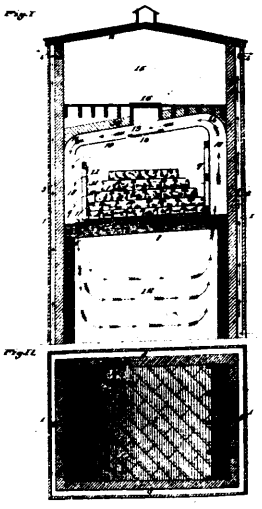
35281 Stanford's Aerator for Wort.



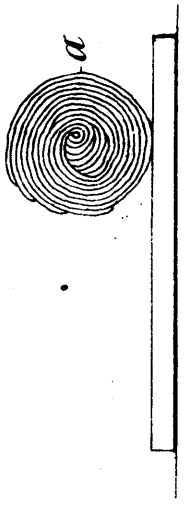
35282 **Stanford's Spraying Device for Atomizers.**



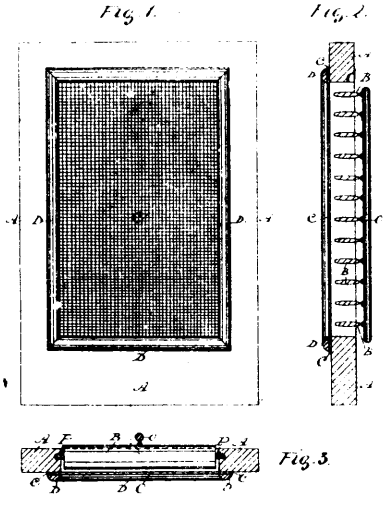
35283 **Facer's Steam Hammer.**



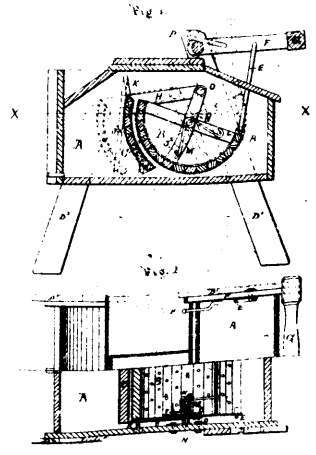
35284 **Black's Cold Storage House.**



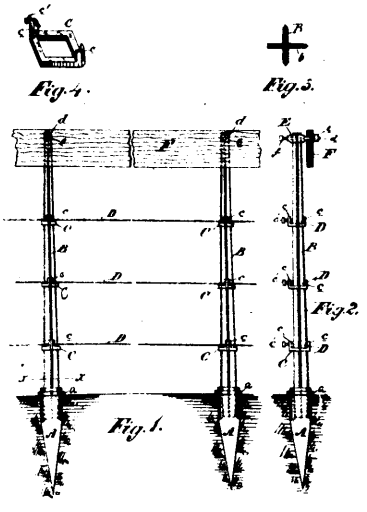
35285 **Meyer's Apparatus for Making Cigar Bunches.**



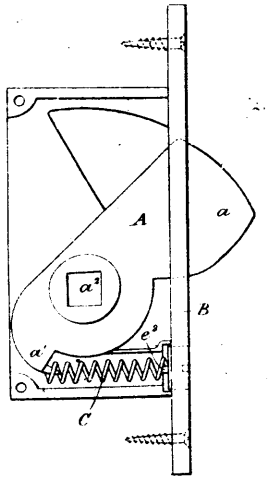
35286 **Isard's Screen Shutter.**



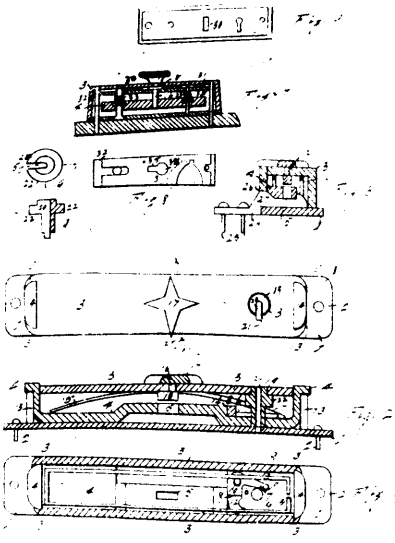
35287 **Vollmar's Washing Machine.**



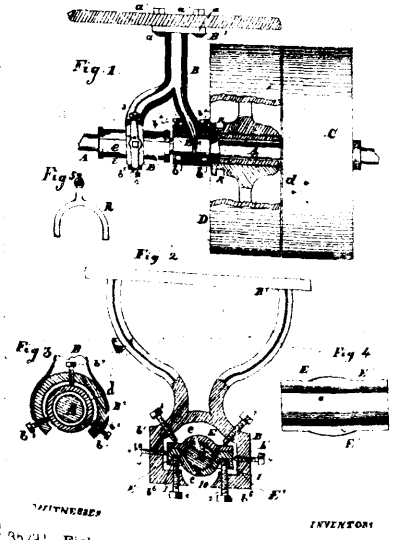
35288 **Longden's Wire Fence Post.**



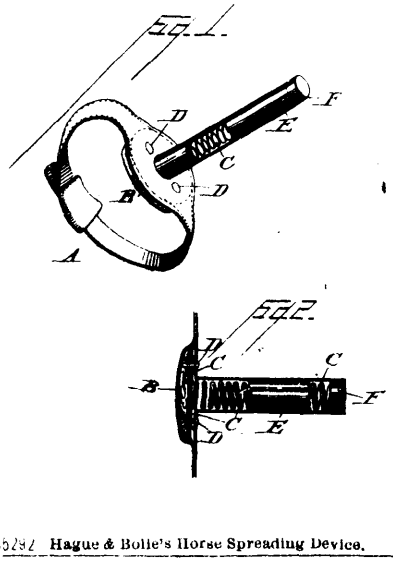
35289 **Matthews & Buckland's Lock and Fastening.**



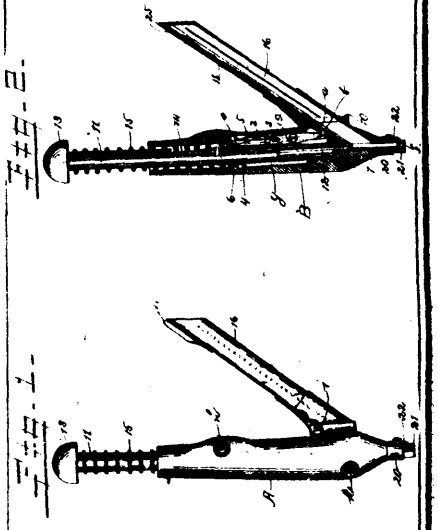
35290 **Ingram's Bag Lock.**



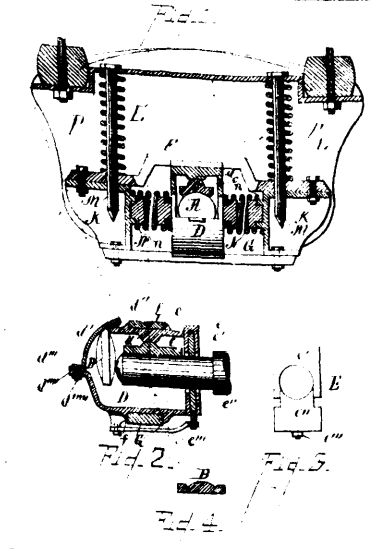
35291 Fisher & Kinney's Shaft Hanger and Belt Shifter.



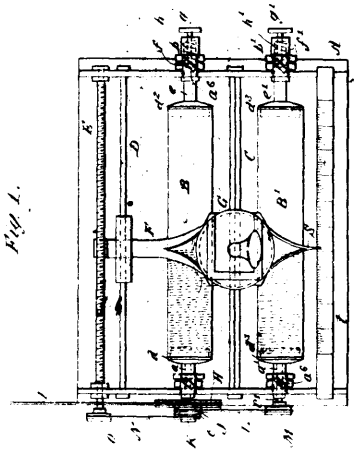
35292 Hague & Bolle's Horse Spreading Device.



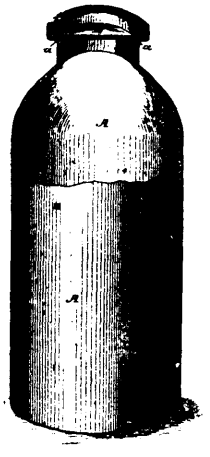
35293 Brady's Nail Driving Tool.



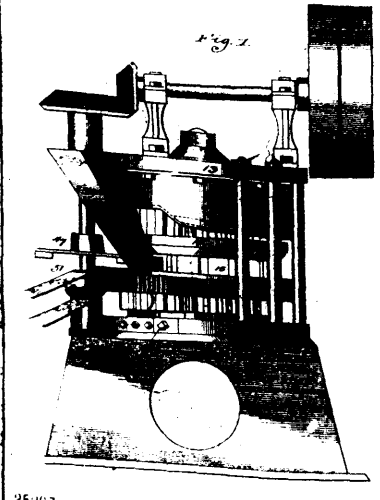
35294 Bowles & Aenchbacher's Car Truck.



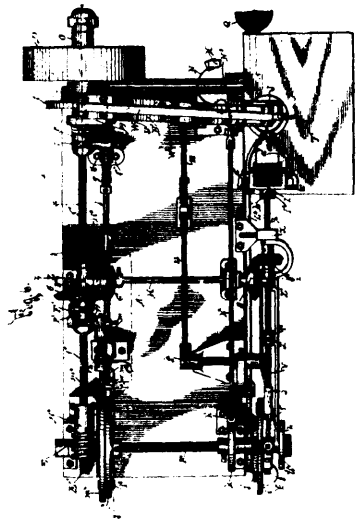
35295 Megenis & Richmond's Phonograph.



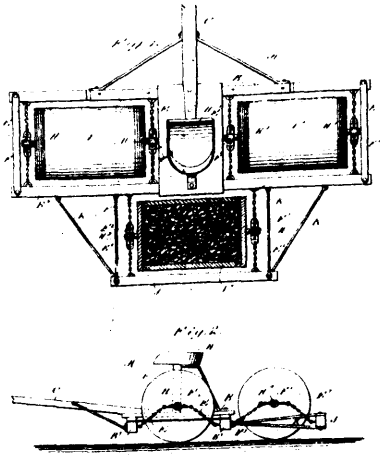
35296 Barnhardt's Milk Bottle.



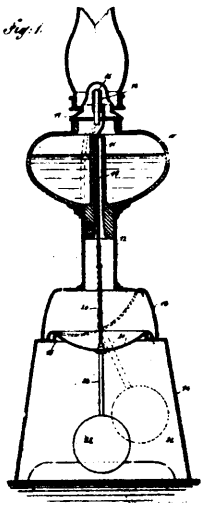
35297 Knickerbocker & Wardell's Brick Machine.



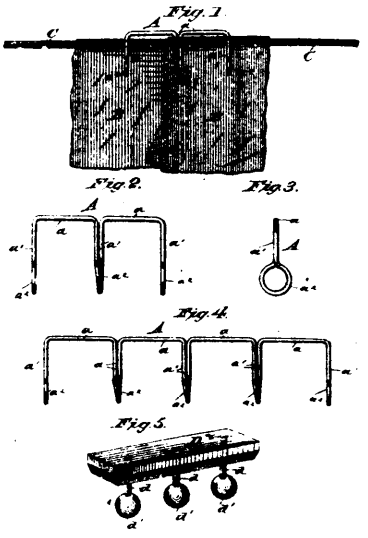
35298 Wile's Machine for Corking Bottles and for Wiring Corks.



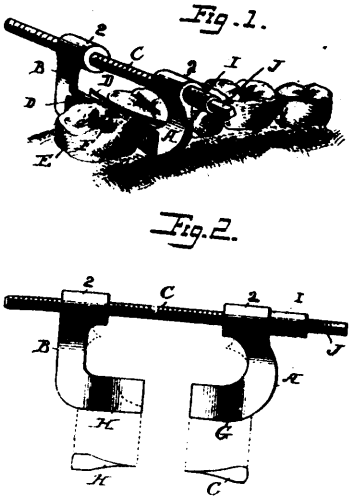
35299 Kint's Land Roller.



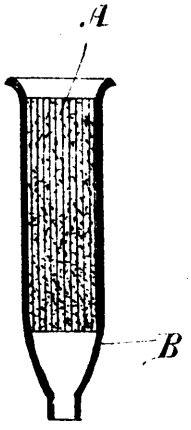
35300 Miller & Troy's Lamp Extinguisher.



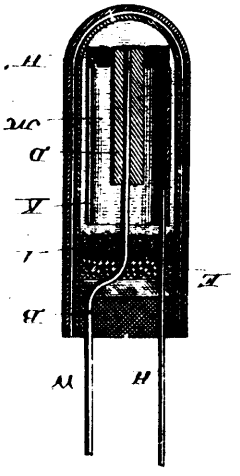
35301 Watson & Brown's Clothes Pin.



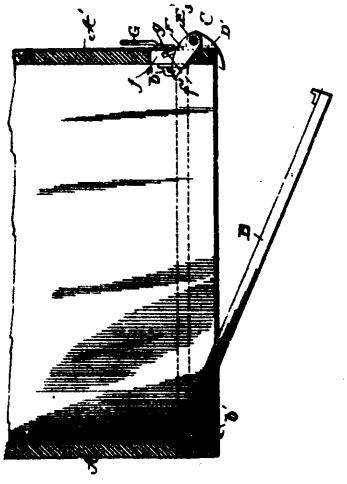
35302 Marshall's Dental Matrix.



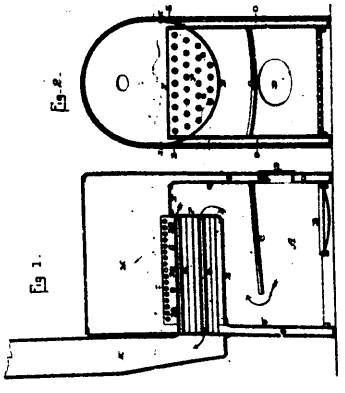
35303 Glew's Inhaler.



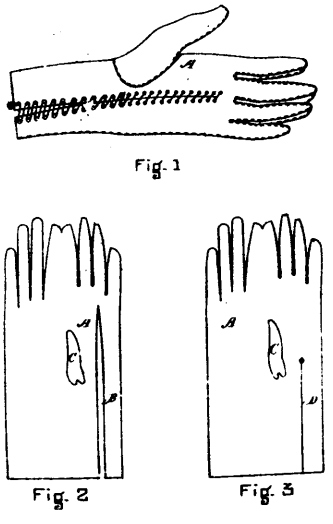
35304 Willms & Liebig's Electric Battery.



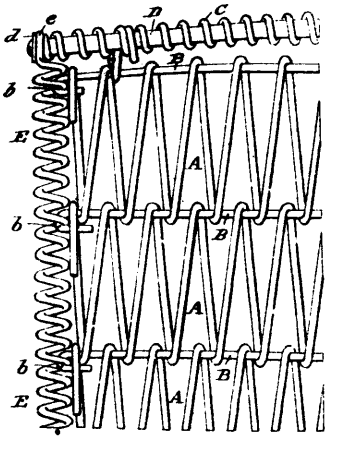
35305 Beckwith's End-gate for Waggons.



35306 Kitten's Steam Boiler.



35307 Young's Glove.



35308 Kelley's Flexible Wire Fabric.