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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. 34,783. Portable Table. (*Table portative.*)

Annie Hawke, Tara, Ont., 1st August, 1890; 5 years.

Claim.—A portable table, composed of a tapered board A, having wings B, hinged on each side of it and provided with folding legs D and E, arranged substantially as and for the purpose specified.

No. 34,784. Gate. (*Barrière.*)

Floyd Hopkins, Belvidere, Ill., U.S., 1st August, 1890; 5 years.

Claim.—1st. The combination of a gate A, a hanging post B, and an anchor post D, with a jointed hanging bar E, F, provided with a pivotal fastening securing it to the hanging post, and having means of adjustment with the anchor or anchor post, substantially as set forth. 2nd. The combination of a hanging post B, a jointed hanging bar E, F pivoted to the hanging post, and provided with wheels or bearings L, a gate A, a supporting wire rod, or chain H, and an anchor or anchor post D, substantially as set forth. 3rd. A gate A, supported on a jointed bar E, F, extending horizontally, and pivoted at one side of the joint by a bolt to a hanging post B, and provided with means of adjustment, and having bearings L whereon the gate may have endwise movement, substantially as set forth. 4th. A hanging post B, an anchor or anchor post D, and a jointed hanger or bar E, F pivoted to the hanging post, in combination with a gate A and a suspender H, supported at one point by the hanging post, and connected with the front part of the hanger, substantially as set forth. 5th. The combination of a hanging bar E, rollers L supported thereby, a gate A supported upon the rollers, and a guard O secured to the hanging bar, substantially as set forth.

No. 34,785. Coupling Bob Sleighs.

(*Accouplage de traîneaux.*)

Robert Douglass, Arran, Ont., 1st August, 1890; 5 years.

Claim.—1st. The form of swivel C, C, used in connecting the reach to the front bolster. 2nd. The combination of the swivel C, C, reach B, B and the hounds A, A in the coupling of bob sleighs, substantially as and for the purposes hereinbefore set forth.

No. 34,786. Safety Gas Burner.

(*Bec à gaz de sûreté.*)

Athanase P. Fréchette and Peter M. Dupuis, Carson, Nev., U.S., 1st August, 1890; 5 years.

Claim.—1st. A gas burner, having the gas inlet to its tip, controlled by an automatically operating valve, substantially as shown and described. 2nd. A gas burner, having the gas inlet to its tip, extinguished, substantially closed when the flame at the tip is burner, having the gas inlet as shown and described. 3rd. A gas matically closed by a thermostat, when the flame at the tip is extinguished, and the shell of the burner cools, substantially as shown and described. 4th. A safety gas burner, consisting of a gas holding inlet to the tip from the shell, a thermostat adapted to automatically close the valve, and a plug valve controlling inlet of gas to the shell, substantially as shown and described. 5th. In a safety gas burner, the combination, with a gas holding shell having a cap, a depending plug valve, and a socket in the shell for connection of a gas supply pipe, and a burner tip in the cap of the burner, of a disk valve controlling the inlet to the tip from the shell, and a thermostat in the valve when the flame at the tip is extinguished, substantially as shown and described. 6th. In a safety gas-burner, the combination, with a gas-holding shell having a burner tip in its cap, a plug valve

in the shell having a lateral toe, a spring-actuated angle lever, one arm of which extends in the path of said toe, and carries a valve controlling the inlet to the burner tip, a spring extension on the other end of said lever, and a post against which said spring extension bears, of split, concentric thermostatic rings held in the cap of the burner, a curved bar detachably pivoted to the ends of said rings, and a ratchet bar pivoted to one end of said curved bar and engaging the spring extension of the angle lever, substantially as shown and described for the purpose set forth.

No. 34,787. Window Screen.

(*Store de fenêtre.*)

Alfred Kaufman, Baden, Ont., 1st August, 1890; 5 years.

Claim.—A window screen, consisting of a rectangular frame composed of two halves or sections, hinges connecting said sections and a wire cloth covering integrally secured to both sections, as set forth.

No. 34,788. Reclining or Hammock Chair.

(*Fauteuil-hamac.*)

Solomon Chambers, Norwich, Ont., 1st August, 1890; 5 years.

Claim.—A hammock-chair, consisting of front legs pivoted near the top, to legs extending rearwardly to the ground and forwardly of said front legs, a front section D pivoted to said rear legs, a back section G pivoted to the rear legs, arms pivoted to said back and front sections, and a textile fabric I secured at the ends to the back and front sections, as set forth.

No. 34,789. Lawn Mower. (*Faucheuse à bras.*)

Charles H. Braithwaite, Ardmore, Penn., U. S., 1st August, 1890; 5 years.

Claim.—1st. In a lawn mower, the combination of the grass receptacle A, the endless band B travelling from near the edge of the blades of the mower to the receptacle, and the curtains C, D, C, surrounding the front and sides of the blades, substantially as set forth. 2nd. In a lawn mower, the combination of curtains C, C, hung on either side of the cutting part thereof, and the curtain D hung in front of the same, substantially as set forth. 3rd. A lawn mower, having uprights h, h, h, at the four corners thereof, and curtains of C, D, C, upon the uprights and surrounding the front and sides of the blades. 4th. In a lawn mower, the combination of the grass-receptacle A, and the handles E, E', fastened thereto at the sides, one of which, E, is swiveled at its forward end to the mower frame, and the other of which E', is detachably connected at its forward end to the mower frame, whereby it is capable of being lifted from its fastening to overturn the receptacle on the other handle, substantially as set forth.

No. 34,790. Method of Destroying Microscopic Organisms for Disinfecting and other purposes and substances used therefor. (*Mode de destruction des microbes pour des fins hygiéniques et autres.*)

Jacob Stilling, Strasburg, Germany, 1st August, 1890; 5 years.

Claim.—1st. The method of disinfecting articles or materials, and preventing putrefaction, fermentation, formation of mould, the action of microscopic organisms, and ferments, or destroying these organisms or ferments, characterized by the treatment of the said articles or materials, with aniline dye-stuffs, preferably with methyl-violet or auramine. 2nd. As a disinfecting and antiseptic substance or agent, an aniline dye-stuff, preferably methyl-violet or auramine.

No. 34,791. Sectional Boiler.

(*Chaudière à carreaux.*)

Joseph Bond, Buffalo, N.Y., U.S., 1st August, 1890; 5 years.

Claim.—1st. A sectional boiler, provided with a spiral smoke-flue, surrounded on all sides by water for conducting the products of com-

bustion from the fire chamber to the outlet spirally up through the water within the boiler, substantially as described. 2nd. In a boiler, composed of sections, each having a spiral water passage, the combination therewith of extension portions connected by screw-threaded nipples for connecting the spiral passage of each section, thereby forming a spiral passage in a continuous forward and upward direction around the boiler, from the inlet to the outlet, substantially as described. 3rd. A sectional boiler, provided with a spiral smoke-flue for conducting the products of combustion from the fire chamber up, through, or around the boiler, in combination with a spiral water passage for conducting the water between and around the heating surfaces from the inlet to the outlet of the boiler, substantially as described. 4th. In a sectional boiler, a series of sections, duplicates of each other, above the fire chamber, forming a spiral smoke-flue within the boiler, in combination with a spiral water-way surrounding the smoke-flue on all sides except the inlet and outlet, substantially as described. 5th. In a sectional boiler, a boiler section having a spiral recess on each side, forming a portion of a spiral smoke-flue and an intermediate spiral water-way, in combination with an extension chamber, provided with a diaphragm interposed between the inlet and outlet openings to prevent the water from reaching the outlet until after it has made a circuit around the section, substantially as described. 6th. In a sectional boiler, a series of sections having an annular and extension water chambers, provided with diaphragms for causing a circulation of the water, a base portion carrying the grate, and screw-threaded tubular nipples for producing a water-tight joint and securing them together, the whole forming the combustion chamber in combination, with a series of sections, each having a spiral or half spiral smoke-flue on opposite sides, and an intermediate spiral water chamber, communicating with an extension water chamber, having a diaphragm for causing the water, when it enters the section, to pass around it before it passes through the outlet screw-threaded tubular nipples for securing the extension water sections, and bolts for securing the main sections, whereby a combined spiral smoke-flue and water-way is provided, substantially as described.

No. 34,792. Sand Band for Vehicles.

(*Garde sable d'essieu de voiture.*)

John F. Smith, Ionia, Mich., U.S., 1st August, 1890; 5 years.

Claim.—1st. In combination with the hub and axle of a vehicle, the two-part shell made fast to the axle, the coiled spring enclosed in said shell, the enclosing shell slidably coupled to the two-part shell, and having in its face, adjacent to the hub, a flexible washer, for the purposes specified. 2nd. In a sand band for vehicles, the combination of the two-part shell, having the annular flange with notches therein, and coupling shank projecting from the back face of the shell, the enclosing shell having lugs on its inner periphery, and annular recesses in its front face, the washer therein, and the spring located between the shells, as specified.

No. 34,793. Wheel. (*Roue.*)

John S. Young, Defiance, Ohio, U.S., 1st August, 1890; 5 years.

Claim.—1st. In a hub, the combination of the axle box provided at one end with the integral flange, and having at its other end the oppositely-disposed shoulders, the sleeve provided at its ends with flanges adapted to clamp the spokes, and the collar having the central opening and provided with the oppositely-disposed curved notches, substantially as described. 2nd. In a hub, the combination of the axle box provided at one end with the oppositely shouldered projections, and at the other end with the integral flange 2, having radial grooves terminating in recesses, the sleeve having the oppositely-disposed grooves 16, in its opening or bore, and provided at its ends with flanges having radial grooves, the collar provided with the oppositely-disposed grooves, and having shoulders 15, and the screw 14, adapted to secure the collar to the sleeve, substantially as and for the purpose described.

No. 34,794. Nut Lock. (*Arrête-écrou.*)

Pharaoh C. Thompson, Miss., U.S., 1st August, 1890; 5 years.

Claim.—1st. A nut-lock, formed of a single piece of sheet metal having an opening for the bolt, and provided with an elastic outwardly bent tongue locking the nut, and a shoulder carried by said tongue, and bearing upon the rear face of the nut with a permanent elastic pressure, substantially as described. 2nd. A nut-lock, composed of a single piece of sheet metal having an opening for the bolt, one lateral portion of the plate being cleft by a cut forming an outwardly bent tongue having an edge locking the nut, and a shoulder carried by the tongue and pressing against the rear face of the nut, a cut entering the other side of the bolt opening to form a point which, in conjunction with a similar point opposite, is bent inwardly, substantially as described. 3rd. A nut-lock, consisting of a substantially rectangular plate having a non-central opening 2, an elastic outwardly bent tongue 4, and shoulder 5, and inwardly-turned ends 6, and 8, substantially as described.

No. 34,795. Stand Boiler. (*Chaudière fixe.*)

William B. Bruce, Staunton, Va., U.S., 1st August, 1890; 5 years.

Claim.—1st. The combination, with a stand boiler and a stove or range water back, of an endless heating pipe extending through the water back, and through the boiler, substantially as described. 2nd. The combination, with a stand boiler, of the water back of the stove or range, and a water heating pipe extending through the water back and into the boiler, so that the water in the boiler will be heated by conduction from the water in said pipe. 3rd. The combination, with a stand boiler, of a water heating and circulating pipe located therein. 4th. The combination, with a water back, of a stand boiler and water heating pipe, extending from the water back into and through said boiler, so that the water in the boiler is heated without passing into the water back. 5th. A stand boiler, hav-

ing a cold water supply pipe, and a hot water exit, in combination with a hot water pipe extending through said boiler, substantially as described. 6th. A stand boiler, having a water supply pipe, and a hot water exit, in combination with a hot water circulating pipe extending through said boiler, and connected with said supply pipe to form a relief for excess of pressure, and receive a supply of water. 7th. The water back and stand boiler, having a water supply, and hot water exit, in combination with a hot water circulating pipe extending through the boiler, and said water back connected at its upper portion with said supply pipe.

No. 34,796. Grain Car or Wagon.

(*Wagon à grain.*)

David R. Springer, Philadelphia, Penn., U.S., 1st August, 1890; 5 years.

Claim.—1st. A car, its bottom provided with discharge openings arranged in series, pivoted doors arranged to swing within said openings, and means for operating them in unison and for locking all of them simultaneously, substantially as described. 2nd. A car having its bottom provided with discharge openings arranged in series lengthwise of the car, a pivoted door arranged to swing within each of said openings, connecting rods for each of the series, and a shaft journaled transversely across the bottom of the car for operating all of the rods and doors in unison, substantially as described. 3rd. A car having its bottom provided with discharge openings arranged in series, a door for each opening, having an arm on its under side, connecting rods for each series of doors secured to the arms thereof, and a shaft provided with a cross arm for each series of doors, to which the connecting rods are attached, substantially as described. 4th. A car, having its bottom provided with discharge openings arranged in series, a door for each opening, having an arm on its under side, an operating shaft having cross arms secured thereto, an adjustable bolt in the ends of the cross arms and in the arm of the outer doors, and connecting rods secured to said bolts, substantially as described. 5th. A car, having its bottom provided with discharge openings arranged in series lengthwise of the car, a door for each opening, a lock for each door, and sliding bars connected with the locks for the doors for each series, and means for operating the bars and locks simultaneously, substantially as described. 6th. A car having its bottom provided with discharge openings arranged in series lengthwise of the car, a door for each opening, a lock for each door, a sliding bar at the side of the door of each series, an arm extending laterally from the bar at each door, the outer end of which is secured to the lock for that door, and a shaft transversely across the bottom of the car, having cross arms for operating said bars, substantially as described. 7th. A car, having its bottom provided with discharge openings, a door for each opening, a lock for each door, a shaft for operating the locks simultaneously, an arm secured to one end of the shaft, having a curved portion for engaging with the bottom of the car, substantially as described. 8th. A car, having its bottom provided with openings, a door for each opening, a lock for each door, a shaft transversely of the car for operating the locks simultaneously, an arm at one end of the shaft, having a slotted curved portion, an L-shaped lock pivotally secured at one end to one end of the curved portion of the arm, and fitting within the slotted portion with its opposite or bent end, and adapted to engage with means of securement at the bottom of the car, substantially as described. 9th. A car, having its bottom provided with openings, a frame in each opening, having its inner edges provided with beveled and straight portions, and doors pivotally secured within said frame, having their opposite edges provided with straight and beveled portions to correspond with the edges of the doors, substantially as described. 10th. A frame for discharge openings in the bottom of cars, having a keeper on its under side, a door pivotally secured in the frame, and a lock or bolt in the keeper for engaging with the door, substantially as described. 11th. The combination, with a frame for the discharge openings in the bottom of cars, of a door pivotally secured therein by means of trunnions, and a two-part boxing for each trunnion, the base of each of which is provided with a recess and a seat for the trunnion, and the top part fits within the recess and is provided with a seat for the trunnion, the sides of which fit down into the seat in the base, substantially as described.

No. 34,797. Wire Spring Bed.

(*Sommier élastique.*)

Samuel K. Butterfield, Swanton, Verm., U.S., 1st August, 1890; 5 years.

Claim.—1st. In a wire spring bed, the parallel wire main springs A, connected by the coil spring B, with the head and foot rails C, and D, substantially as herein shown and described. 2nd. The combination in a wire spring bed, of the parallel wire main springs A, connected with the head and foot rails by the coil springs B, with the helical springs E, secured to the cross bars F, substantially as herein shown and described.

No. 34,798. Carpet Stretcher. (*Tire-tapis.*)

John R. Eden and Albert Cornell, Berlin, (assignees of Samuel Cavers, Toronto), Ont., 1st August, 1890; 5 years.

Claim.—The combination of the handles A and B, the rod C, the slide E, the castings F and G, the hinge H, the band K, the plate L, the lever M, and the spiral spring O, substantially as and for the purpose hereinbefore set forth.

NO. 34,799. Carriage Curtain Fastener.

(*Suspension de rideau de voiture.*)

The Star Manufacturing Company, (assignee of Samuel P. Scott), Hillsboro, Ohio, U.S., 1st August, 1890; 5 years.

Claim.—In a carriage curtain fastening, the combination of the stationary base A, the button C, having a central bore and a round-

ed outer end flattened at the outer extremity of said bore, and provided with diametrically opposite pairs of notches D, and E, and the spring F, with the pin G, passing through base and button, and having a pair of diametrically opposite ribs *g, g*, at its outer end, and an enlarged head H, projecting over said ribs and fitting closely therein, and to strengthen the ribs, all substantially as and for the purpose specified.

No. 34,800. Lightning Arrester.

(*Paratonnerre.*)

George G. Bayne, Fremont, Neb., and William F. Bayne, Macomb, Ill., U.S., 1st August, 1890; 5 years.

Claim.—1st. In a lightning arrester, the combination of a central arrester plate having toothed edges, a ground wire connected to the same, the adjacent arrester plates having toothed inner edges, two vertical series of binding posts connected by fusible wires with the outer arrester plates, conductors connecting one binding post of each series with the line wires, and mechanism, whereby in the event of the fusion of the wire connecting said binding post with the adjacent arrester plate, the said binding post shall be automatically placed in electrical connection with the next adjacent binding post of the same series, substantially as set forth. 2nd. In a lightning arrester, the combination of an arrester plate, a series of binding posts, fusible wires connecting the said binding posts with the said arrester plate, and the electrical conductor connecting one of said binding posts with the line wire, and spring arms attached to each of the remaining binding posts, and having insulating sleeves bearing against the fusible wires connecting the binding posts next above with the arrester plate, thereby holding each of said resilient arms out of contact with the binding post next adjoining, substantially as and for the purpose set forth. 3rd. In a lightning arrester, the combination of a series of binding posts, fusible wires connecting said binding posts with an arrester plate, an electrical conductor connecting one of said binding posts with the line wire, springs coiled upon each of the remaining binding posts, arms extending outwardly from said springs and having cranks at their outer ends, and insulating sleeves mounted upon the said cranks, substantially as and for the purpose set forth.

No. 34,801. Cultivator. (*Cultivateur.*)

John Blakeley and Thomas J. Bounds, Newton, Miss., U.S., 1st August, 1890; 5 years.

Claim.—1st. The combination, with the plow beam and the cross beam in two parts, each formed of a substantially V-shaped piece of metal, arranged with parallel portions in the same vertical plane, the adjacent ends of the two parts being overlapped, of the shank passed through the overlapped ends of the two parts, and provided with a nut for holding the same in place, substantially as shown and described. 2nd. The combination, with the plow beam and the cross beam formed of two like parts overlapped at their adjacent ends, of the plow standards carried by the said two parts and provided with removable plow points, the central plow, the shank, of which serves to connect the two parts of the cross beam, the adjusting nut on the end of the central shank, and the angular braces connecting the said two parts of the cross beam with the plow beam, substantially as shown and described.

No. 34,802. Disk Harrow.

(*Herse à disques.*)

Andrew G. Hill, Prescott, Ont., 1st August, 1890; 5 years.

Claim.—1st. The combination of a tongue, a cross beam or frame, and disk-gangs having motion at a point intermediate the ends of such gangs in both horizontal and vertical planes, said cross-beam and sliding bars connected to the tongue, and the braces to the tongue being operated, one in advance of the other and in parallel planes, substantially as described. 2nd. The combination of a tongue, a cross beam or frame, with disk-gangs, having motion at a point intermediate the ends of such gangs, in both horizontal and vertical planes, and adjustable to said cross beam or frame, that the said disk-gangs may be used to throw the soil either inwardly or outwardly as desired, and operated one in advance of the other and in parallel planes, substantially as described. 3rd. The combination of a tongue, intermediate the ends of such gangs, in both horizontal and vertical planes, and adjustable to said cross beam or frame, that the said disk-gangs may be used to throw the soil either inwardly or outwardly, as desired, lowering them simultaneously for operating said disk-gangs, and raising or tilting as described. 4th. The combination of a tongue, cross-beam gangs in both horizontal and vertical planes, and sliding bars or motion by means of a lever placed at or near rear end of said tongue for the purpose of operating the disk-gangs, substantially as described. 5th. The combination of a tongue, cross-beam, disk-gangs, operated by a lever on the tongue, and vertical planes, sliding bars interchangeable connections with the disk-gangs, substantially as described. 6th. The combination, with the disk-gangs, substantially as described, of the adjustable loop plates, arranged substantially as described, whereby the height of the braces is varied, as and for the purpose set forth. 7th. In a disk harrow, the combination of a down-disk and disk-gang with the bayonet joint swivel, substantially as described. 8th. In a disk harrow, the lever 11, and the slide bars 10, and at their upwardly-curved front ends working in oblique guides on the tongue in combination with the disk-gangs mounted, substantially as described. 9th. An oil cap, with a lip or extension, in com-

ination with the box on the axle of the disk-gang for holding the brace securely to the box, substantially as described. 10th. The combination with the tongue, the cross beam pivoted thereto, and the two disk-gangs mounted on the beam, of the tongue, substantially as set forth. 11th. The combination of the tongue, the cross-beam pivoted thereto, and the two disk-gangs mounted on the beam, of the outer braces pivoted to the gang bearings and adjustably secured to the tongue, the sliding frame and the inner braces adjustably secured to the frame and to the gangs, substantially as described. 12th. The combination, with the disk-gangs and their inner braces, of the lever and the sliding frame moved thereby forward or backward, and simultaneously raised or lowered respectively, substantially as and for the purpose set forth. 13th. The combination of the disk-gangs and their inner braces, of the tongue, the lever pivoted thereto, and the sliding frame suspended at its rear end on the lever, and supported on its front upwardly curved end on guides on the tongue, substantially as described. 14th. The combination of the tongue, the cross beam pivotally mounted thereon, and the opposite disk-gangs, each connected near one end by a universal joint to the cross bar, and at its other end horizontally and vertically adjustable, substantially as described. 15th. The tongue and the disk-gang beam, pivotally mounted thereon, and having at its ends down-hangers supporting one end of the disk-gang shafts, in combination with the disk-gangs, the lever and slides, and the braces connecting the free ends of the gangs to the slides, substantially as described.

No. 34,803. Invalid's Garment.

(*Vêtement d'invalidé.*)

Emma L. Tozer, Canandaigua, N.Y., U.S., 1st August, 1890; 5 years.

Claim.—1st. A combination garment, comprising a body covering and a bifurcated covering for the legs, the said garment being separable into two sections, the lines of separation running up and down the front and back, connecting with each other under the crotch, and provided with detachable fastenings, substantially as set forth. 2nd. A combination garment, divided into two sections, the lines of separation running up and down the back and front, and connecting under the crotch, the rear line dividing into branches *d, e*, which form flaps under the seat, for the purpose set forth. 3rd. An article of wearing apparel, divided along the back from neck to the hips, and provided below the latter with branches *d, e*, of the line of separation, both the main line and the branches being detachably fastened, substantially as set forth. 4th. An article of wearing apparel, conforming to the shape of the upper part of the person, and divided from the neck along the back to below the seat, substantially as set forth. 5th. An undershirt or equivalent article for female wear, formed with curves, corresponding to the convexity of the bosom, in order to dispense with the pieces, which usually are let in opposite the breasts, but without straining the material, for the purpose set forth.

No. 34,804. Shuttle Guard for Power Loom.

(*Garde-travelle pour les métiers mécaniques.*)

Ludwig Povel, Nordhorn, Prussia, 1st August, 1890; 5 years.

Claim.—In power looms, provided with a so-called reed-releasing mechanism, *i. e.*, a device by which, when the shuttle is accidentally arrested in the shed, owing to the pressure exerted by the reed against the arrested shuttle, the reed is forced out of the lathe, and provided moreover with a catch or tongue W, the arrangement that the frog F, applied before the tongue W is secured to an arm or lever J, movable about a fixed pivot or pin J', which lever J, when the shuttle has come to rest in the shed, and the tongue W strikes against the frog, moves about the pivot J', and raises or lowers by means of a roller R secured to the arm J, one end of a lever H, movable about a fixed pivot and acting thus in one sense or the other on the reed-releasing mechanism, so that the reed-pressing rail (V¹) in Figs. 1, 2, 3, 4, and F, in Figs. 5, 6, 7, holding the reed fast to the lathe is removed, and the reed is set free which, owing to the pressure exerted against the shuttle is readily forced out of the lathe, substantially as herein described and shown in the accompanying drawings.

No. 34,805. Gate. (*Barrière.*)

John Gunder, Six Points, Ohio, U.S., 1st August, 1890; 5 years.

Claim.—1st. The stationary supporting-post S, the lever L pivoted at l to the upper end of said post, and an operating cord E connected to the rear end of the lever and depending therefrom, in combination with a gate G, hinged so as to swing in a horizontal plane at a variable height, and a supporting cord O adjustably connected at one end to a bar of the gate, led thence through a hole U in the front end of the lever, and connected at its other end to a fixed part of the gate, substantially as described. 2nd. The supporting post S, having the hook K, the lever L, pivoted between its ends to the upper end of said post, an operating cord E, connected to the rear end of said lever, and having rings adapted to engage said hook, and the pivot post P, parallel with and in front of said supporting post, in combination with a gate G, having rollers R at its inner end and engaging said pivot post, and a supporting cord O adjustably connected at one end to the gate, its body passing through a hole U in the inner end of the lever, and its other end secured to the gate, the whole constructed and adapted to operate substantially as and for the purpose set forth.

No. 34,806. Rail Joint. (*Eclisse de rail.*)

Charles B. Lyon, New York, N.Y., U.S., 1st August, 1890; 5 years.

Claim.—The combination, with the rails slotted in the web at the ends thereof only, of the base-plate and the angle-plates properly slotted to allow for expansion and contraction, the said base and angle plates united by bolts passing through the bases of the rails, the said angle-plates being also united by the single bolt passing through the slot at the abutting ends of the rails, substantially as set forth.

No. 34,807. Fetter Lock. (*Cadenas de chaîne.*)

William Moran and Charles A. Ingalls, Erie., Penn., U. S., 2nd August; 1890; 5 years.

Claim.—In a fetter lock, the combination, with the enclosing plates C and C', provided with the corresponding flanges N, N', and the perforated ears K, K', of the ring A, the latch or shackle G, having a cam shoulder H', lever B, spring D and stops J, substantially as and for the purpose set forth.

No. 34,808. Cock. (*Robinet.*)

Phillip Mueller, Decatur, Ill., U. S., 2nd August, 1890; 5 years.

Claim.—1st. A cock, comprising the body having the oblique inlet chamber, the outlet and the waste hole, the stem carrying the waste valve, the bar in the inlet chamber pivoted on the stem, and carrying an inlet valve, and a piston on the stem in position to check the outlet before the inlet is closed, as and for the purpose set forth. 2nd. In combination with the stem of a stop and waste cock, the tilting frame connected with the stem and having the depressed angle, and the weight adapted to slide on the frame and having a flexible connection extending upward, as set forth. 3rd. In combination, a stop and waste cock having a rack formed on its stem, a tilting frame with a depressed angle having a pinion in mesh with the rack, and a weight adapted to slide on the frame and having a flexible connection extending upward, as set forth. 4th. A cock, comprising the body, having an inlet chamber, an outlet, and a waste hole, a stem carrying a waste valve and connecting with an inlet valve and a piston on the stem in position to check the outlet before the inlet is closed, as set forth.

No. 34,809. Wind Mill. (*Moulin à vent.*)

George B. Thurber, Upton, Que., 2nd August, 1890; 5 years.

Claim.—In a wind wheel, an upright shaft B, with fixed wheel G, surrounded with tangential slats, and an outer mobile wheel on the shaft B, provided with fixed shields C, the whole as shown and described for the purpose set forth.

No. 34,810. Sand Blast Apparatus.

(*Appareil à jet de sable.*)

Jeremiah E. Mathewson, Sheffield, Eng., 2nd August, 1890; 5 years.

Claim.—1st. In sand blast apparatus, the combination of a divided blast pipe, with a sand hopper arranged in relation to the blast pipe so that the dry sand shall fall therefrom by gravitation and enter the divided blast pipe at the division, as and for the purpose set forth. 2nd. In a sand blast apparatus, the combination of a divided blast pipe, a sand hopper arranged so that the dry sand shall fall therefrom by gravitation and enter the blast pipe at the division, a separating chamber surrounding the blast pipe and a settling chamber connected therewith, and provided with an exhauster, as and for the purpose set forth. 3rd. A sand blast apparatus, in which the settling chamber, or the receptacle for the condensed steam and the mud arising from the pulverization of the sand, and the surface under treatment, is arranged below or away from the sand hopper and its connections, as and for the purpose set forth. 4th. In a sand blast apparatus, in which steam is the motor, a blast pipe, as C', having its open lower end entering a dish-shaped hopper supported by or placed immediately above the steam jet C, such hopper being supplied with sand in regulated quantities by gravitation, direct from the dry sand chamber, as set forth, whereby the liability of the sand to come in contact with moisture from the condensed steam is avoided. 5th. In apparatus for cleaning castings, and for operating on other work which cannot be conveniently done by a stationary apparatus, by means of the sand blast, and in which the propelling steam is separated from the sand by a counter current of air, the combination with the blast apparatus, supported or suspended in such a manner that the direction and position of the blast may be quickly and readily changed, according to the requirements of the work in hand, of a separating chamber carried by the blast apparatus, and flexibly connected with a fixed settling chamber and an exhaust, as and for the purpose set forth. 6th. The sand blast apparatus, consisting of a stationary exhaust apparatus and settling chamber, a blast apparatus provided with a separating chamber flexibly connected with the exhaust, a sand hopper carried by a sling or frame, which also carries the blast apparatus, so that the relative position of the hopper and blast apparatus are insured, and tackle, provided with automatic gripping mechanism, and which permits of the position and direction of the blast apparatus being changed, all as described and illustrated.

No. 34,811. Apparatus for Purifying and Refining Oil. (*Appareil à épurer et raffiner l'huile.*)

Emil Noppel, Philadelphia, Penn., U. S., 2nd August, 1890; 5 years.

Claim.—1st. An apparatus for refining and purifying oil, consisting of a tank, a reservoir therein, a discharge pipe leading from said reservoir to a heating chamber, a traversing chamber surrounding said heating chamber and in communication therewith, discharge nozzles and a heating pipe, said parts being combined, substantially as described. 2nd. A pipe with a reservoir therein, the latter having a discharge pipe extending to near the bottom thereof, concentric chambers surrounding the outlet end of the discharge pipe, a heating pipe within the central chambers, and nozzles or outlets on the outer chamber, said parts being combined substantially as described. 3rd. In an apparatus, substantially as described, a tank, a reservoir therein, a discharge pipe leading from said reservoir, a chamber surrounding the outlet end of said discharge pipe, in combination with a deflector above said chamber, as stated. 4th. In an apparatus for refining and purifying oil, a tank with outlets at different heights, a reservoir with a discharge pipe in said tank, communicating cham-

bers around the outlet end of said pipe, a heating pipe in one of said chambers, and nozzles or outlets on the outer chamber, combined substantially as described. 5th. In an apparatus for purifying and refining oil, a heating chamber provided with a pipe for discharging foam and gas from said chamber, substantially as described. 6th. The pipe L, leading from the heating chamber G to the reservoir B, substantially as described. 7th. The heating chamber F and the surrounding chamber G, in combination with the chamber H and the discharge pipe J rising from said chamber H, the several chambers being in communication, substantially as and for the purpose set forth. 8th. The chamber H communicating with the heating chamber F, in combination with the tank A, and the pipes J, the latter rising from said chamber H, and projecting above the water line of said tank, substantially as described. 9th. The tank A, the heating chamber F therein, the steam pipe K in said chamber, and the chamber G surrounding said chamber F, said pipe K and said chamber F projecting above the water line of said tank, substantially as described. 10th. In an apparatus for purifying and refining oil, a tank having a heating chamber therein, and a pipe leading from the supply reservoir into said chamber, in combination with a steam pipe in said tank, at the bottom thereof, substantially as described. 11th. In an apparatus, substantially as described, the hollow deflector P, with openings therein, for the purpose set forth.

No. 34,812. Electric Battery.

(*Batterie électrique.*)

Charles A. Hussey, New York, N. Y., U. S., 2nd August, 1890; 5 years.

Claim.—1st. In an electric battery, designed for two fluids, a porous diaphragm for separating the two fluids, and extending solely in a horizontal or approximately horizontal plane, and having non-porous vertical walls, substantially as specified. 2nd. In an electric battery, designed for two fluids, the combination, with a cell, of a cup having a porous bottom portion, and an upper non-porous portion, substantially as specified. 3rd. In an electric battery designed for two fluids, a cell made of porous material, the upper portion being made non-porous by the application of a material closing the pores and resisting the fluids in the battery, substantially as specified. 4th. In an electric battery designed for two fluids, the combination with a cell provided with a spout, of a cup arranged in the upper part of the cell, its bottom being above the lower portion of the spout, substantially as specified.

No. 34,813. Multiple Pointed Corrugated Fastener. (*Agraffes métallique et gouffées.*)

Ferdinand W. Starr, Springfield, Ohio, U. S., 2nd August, 1890; 5 years.

Claim.—1st. A corrugated fastener, provided with multiple entering points or edges, substantially as shown and described. 2nd. A corrugated fastener, provided with multiple points or edges, and a re-entering draw-cutting edge. 3rd. A corrugated fastener, having a head end adapted to resist the driving action, and an entering end provided with sharpened multiple points or edges, the penetrating portions of which extend obliquely to the plane of general direction of the fastener. 4th. A corrugated fastener, each corrugation of which is provided with a double point or edge, and a re-entering angle which is sharpened to form a draw-cutting edge that registers with and intersects the ridge of said corrugation. 5th. A corrugated fastener, consisting of a single corrugation having multiple points or edges, and a draw-cutting edge, substantially as described. 6th. A corrugated fastener, having a multiple-pointed draw-cutting edge on its entering end, and beveled side edges to facilitate the insertion of said fastener.

No. 34,814. Manufacture of Horse Shoes.

(*Fabrication des fers à cheval.*)

James Vernon, Newton Stewart, Scotland, 2nd August, 1890; 5 years.

Claim.—1st. In moulds for casting horse shoes, the employment of inclined removable cores for the purpose of producing, in the casting, nail holes set at a proper angle to the plane of the shoe, as hereinbefore described. 2nd. In moulds for manufacturing horse shoes complete, the combination of a stationary back part A, movable cover A', and group of nail hole cores d, loosely jointed to plate D, all arranged and operating substantially as hereinbefore described and illustrated. 3rd. In moulds for manufacturing horse shoes, the combination with a back part A and cover A', and nail hole cores d, of a chisel, as I, for cutting off the runner from the casting.

No. 34,815. Sporting Calendar.

(*Calendrier de campagne.*)

Arthur H. Robinson, Minneapolis, Minn., U. S., 5 years.

Claim.—1st. A calendar, provided with spaces representing the days of the month, with pictures of persons engaged in a sport placed upon the spaces representing the days upon which said sport is to occur, substantially as described and for the purpose set forth. 2nd. In a calendar, having spaces representing the days of the month, a pictorial representation designating a particular sport placed upon one or more of said spaces, and a record blank or score card corresponding with said sport and placed upon the same space with said pictorial representation, substantially as described. 3rd. In a calendar, in combination with the sheets representing the different months, having the days of the month marked thereon, the pictorial representation designating a particular sport placed upon one or more spaces or dates of the said calendar, a record or score corresponding with said sport placed upon the same space therewith, and a recapitulation sheet or blank for the purpose of recording the results of the different sports, substantially as described.

No. 34,816. Calendar. (Calendrier.)

Louis Palmersten, Milwaukee, Wis., U.S., 5th August, 1890; 5 years.

Claim.—1st. In a calendar, a base plate having two annular spaces drawn thereon, with one hundred subdivisions drawn radially across the said two annular spaces, the subdivisions in one circle or annular space, numbered from "01" to "00," corresponding to the two right hand figures in a century of years, and the corresponding spaces in the other circle or annular space, each containing a digit or cipher, also provided with a superimposed circular plate of lesser diameter divided into two circles or annular spaces, with forty-one subdivisions marked off radially across said circles, so as to register with the radial divisions on the base card, the subdivisions in one of said circles being numbered consecutively from "0" to "40," and the corresponding spaces in the other circle or annular space, each containing a digit or cipher, another superimposed circular plate of lesser diameter than the foregoing, provided with a single circumferential circle or annular space having thirty-one radial subdivisions marked off registering with the before-named radial subdivisions on the lower plates and numbered from "1" to "31," another superimposed plate of lesser diameter than the foregoing, provided with two circumferential circles or annular spaces, marked across with radial division lines registering with the before-named radial division lines, twelve of the subdivisions, thus formed, in one circle, being marked with the names of the months in regular order, followed by eleven blank subdivisions, succeeded by two marked with the names of the first two months, and the fourteen subdivisions in the other circle on this plate corresponding to the marked divisions just named, each containing a number or digit, and another superimposed plate of lesser diameter than the foregoing, also provided with two circumferential circles or annular spaces, similarly marked across with registering radial division lines, into fifty subdivisions, those in one circle containing the names, initials or numbers of the days of the week, regularly repeated, and those in the other circle numbered from "1" to "50," all said plates being centrally and pivotally united to each other, substantially as set forth. 2nd. In a calendar, the combination of a series of plates centrally united to a bottom plate to turn one upon the other independently, said plates being of different diameters, with their exposed portions provided with series of figures, numbers, or other marks, for reference and calculation, and having projecting tags or analogous turning devices, substantially as set forth. 3rd. In a calendar, the combination of a series of circular plates centrally united to a bottom plate, to turn one upon the other, the plates above the bottom plate being of diminishing diameters, with a plate interposed between two of said plates, half of this interposed plate being of practically the same diameter or circumferential extension of the plate below it, while its other half corresponds in size and extent to that of the plate above it, the larger portion being provided with a slot or opening in its circumference, and all the circular plates having projecting tags or analogous turning devices, substantially as set forth.

No. 34,817. Blocking Tension. (Mandrin.)

George R. Jeffries, Toronto, Ont., 5th August, 1890; 5 years.

Claim.—A frame, consisting of a series of round stationary bars, arranged parallel with each other, in combination with a round bar horizontally or diagonally adjustable in the said frame, substantially as and for the purpose specified.

No. 34,818. Ladder. (Echelle.)

William G. Sickles, Stryvesant, N. Y., U. S., 5th August, 1890; 5 years.

Claim.—In a ladder, the combination of the extension bar B, movable in a vertical plane in contact with one of the side-pieces of a ladder, said extension bar provided with a series of holes, a presser foot attached to said bar B, having an upper horizontal portion H, and a lower smaller pointed portion C, with a bolt P passing through the side piece A, of the ladder, engaging with the holes in the bar B, said bolt operated by the spiral spring S, placed about the shank of the bolt and secured within the side-piece A, all substantially as described and for the purpose set forth.

No. 34,819. Process of Treating Silver and Zinc Ores. (Procédé de traitement des minerais d'argent et de zinc.)

Frank L. Bartlett, Portland, Me., U.S., 5th August, 1890; 5 years.

Claim.—The herein described process of treating ores containing zinc and silver, which consists in mixing the ore with hydro-carbon fuel, supplying sufficient sulphur to produce an excess of the same, burning in the presence of an air-blast forced uniformly up through the whole mass of ore, and supplying air to unite with the products of combustion above said mass, substantially as shown.

No. 34,820. Process and Apparatus for Manufacturing Pigments. (Procédé et appareil de fabrication des couleurs.)

Frank L. Bartlett, Portland, Me., U.S., 5th August, 1890; 5 years.

Claim.—1st. The herein described apparatus for the manufacture of pigment, consisting of a blast furnace, a passage or flue leading therefrom, an oxidizing furnace provided with means for heating the air supplied thereto in the line of said flue, a mass of refractory material filling said flue between the main furnace and said oxidizing furnace, and having tortuous passages passing through it, and air pipes for supplying air to said oxidizing furnace, blast furnace, and to the flue leading therefrom, substantially as shown. 2nd. The herein described apparatus for the manufacture of pigment, consisting of a blast furnace, a passage or flue leading therefrom, a mass of refractory material in the line of said flue having tortuous passages extending through it for the passage of fume, an oxidizing furnace situated in the line of said flue, a cooling chamber having

numerous small flues for the passage of fume, a collecting and settling chamber, pipes for supplying said cooling chamber with a cooling fluid, and pipes for supplying air to said oxidizing furnace, blast furnace, and the passage leading therefrom, substantially as shown. 3rd. The herein described apparatus for the manufacture of pigment consisting of a blast furnace, a passage or flue leading therefrom, a mass of refractory material filling said passage or flue and having numerous tortuous flues passing through it, and a cooling chamber containing small flues for the passage of fume. 4th. The herein described apparatus for the manufacture of pigment, consisting of a blast furnace, a passage or flue leading therefrom, an oxidizing furnace placed in the line of said flue, a mass of refractory material filling said flue between said oxidizing furnace and the main furnace, and having numerous tortuous flues passing through it, a flue leading from said oxidizing furnace to a cooling chamber having numerous small flues for the passage of fume, a pressure blower connected with the space surrounding said small flues, a settling chamber connecting with said cooling chamber, and pipes connecting said cooling chamber with said blast furnace, oxidizing furnace, and the flue leading from said blast furnace, substantially as shown. 5th. The herein described apparatus for the manufacture of pigment, consisting of a blast furnace, a passage or flue leading therefrom, an oxidizing furnace in the line of said flue, a mass of refractory material filling said flue between said oxidizing furnace and the main furnace, and having numerous tortuous flues passing through it, a flue leading from said oxidizing furnace over or by said main furnace, and in contact therewith to a cooling chamber having numerous small flues for the passage of fume, a settling chamber connected with said cooling chamber, and pipes leading from said cooling chamber to said oxidizing furnace, blast furnace, and to the flue leading therefrom for supplying air thereto, substantially as shown. 6th. The herein described apparatus for the manufacture of pigments, which consists of a shallow blast furnace having tuyeres entering at its side or sides, a passage or flue leading from said blast furnace, an oxidizing furnace in the line of said flue, a mass of refractory material filling said flue between said oxidizing furnace and the main furnace, and having numerous tortuous flues passing through it, a flue leading from said oxidizing furnace to a cooling chamber having small flues for the passage of fume surrounded by an air space, a pressure blower and a pipe connecting it with the space surrounding said contracted flues, a settling chamber connecting with said cooling chamber, and pipes for blowing air to said blast furnace, oxidizing furnace, and to the flue leading from said blast furnace, said pipes connecting with said cooling chamber, in combination, substantially as shown. 7th. The herein described process of manufacturing pigment, which consists in mixing the ores of lead, zinc, or antimony with carbon, subjecting the mixture to an air blast in a suitable furnace, then successively supplying air to the fumes thus produced, bringing them into contact with incandescent fire-clay or other refractory material, subjecting them to the action of an oxidizing flame, then suddenly cooling them, substantially as shown. 8th. The herein described process of manufacturing pigment, which consists of mixing the ores of lead, zinc, or antimony with carbon, subjecting the mixture to an air blast in a suitable furnace, then successively supplying air to the fumes thus produced, bringing them into contact with incandescent fire-clay or other refractory material, subjecting them to the action of an oxidizing flame, and finally collecting them, substantially as shown. 9th. The herein described process of manufacturing pigment, which consists in mixing the ores of lead, zinc, or antimony with carbon, subjecting the mixture to an air blast in a suitable furnace, then successively supplying air to the fumes thus produced, bringing them into contact with incandescent fire-clay or other refractory material, subjecting them to the action of an oxidizing flame, withdrawing said oxidizing flame after the apparatus becomes heated through, then suddenly cooling them when in a highly heated state, and finally collecting them, substantially as shown.

No. 34,821. Cash Drawer and Sale Register.

(Caisse de comptoir et registre de vente.)

David J. Johnston and George M. Verrall, Toronto, Ont., 5th August, 1890; 5 years.

Claim.—1st. The two webs of paper H and I, wound upon the roller J, journalled within the cash drawer case A, and separated on leaving the roller by the bar N and carbon impression paper M, the paper H being carried through an opening in the top of the case A, and below the plate K, and the paper I, over the supporting plate L, located immediately below the said opening in the case A, substantially as and for the purpose specified. 2nd. The two webs of paper H and I, wound upon the roller J, journalled within the cash drawer case A, and separated on leaving the roller by the bar N, and carbon impression paper M, the paper H, being carried through an opening in the top of the case A, and below the plate K, and the paper I, over the supporting plate L, located immediately below the said opening in the case A, in combination with the rollers O, P, and Q, spur pinion B, and rack S, arranged substantially as and for the purpose specified. 3rd. The drawer B, actuated by the spring C, and having a notch D made in it, in combination with the lever E, push bar F, and spring G, arranged substantially as and for the purpose specified. 4th. The paper H, wound upon the roller J, in combination with the roller U, provided with a rubber stamp W, and supporting the inking roller V, substantially as and for the purpose specified.

No. 34,822. Combination Pipe and Nut Wrench. (Clé à écrou et à tuyau.)

Erastus E. King and Lee's Summit M'fg. Co., Lee's Summit, Mo., U.S., 6th August, 1890; 5 years.

Claim.—1st. In a wrench, the combination, with the stock 1, terminating at its upper end in the head 2, and having claw 4, and having the irregular recess 14, terminating at its lower end in the bearing 15, and at its upper end in the cut away portion 16, of the L-shaped locking pawl 17, having the transversely toothed head 18,

located in the cut away portion, the bearing 18x at its angle, the foot provided with the lug 19, the locking lever 20, terminating at its lower end in the bent handle 22 and at its upper end in the head 21, having the lug 23, the spring 24, encircling the lugs, the shank 10, toothed as at 11, and provided with the head 9, toothed as at 9x, and lug 12, the collar 5, having the lug 6, the coiled spring 13, and the band or collar encircling the shank, stock, and locking mechanism, substantially as specified. 2nd. In a wrench, the combination, with the stock 1, terminating at its upper end in the stationary head 2, at its lower end in the reduced threaded shank, and provided between its head and shank with the irregular recess 14, terminating at its lower end in the bearing 15, and at its upper end in the cut away portion 16, of the L-shaped locking pawl 17, having the transversely toothed head 18, located in the cut away portion, the bearing 18x at its angle, the foot provided with the lug 19, the locking lever 20, terminating at its lower end in the bent handle 22, and at its upper end in the head 21, having the lug 23, the spring 24, encircling the lugs, the shank 10, toothed as at 11, and provided with the head 9, and lug 12, the collar 5, having the lug 6, the coiled spring 13, interposed between the lower end of the shank and lug, the encircling band encircling the stock and shank, and the locking mechanism, the handle 7, mounted on the shank of the stock below the collar, and the binding nut 8, threaded on the lower end of said shank, substantially as specified. 3rd. In a wrench, the combination, with the stock 1 terminating at its upper end in the head 2, of the L-shaped locking pawl 17, having the transversely toothed head 18, the bearing 18x at its angle, the locking lever 20, terminating at its lower end in the bent handle 22 and at its upper end in the head 21, the spring 24, the shank 10, toothed as at 11, and provided with the head 9, the collar 5, the coiled spring 13, and the band or collar encircling the shank, stock, and locking mechanism, substantially as specified.

No. 34,823. Safety Package. (*Vaisseau de sûreté.*)

John Q. A. Whittemore and Charles Whittemore, Boston, Mass., (assignees of Sigourney Wales, Terre Haute, Ind.,) U.S., 6th August, 1890; 5 years.

Claim.—1st. A safety package for containing liquid or semi-liquid substances, comprising a hollow vessel or receptacle made of glass or other easily fractured material, having formed upon its exterior at or near its lower end projecting lugs or threads, and an outer casing of sufficient length to enclose said inner receptacle, and made of less fragile material, as wood or metal, and having its lower end open, and provided with a female inclined groove or thread to engage said thread or lug on the inner receptacle, and its upper end closed and arranged to bear upon and press the receptacle closing stopple or cap to its seat. 2nd. In combination, with a receptacle provided with a male thread or lug at or near its base end, and a recess or recesses in its bottom, an enclosing and protecting casing closed at one end and open at the other, and provided near said open end with a female screw thread or inclined groove to engage said male thread or lug on the receptacle, and constructed and arranged to extend below the bottom of the receptacle, and press at its closed end upon the receptacle closing stopple or packing, substantially as described.

No. 34,824. Riveting Machine. (*Machine à river.*)

Reinhold A. Carl and Robert C. Allen, Hearne, Texas, U.S., 6th August, 1890; 5 years.

Claim.—1st. A riveting machine, consisting essentially of an upright frame having a vertically movable driving rod therein, a vertically separable rivet burr set loosely mounted upon the lower end of the driving rod, and an upright mounted in the frame beneath the driving rod and set, said upright having a spring actuated sleeve extending above the upper end thereof, substantially as described. 2nd. A riveting machine, consisting essentially of an upright frame having a vertically movable driving rod therein, a vertically separable rivet burr set loosely mounted upon the lower end of the driving rod, a vertically separable rivet burr holder supported beneath the burr set and in alignment with the burr set and driving rod, and an upright mounted in the frame beneath the driving rod, burr set and burr holder, said upright having a spring actuated sleeve extending above the upper end thereof to form a pocket for the rivet, substantially as described. 3rd. A riveting machine, consisting essentially of a frame, a vertically movable driving rod mounted in the frame, a spring actuated vertically separable burr set mounted upon the lower end of the rod, a clamp fixed to the front portion of the frame and adapted to enclose said burr set, a separable burr holder beneath the driving rod and burr set, supported by spring arms attached to an arm vertically movable upon the driving rod, and an upright mounted in the frame to vertically align with the driving rod, burr set and burr holder, said upright having a spring actuated sleeve mounted thereon and projecting above the same to form a pocket for the rivet, substantially as described. 4th. The combination, with the driving rod F, having means as shown, for actuating the sleeve mounted thereon and projecting above the same to form a pocket for the rivet, substantially as described. 5th. The combination, with the driving rod F, having the separable burr set b, mounted thereon, as shown, of the separable burr holder f, having the spring members f', attached thereto, said members being supported by the arm g, which is vertically movable upon the driving rod, substantially as described. 6th. The combination, with the driving rod F, and burr set b, mounted thereon as shown, of the clamp e, adapted to enclose the burr set and having means as rod d, and spring d', for guiding and supporting the same, substantially as set forth.

No. 34,825. Tobacco Moistener. (*Humecteur de tabac.*)

Phillip Hamm and Joseph N. Kirschner, Fostoria, Ohio, U.S., 6th August, 1890; 5 years.

Claim.—1st. The herein described apparatus for moistening tobacco, consisting of a cover provided with two concentric flanges upon its under side, the inner flange being of greater width than the outer flange, and a receptacle adapted to contain a moistening substance located upon the upper side of the cover, and in communication with the contents of the package upon which the cover is placed, as and for the purpose set forth. 2nd. A tobacco moistening apparatus, consisting of a cover comprising a stationary portion, and a movable portion, and provided with two concentric flanges upon its under side, the inner flange being of greater width than the outer flange, and a receptacle adapted to contain a moistening substance located upon the upper side of the stationary portion of the cover, and in communication with the contents of the package upon which the cover is placed, as and for the purpose set forth. 3rd. A tobacco moistening apparatus, consisting of a cover comprising a stationary portion, and a hinged portion, and provided with two concentric flanges upon its under side, the inner flange being of greater width than the outer flange, and a receptacle adapted to contain a moistening substance located upon the upper side of the stationary portion of the cover, and in communication with the contents of the package upon which the cover is placed, as and for the purpose set forth.

No. 34,826. Bobbin. (*Bobine.*)

Joshua H. Wilson and Herbert W. Wilson, Cornholme, Eng. (assignees of Samuel D. Keene, Providence, R.I., U.S.), 6th August, 1890; 5 years.

Claim.—1st. The bobbin or tube hereinbefore described, provided with driver-slots, and having the exterior lower portion covered with a sheet metal ring provided with a series of cuts, the adjacent sides of which are bent rearwardly laterally into the driver-slots, substantially as specified. 2nd. The combination, with a driver-slotted bobbin, of a sheet-metal ring secured thereto, having cuts therein at intervals, the sides of which are bent rearwardly laterally into the driver slots to form spring sides, substantially as shown and described and for the purpose hereinbefore set forth. 3rd. The driver-slotted bobbin a, hereinbefore described, having the lower portion covered with an exterior sheet-metal ring b, whose bottom edge is turned or bent into the under face of the bobbin, as at e, and having the driver-slots c, faced with yielding surfaces f, forming a part of said ring, substantially as shown and set forth. 4th. The combination, with a mounted spindle and driver s, of the driver-slotted bobbin a, hereinbefore described, having secured thereto at its lower end the sheet-metal ring b, provided with wings f, which are bent rearwardly laterally into the driver-slots to form metallic spring sides adapted to engage the dog d of said driver, substantially as specified. 5th. A bobbin of the class hereinbefore described, provided with driver-slots c, having the interior surface of the lower portion of the bobbin provided with a thin metal ring cut adjacent to the driver slots, and having the cut portions of the ring bent laterally into the said driver-slots, for the purpose specified. 6th. A driver-slotted bobbin, of the class hereinbefore described, having the lower portion thereof provided with a cut thin metal ring secured to the interior surface of the bobbin, and a similar ring secured to the exterior surface, and having the metal of the rings adjacent to the cuts bent laterally into and lining the sides of the driver-slots.

No. 34,827. Multiform Tool. (*Outil multiforme.*)

Richard E. Woodruff and Samuel W. McConochie, Hamilton, Ont., 6th August, 1890; 5 years.

Claim.—1st. The combination, with the stock A, having slot G, point E and the projection V¹, the blade B, having the recesses V, the slot U, the point E, the set-screw C, and the blade L, having recess M, and slots K and N, substantially as and for the purpose hereinbefore set forth. 2nd. The combination, with the stock and blade B, provided with the lines D, the gauge F, the set screw I, and the adjustable point or cutter H, substantially as and for the purpose hereinbefore set forth. 3rd. The combination, with the stock and blade, having slots G and U, the set-screw C, the recess V, the projection V¹ and the level J, substantially as and for the purpose hereinbefore set forth.

No. 34,828. Toilet Paper Roll.

(*Rouleau à papier de garde-robe.*)

Seth Wheeler, Albany, N.Y., U.S., 6th August, 1890; 5 years.

Claim.—A roll of paper, the web forming, which has straight parallel edges and oblique lines of weakness transversely dividing it into diamond-shaped sheets, substantially as described.

No. 34,829. Stump Extractor.

(*Arrache-souche.*)

John Manson, North Bloomfield, Cal., U.S., 7th August, 1890; 5 years.

Claim.—1st. In a stump extractor, the combination, with a horizontal slotted link, the sides of which are each provided with two separate series of perforations, those near the outer edges being spaced farther apart than those near the centre, for the purpose set forth, a grappling chain connected to one end of said link, of a fastening chain, a clevis connected at its other end thereto, and having longitudinal horizontal arms embracing said link, a bifurcated lever embracing said link, to which lever the inner end of the clevis is pivoted, the operating edge of said lever at points equi-distant from said pivot, having two inner and two outer notches, and two pins removably seated in certain of the holes in the same series at each side of the link, the pins being moved as the lever is operated, substantially as described. 2nd. In a stump extractor, the combination, with a horizontal slotted link, the sides of which are each provided with two separate series of perforations, those near the outer edges

being spaced farther apart than those near the centre, for the purpose set forth, a grappling-chain connected to one end of said link and a staple at the other end thereof, of a fastening chain, a clevis connected at its outer end thereto, and having longitudinal horizontal arms embracing said link and passing loosely through said staple, a bifurcated lever embracing said link to which lever the inner end of the clevis is pivoted, the operating edge of said lever at points equi-distant from said pivot, having two inner and two outer notches and two pins removably seated in certain of the holes in the same series at each side of the link, the pins being moved as the lever is operated, substantially as described.

No. 34,830. Hay Press. (*Presse à foin.*)

Hermas Larose and Xavier Privé, Verchères, Que., 7th August, 1890; 5 years.

Claim.—1st. In a hay press, the combination, with the box A, opening a plunger C, knife *c*, rods D, links *d*, of the pulley G, chain T, rod S, plate N, crank K, friction roller *e* operated by the catches M, *m*, *n*, plate O, projection N, plate L, shaft K, collar *k*, frame O, I, J, *i*, *j*, and arm P, substantially as set forth. 2nd. In a hay press, the combination, with a horse power consisting of the frame O, I, J, *i*, *j*, arm P, revolving shaft K, *k*, plate L, catches M, *m*, *n*, plate N, crank R, and rod S, of the chain T, pulley G, operating plunger of a press, substantially as set forth. 3rd. In a hay press, the combination of a shaft K journalled in a suitable frame, of the plate L, catches M, *m*, *n*, and plate N, operating a crank connected with a press, substantially as set forth.

No. 34,831. Wire Hanger for Plaques.

(*Porte-plaque.*)

Frederick J. Rice, Toronto, Ont., 7th August, 1890; 5 years.

Claim.—1st. The combination of the arms A, B and C, and the hexagonal form with the loop D, as and for the purpose hereinbefore set forth. 2nd. The combination, with the arms A, B and C, with the hexagonal form, with the loop D and the plaque, substantially as and for the purpose hereinbefore set forth.

No. 34,832. Process and Apparatus for Refining Fumes. (*Procédé et appareil pour purifier les fumées.*)

Frank L. Bartlett, Portland, Me., U.S., 7th August, 1890; 5 years.

Claim.—1st. The herein described process of refining fume containing sulphur compounds, which consists of passing the fume through a heated tube in an atmosphere of sulphurous gas, and out of contact with air, substantially as described. 2nd. The herein described process of refining fume, which consists of passing the fume through a heated tube, and continually stirring and scraping it from the walls of said tube during its passage through the same, substantially as described. 3rd. The herein described apparatus for refining fume, which consists of an elongated chamber or tube having its lower portion cylindrical, a furnace for heating the same, and a coreless helical screw within said tube adapted to rotate relative thereto, and composed of a coiled bar, having an outer spiral edge adapted to come in direct contact with the cylindrical bottom of said tube, substantially as described.

No. 34,833. Side Spring Running Gear for Vehicles. (*Train de voiture à ressorts de côté.*)

Thomas J. Story, Gananoque, Ont., 7th August, 1890; 5 years.

Claim.—1st. A side spring running gear, having the bottom plate of each spring set so as to converge towards the centre of the front axle, to which it is suitably connected, and the top plate of each spring set so as to diverge towards the end of the rear axle, to which it is suitably connected. 2nd. A side spring running gear, having the bottom plate of each spring set so as to converge towards the centre of the front axle, and passing between the said axle and its head block, is securely connected by the king-bolt F, brace G, and safety brace I, substantially as specified.

No. 34,834. Manufacture of Boots and Shoes. (*Fabrication des chaussures.*)

Robert W. Ross, Port Moody, B.C., 7th August, 1890; 5 years.

Claim.—1st. The upper guard A, as a continuous moulded metal plate, protecting the entire exposed projection of the vamp from the toe to the hollow of the foot with its clips, and lock, as shown. 2nd. The sole-plate or guard, with its clips, toe plate, and screw attachment. 3rd. The combination of upper guard and sole guard, and their adaptation to any size or style of boot or shoe.

No. 34,835. Machine for Affixing Emery Wheels to Sewing Machines, or other Machines Worked by a Foot Pedal, and with Foot Power for use in Grinding Knives, Tools and other Instruments. (*Machine à attacher les tambours à émeri aux machines à coudre et autres, actionnées par des marches.*)

Alfred Huggins, Monkton, Ont., 7th August, 1890; 5 years.

Claim.—In a domestic knife grinder, the combination of the spindle C, adjustable box D, with emery wheel A, and pulley B, the whole attached to table by clamp E, as and for the purpose described.

No. 34,836. Horse Poke. (*Carcan à cheval.*)

Samuel B. Little, Barrington, Que., 7th August, 1890; 5 years.

Claim.—1st. A horse and animal poke, constructed substantially as hereinbefore shown and described, consisting of a forked end, and a forwardly-extending and terminally-curved tongue, having the means of attachment to the animal to be controlled or held in check by it, such as are set forth. 2nd. In a horse and animal poke, the combination, with the part or member A, having the bifurcations *b*, and rings *a*, *a*, and loops *e*, *e*, of the straps B, C, D, E, all substantially as set forth.

No. 34,837. Wet Method of Extracting Gold from Ores. (*Procédé humide pour extraire l'or des minerais.*)

James H. Pollock, Glasgow, Scotland, 7th August, 1890; 5 years.

Claim.—The improvement in the wet method of extracting gold from ores, consisting in the addition in the chlorinating vessel, after the chlorinating operation, of a suitable quantity of alkali, by means of which the excess of reagent is neutralized and absorbed, and rendered available for further use.

No. 34,838. Rod Packing. (*Garniture de tige.*)

John T. Martin, Scranton, (assignee of Francis P. Martin, Easton,) Penn., U.S., 7th August, 1890; 5 years.

Claim.—1st. In a piston rod packing for steam engines, the combination, with the cylinder head having steam openings therein, of an annular seat provided with similar apertures having one end lying in a circular channel adjacent to the cylinder head, a ring support surrounding the piston rod and seating at one end on a steam tight seat on the annular seat inside the steam openings, said ring support having separate interior circumferential seats provided with circumferential steam passages communicating with apertures drilled through the wall of said support, compressible cleft rings lying in said seats, a cylindrical casing inclosing the support, and provided with interior steam channels, and means for attaching said casing to the cylinder head, substantially as described. 2nd. In a piston rod packing for steam engines, the combination, with a cylinder head having live steam apertures pierced therein, of an annular seat of metal having a raised steam tight seat outside of a series of steam apertures formed in said seat and communicating with the live steam apertures in the cylinder head, a cylindrical casing and a sectional ring support within said casing, a series of cleft packing rings arranged in separate seats, having interior circumferential steam ways formed within said ring support, and means for connecting the cylindrical casing to the cylinder head, whereby a steam joint is formed between the meeting edges of the same and of the rings, the live steam openings having communication with steam entrances introducing live steam behind the packing rings, substantially as described. 3rd. In a piston rod packing for steam engines, the combination, with a cylinder head having a series of steam openings surrounding the piston rod opening, of a metallic annular seat having on one face a raised steam tight seat, making a steam-fit with the cylinder head, a series of steam apertures piercing said seat within the raised face or steam tight seat, a ring support consisting of two similar parts, each containing a seat for a packing ring, and a fractional seat for a packing ring intermediate of the other seats, said ring support resting upon the annular seat within the steam entrances, cleft packing rings lying in the seats and embracing the piston rod, and an outer cylindrical casing resting upon the annular seat and surrounding the ring support, an annular steam chamber being formed between the two, and communicating with the interior of the cylinder by means of steam ways formed in the inner face of the casing, and with the ring seat by means of steam openings entering said ring seats, behind the rings, substantially as described.

No. 34,839. Car Coupling. (*Attelage de chars.*)

James R. Avery, Louisville, Ky., U.S., 8th August, 1890; 5 years.

Claim.—1st. In the couplerhead of a car coupler, the link cavity *a*, in combination with the entrance and opening thereto, and pin hole there through, substantially as and for the purposes hereinbefore set forth. 2nd. In the coupler head of a car coupler, the sub-cavity *a'*, in combination with the link cavity, substantially as and for the purposes hereinbefore set forth. 3rd. The socket *a*², in the coupler head of a car coupler, in combination with the sub-cavity and hollow neck, substantially as and for the purposes hereinbefore set forth. 4th. The transverse slot *a*³, in combination with the hollow neck of the coupler head of a car coupler, substantially as and for the purpose hereinbefore set forth. 5th. The coupler head A, of a car coupler having the link cavity *a*, the entrance and opening thereto, and vertical pin hole there through, the sub-cavity *a'*, the draw bar socket *a*², hollow neck and transverse slot *a*³, in combination, substantially as and for the purposes hereinbefore set forth. 6th. In combination with the coupler head of a car coupler, the draw bar B, substantially as and for the purpose hereinbefore set forth. 7th. In the combination of a car coupler, the cross bar C, substantially as and for the purposes hereinbefore set forth. 8th. In a car coupling, the cross bar C, in combination with guards connecting it with a coupler head or front end of a draw bar, substantially as and for the purposes hereinbefore set forth. 9th. In a car coupler, the guards D, or equivalents, connecting a cross bar with a coupler head or draw bar, substantially as and for the purposes hereinbefore set forth. 10th. In a car coupler, attachment plates G, having transverse grooves in the upper and lower edges, forming bearings for lugs and cross ties or bars, either or both connecting the draft timbers, or secured thereto with rods or bolts to prevent the spreading and splitting of said timbers, substantially as and for the purposes hereinbefore set forth. 11th. In a car coupling, the combination of a coupler head having a transverse slot through its neck, a

draw bar provided with a transverse slot or groove, a cross bar having projections and slotted lateral guard or guards, a bolt passing through the slots in the guards, and through the slot in the neck of the coupler head and draw bars, substantially as and for the purposes hereinbefore set forth. 12th. In a car coupling, the combination of a coupler head having a transverse slot through its neck, a draw bar having a slot or groove, a cross bar having a centre bearing, and projections slotted or otherwise suitably constructed guard or guards, a bolt passing through the slots in the guards and neck of the coupler head, and closely engaged by the slot or groove in the draw bar, a spring placed upon the draw bar between the coupler head and cross bar, and another spring bearing against the rear side of the cross bar, and a washer or other abutment at or near the rear end of the draw bar, all combined and arranged to operate in the manner and for the purpose specified. 13th. In a car coupler, the angled pin P, in combination with a coupler head and the vertical rod N, substantially as and for the purpose hereinbefore set forth. 14th. In a car coupler, the coupler head of a car coupler, the coupling pin P, the vertical rod N, the bearing and gravity ball catch O, and R, in combination, substantially as and for the purpose hereinbefore set forth. 15th. In combination with the coupling, and the car, the horizontal rod M, and gravity brace catch R, substantially as and for the purpose hereinbefore set forth. 16th. In a car coupling, the combination of an angled coupling pin, a vertical rod having its upper end bent to form a handle, and the lower end bent to form a shoulder, with a depending loop or eye upon its lower end and through which the upper or horizontal portion or end of the coupling pin passes, and a horizontal rod having handles formed thereon, and provided with a loop or bend at or near its centre for engagement with the bent portion of the vertical rod, whereby movement of the horizontal rod will cause the vertical rod to be raised and thus remove the pin from the link cavity, and thereby release the link, substantially as and for the purpose hereinbefore set forth. 17th. In a car coupler, a gravity catch, in combination with an uncoupling lever or levers, and a coupling pin, substantially as and for the purposes hereinbefore set forth. 18th. In combination with a car, journal bearing plates attached thereto, a cross bar pivoted therein, draft rods connecting the cross bar with the king bolt transom and another cross bar, a draw bar with a coupler head secured upon the front end, and adapted to slide thereon longitudinally, the stem of said draw bar supported in a bearing provided through the pivoted cross bar, a guard upon each end of the cross bar connecting it with the front end of the draw bar in the coupler head by means of a bolt therein, a spring interposed between the coupler head and cross bar, and a spring interposed between the cross bar and a washer or other abutment impinged against a key in the draw bar near its rear end, all substantially as and for the purposes hereinbefore set forth. 19th. In combination with a car and coupler, a gravitating rest or catch attached to the end of the car, a vertical rod adjusted to engage with said rest or catch, a horizontal rod adjusted to engage with said vertical rod, a coupling pin angled to engage a link in the cavity of the coupler head of the coupler with its lower end, and the vertical rod with its upper end, substantially as and for the purposes hereinbefore set forth. 20th. In combination with a car, the coupler head A, draw bar B, cross bar C, guards D, bolt E, draft rods H, plates G, coupling link L, pin P, vertical rod N, horizontal rod M, bearing and ball catch O and R, or brace catch R, all substantially as and for the purposes hereinbefore set forth.

No. 34,840. Wheel for Railway Vehicles.

(Roue de chars.)

Eliza Lumley Stroudley (executrix of William Stroudley), Brighton, Sussex, Eng., and Samuel Carleton, Swinton, Wilts, Eng., 8th August, 1890; 5 years.

Claim.—1st. For securing in place the tyre of a railway wheel, a clip ring having on one side two lips or lugs 5 and 6, for engaging respectively with the wheel rim or body, and with the tyre of a wheel, and having on the other side a ledge shoulder or check 7, to serve as a key or support to a wedge or Lewis ring. 2nd. Securing in place the tyre of a railway wheel by means of a clip ring 3, having a ledge shoulder or check 7, in combination with a wedge or Lewis ring 4, which after being inserted in its proper place partly within, the tyre is laid down so that it is secured by the said ledge shoulder or check, substantially as described. 3rd. In a wheel for a railway vehicle, the combination with the wheel rim or body 1, and the tyre 2, of a clip ring 3, lips having lips or lugs 5 and 6, for holding the tyre in place on the wheel rim or body, and with a ledge shoulder or check 7, and a Lewis ring 4, held in place by said ledge shoulder or check 7, substantially as described.

No. 34,841. Rolled Wood Screw.

(Vis à bois cylindrée.)

The American Screw Company (assignee of Charles D. Rogers), Providence, R. I., U. S., 8th August, 1890; 5 years.

Claim.—A screw, having its shank or unthreaded portion provided with longitudinal ribs or projections, extending from the head towards the threaded portion.

No. 34,842. Shingle Sawing Machine.

(Machine à scier le bardeau.)

John B. Putrow Westborough, Wis., U. S., and William Boaz Johns, Antigo, Wis., U. S., 9th August, 1890; 5 years.

Claim.—1st. The combination of the base strips A, having the grooves or channels a, the side frames B, having the flanges b and the rack surfaces b', the saw, its shaft and belt pulley supported by said frames b, the shaft S, the cog wheels s, the pinion s', and the hand lever s', substantially as described. 2nd. The combination of the side frames B, the upper cross beam B', formed with inwardly extending lugs b', having set screws mounted therein, the lower cross beam B'', having the rectangular socket B'', the frame C, the

rectangular saw arbor bearing at the lower end of said frame fitted in said socket, the half bearing c' at the upper end of the frame, the cap c'', the vertical saw arbor mounted in the rectangular bearing and between the cap c'', and half bearing c', and the set screws bearing on the upper and lower ends of the frame to adjust the same, as set forth. 3rd. In combination with the frame to adjust the same, as guards D and D', one of which forms a side frame B, the hollow movable hinged arm D'', and the rear dust spout, the horizontally extended spout D' formed therewith, substantially as described. 4th. The combination, with the side frames B, having the guards D and D' secured to the upper portion thereof, and the rotatable saw of the guideways or tracks E, the carriage F, and the rotatable saw, mounted on the rear portion of the guards D and D', substantially as described. 5th. The combination, with the upper longitudinal and parallel guideways or tracks E, having the outer horizontal grooved faces, of the carriage F, having the transverse bars F', formed with vertical slot f', on their under side to receive the tracks E, and horizontal bars f'' connecting the ends of bars F' and f'', and located adjacent to the grooved faces of the tracks, and having vertical and horizontal friction rollers f', f'' to bear against corresponding faces in the grooved sides of the guideways E, as described and shown, substantially as described. 6th. The combination of the bars F', the forward one of which is provided with slots 16 in its lower edge, one of the rock shafts 3, and its dog F', the handle 7, the bracket 10, provided with a slot, through which the end of the rock shaft passes and having a projection 12, the spring 13, the stud or pin 14, and the lever 15, substantially as described. 7th. The combination, with the bars F', the forward one of which is provided with slots in its under edge, and the slotted bracket 10, having a projection to engage said slots, of the dogs F', in connection with said bars F', provided with slots, through which a shingle or strip of wood is inserted, the rock shafts 3, connected to said dogs, one of said shafts extending through said slotted bracket, the handle 7, in connection with one rock shaft, and the handle 7 in connection with the other, substantially as described. 8th. The combination, with the rear bar F' of the carriage F and the rock shafts 3, of the bracket boxes 18, the rock shaft 19, having projections 20, one of which is formed into a handle 21, the links 22, and the transversely arranged frame F', having grooves in its extended ends adapted to engage with and slide on the rock shafts 3, substantially as described. 9th. The combination, with the guide rails of the frame, of the carriage F, provided with bars F', movable on said rails, the dogs F'', movable transversely of the frame, transversely mounted frame F'', movable longitudinally thereof, and handles and connections for moving said dogs and frame, the said dogs, their handles, and frame F'' being located within the limit of the rails and bars F', substantially as specified. 10th. The combination, with the guide rails of the frame, of the carriage F, provided with bars F', movable on said rails, the vertically slotted dogs F'', movable transversely of the frame F'', vertically slotted and mounted longitudinally thereof, handles and connections for moving said dogs and frame F'', the said dogs and frame F'', and their handles and connections being located within the limit of the rails and bars F', substantially as specified. 11th. The combination, with the cross beams, of the hollow upright G', seated in said beams as described, and having a vertical transverse and oscillating adjustment therein, and a tilting table G, mounted on the upper end of the upright, substantially as described. 12th. The combination, with the cross beams B', having the central square opening b', and lugs b'', on each side of said opening, having adjusting set screws s' therein, and the beam B'', constructed hollow, as set forth, of the upright G', constructed cylindrical at its upper portion and substantially rectangular at its lower portion, and hollow throughout its length, the grooved boxes 28, the yoke G', and the tilting table G, substantially as described. 13th. In combination with the upper part of the upright G', of the yoke G', the yoke G'', having the extension g'', the table G, constructed as set forth, mounted in connection with the yoke G'', the rod 46, having a collar 47, and coiled spring 48, the block 49, carrying a frictional roller 50, in its lower end, the tilting table 52, the draw rod 53, the connecting link 54, the vertical rod 55 having an operating handle 58, and the set screws s', substantially as described. 14th. The combination, with beams B' and B'', of the upright G', having the lower projecting ends 31, the lever G'', the lifting rod G', the slotted hand lever 33, having a crank 32 and a spring actuated stop arm 34, the adjustable arm 36, having a notch or notches 37, therein, the stationary projection 38, and the projection 39, movably mounted as set forth, substantially as described. 15th. The herein described tilting table, comprising the centrally pivoted transverse plate g', and the longitudinally adjustable arms g, g', mounted on the ends of said plate g', as set forth. 16th. The combination, with one of the side frames B, of the saw guiding and holding device H', consisting essentially, of the casting 58, having an opening 59, provided with a groove 62, the vertically adjustable box 60, having a feather 61, the angular arm 63', carrying a depending billet 65 in its angularly projecting portion 64, the projection 66, the hollow ended set screw 67, carrying a billet 68, and the adjusting screw s', substantially as described. 17th. The combination, with one of the side frames B, of the casting 66', having the elongated arm 70, provided with a depending slotted projection 71, at its one end, and a slightly depending hollow projection 72, at its opposite end, a lever 73, fulcrumed in the projection 72, and passing through the slot in the projection 71, and having its forward end reduced and rounded, and the vertically sliding block 74, having a recess 75, with which the reduced end of the lever 73 engages, and an upper flanged extended surface adapted to bear against the under side of the saw, substantially as described. 18th. The combination, with one of the side frames B, of the casting 66', adjustably mounted in connection therewith, having lugs 77 and 80, integrally formed therewith, the lever 78, provided with an upwardly curved apertured end and fulcrumed in the lugs 77, and adjustably secured to the lug 80, by a set screw s'', passing through a slot in said latter lug and into the lever, the depending wooden billet 81, carried in the aperture in the end of the lever 78, the projection 82, the adjusting screw 83, and the wooden billet 84, substantially as described. 19th. The combination, with the frame having the side rails, saw arbor, and saw, of the casting 66, provided with upper and lower projections carrying billets, frictional rollers 85, mounted on said casting, and a carriage

movable upon said rails, substantially as specified. 20th. The combination, with the guards D and D', of the apertured block 86, mounted in the rear portion thereof, short rods 87, having enlarged heads 89, mounted in said blocks, the coiled springs 88, surrounding said rods 87, and the saw and carriage, substantially as described. 21st. In combination with the stationary strips A of the base frame, the side frames B, carrying the entire operating mechanism of the shingle sawing machine, including the saw, its arbor, and the belt pulley, the said frames B being movable in grooves or ways of the frame A, and mechanism, substantially as described to actuate the frames B, as set forth. 22nd. In combination with the hollow guards D, D', provided on the side frames of the shingle sawing machine, one side of guard D' being open, the horizontally-movable hinged arm D², for closing the open side of said guard, as set forth. 23rd. In combination with the side frames B, having the guide-ways or tracks E, the carriage F, running in the guide-ways or tracks, and the elastic buffers mounted at one end of the track to receive the impact of the carriage, as set forth. 24th. In combination with the movable saw-carriage, the movable dogs located within the carriage-frame and movable transversely, handles and their connections for moving said dogs, a longitudinally-movable frame F¹, located between the dogs and connections for moving said frame, said frame-handles and connections being located within the dimensions of the supporting frame, substantially as described. 25th. The combination, with the frame, of the longitudinally-movable carriage mounted thereon, the frame F¹ supported by said carriage and arranged transversely to the same, and the lever fulcrumed on the carriage and connected to the frame D¹, to move the same longitudinally independent of the carriage, as set forth. 26th. The combination of the standard, the yoke G², pivoted to the upper end of the same, and having a lateral extension G³, the table pivoted to the said yoke, and the set screw inserted vertically through the table and engaging the end of the said extension G³, as set forth. 27th. The combination, with the upper and lower end bars B¹, B² of the frame, of the vertical hollow standard G¹, seated in both bars, a tilting table G mounted upon the same, and adjusting appliances, substantially such as parts 46, 49, 52, 53, G², and operating connections located in and adjacent to said standard to elevate, tilt, and transversely move the table, substantially as specified. 28th. In combination with the hollow upright G¹, the table H at the top of the upright, the tilting devices for the table located within the upright, the adjustable means for the tilting devices, and the elevating mechanism for the upright G¹, as set forth. 29th. In combination with the hollow upright G¹, the table G, the yoke G², the rod 46, connected to the yoke and located within the upright, the spring arranged on the rod, the roller connected to the lower end of the rod, the oscillating mechanism to act against the roller, and the operating levers for raising the upright, as set forth.

No. 34,843. Machine for Moistening Postage Stamps. (*Appareil pour humecter les timbres-poste.*)

Charles Edward Orloff Hager, Hagersville, Ont., 9th August, 1890; 5 years.

Claim.—1st. The particular position in which the rollers are placed, running parallel with each other across the narrow side of the box, and the use of said rollers in carrying said stamp across the upper surface of each roller, and moistening it thoroughly as it passes over. 2nd. The use of the sponge in carrying moisture to the under side of the said rollers, or, more clearly, the mode of moistening postal stamps by means of a number of rollers placed in their respective positions, and being moistened from their under side by means of a moistened sponge placed in a water-tight box, and filling the space between the rollers and the bottom of the said box.

No. 34,844. Railway Passenger Ticket.

(*Billet de passagers pour chemins de fer.*)

James Drummond Marston, Chicago, Ill., U.S., 9th August, 1890; 5 years.

Claim.—A railway or passenger ticket, having a removable portion B, readily detachable within prescribed limits, indicated by perforations or otherwise, as a means for preventing repeated checking of baggage on the same ticket, in fraud of the company, as set forth.

No. 34,845. Self-acting Gate.

(*Barrière automatique.*)

John O'Neil, Pakenham, Ont., 9th August, 1890; 5 years.

Claim.—1st. In a self-acting gate, tumbling block D, lever-latch E and sliding bar A, gate-post K, provided with latch L and inclined plane M, substantially as and for the purpose hereinbefore set forth. 2nd. In a self-acting gate-sliding bar A, provided with bracket X, coupling rod P, lever H, and pitman I, substantially as and for the purposes hereinbefore set forth. 3rd. In a self-acting gate post F, having friction roller B, keeper L and inclined plane O, substantially as and for the purposes hereinbefore set forth. 4th. In a B, B', in connection with rub-posts S and N, substantially as and for the purposes hereinbefore set forth.

No. 34,846. Carriage Seat. (*Siège de voiture.*)

George Durelle Ramsdell, Rochester, N.Y., U.S., 9th August 1890; 5 years.

Claim.—A central supplementary carriage seat c, provided with an open-ended loop a, on its under side, capable of hooking around the carriage cushion, as and for the purpose specified.

No. 34,847. Air Moistening Device.

(*Appareil pour humecter l'air.*)

William R. Renalds, Salem, Va., U.S., 9th August, 1890; 5 years.

Claim.—1st. In an attachment for hot air registers, the combination with the removable frame, of the pans for holding water supported therein, the uprights 5, the cross arms 6 secured to said uprights, and the hooks 7 for holding a moistening pad, substantially as specified. 2nd. In an attachment for hot air registers, the removable pans for holding water, in combination with an upright in each pan, a cross-bar on the uprights, hooks on the outer ends of the cross arms, and moistening pads 4, secured on said hooks and arranged in the pans, substantially as specified. 3rd. In an attachment for hot air registers, the combination with oval-shaped pans arranged between the register and the flue, with their longer axes parallel with the current of air, of pads suspended above the pans edgewise to the current of air, substantially as described.

No. 34,848. Ventilating Railway Cars.

(*Appareil de ventilation pour les chars.*)

Samuel Hughes, Lindsay, Ont., 12th August, 1890; 5 years.

Claim.—1st. In a ventilating system for railway cars, the combination of a tank A, having a water-space, air-space and ice-space, and is provided with water gauge and draw-off cock, the ice-rack B, having a tubular opening b, the air-space C terminating at the top in a trumpet-mouthed twin funnel c, c, and the lower end of which is self-adjusting in length, the float D, supporting the journalled bar D', and the perforated false floor E, the journalled bar D' supporting the lower end of the air pipe adjustably, the false perforated floor E, supported by the float above the water surface, means for heating the water supporting the float, means for heating the air after leaving the ice-space, and a discharge pipe a', substantially as set forth. 2nd. In a ventilating system for railway cars, the combination of a tank partly filled with water, a float upon the water supporting a false perforated floor above the water level and the lower end of an air pipe, an air pipe self-adjusting in length and terminating above the car roof in a trumpet-mouthed twin funnel, an ice-rack above the false floor, and having a tubular space to allow the air pipe to pass through the ice space, means of heating the water and the air, a discharge pipe for discharging the air from the tank into the body of the car, perforations in the partition separating the body of the car from the closet space, an air pipe in said closet space similar to the air pipe hereinbefore referred to, but having its lower end branched out and connected with the soil pipes of the closet and urinal, and the soil pipes so connected, substantially as set forth. 3rd. In a ventilating system for railway cars, the combination of the tank A, float D, supporting an air pipe, and a perforated false floor, an air pipe C, self-adjusting in length, its lower end supported by the float and its upper end terminating in a trumpet-mouthed twin funnel c, c, and the perforated false floor E, supported above the top of the float, substantially as set forth.

No. 34,849. Journal Bearing.

(*Coussinet de tourillon.*)

Robert Wellington Moffat, Denver, Col., U.S., 12th August, 1890; 5 years.

Claim.—1st. In an anti-friction journal bearing, a bearing roller, its spindle and interposed balls, in combination, substantially as set forth. 2nd. In an anti-friction journal bearing, bearing rollers, retaining rings provided with spindles for said rollers, and balls interposed between the roller, the spindle and the adjacent retaining ring in combination, substantially as set forth.

No. 34,850. Machine for Affixing Postage Stamps and Labels. (*Machine à affixer les timbres-poste et étiquettes.*)

Louis Jules Borie, San Francisco, Cal., U.S., 12th August, 1890; 5 years.

Claim.—1st. The machine for affixing gummed stamps or labels to envelopes, papers, and other articles, consisting essentially of a stamp holding platen D, capable of a limited vertical movement, and having a device for temporarily confining the stamp on its surface, the oscillating presser plate E, provided with a device for seizing and fixing the stamp to its bottom face when pressed down upon the face of the platen, and having movement in a vertical arc from the platen forward over a moistening device, and down upon a table or surface adapted to support the envelope or article to be stamped or labeled, a device operating at the front of the platen to separate the seized stamp from the next one of the strip, and means whereby the moistening device is thrown into action to wet the gummed side of the stamp in the movement forward of the presser plate, and is drawn away out of contact in the return movement, constructed substantially as hereinbefore set forth. 2nd. In a machine for affixing postage stamps and gummed labels, the combination of a spool for holding the stamps or labels previously prepared in the form of a long strip or ribbon, having the width of one stamp or label, and with lines of perforations that partially separate the stamps from one another, the supporting platen D, having a separating device to catch into the perforations between one stamp and the next, the swinging presser plate having oscillating movement in a vertical arc from the platen forward, and down upon a surface Ax, on which the envelope or article to be stamped is laid, and provided with a device to seize the stamp presented to it by the platen and temporarily fix the same against its bottom face, a moistening device consisting of a fountain, a fountain roller, and a moistening roller, and means by which the moistening roller is thrown into and out of action, and a locking device to lock the press-

er to the platen during the first portion of the forward stroke of the presser, for the purpose of producing a sliding movement of this part on the platen, by which the stamp is drawn off and separated from the strip, substantially as described for operation as set forth.

No. 34,851. Sectional Water Boiler.

(*Chaudière en section.*)

James Keith, London, England, 12th August, 1890; 5 years.

Claim.—1st. A hot water boiler, composed of a series of vertical water tube sections enclosing a furnace, and a series of vertical or inclined water tube sections placed in rear thereof, the boiler being extensible lengthwise by adding to the number of sections, substantially as described. 2nd. In a sectional boiler, the combination, with the fire box, of the bridge wall section A², having the upper and lower cross tubes a¹, a², respectively, and said tubes being connected together by a series of inclined tubes a³, substantially as set forth. 3rd. In a sectional boiler, the combination, with the fire box, of a number of water sections A³, arranged on edge in a horizontal series and communicating with each other, and the tapering tubes a⁴, connecting the upper and lower sides of each section together, substantially as set forth. 4th. In a sectional boiler, the combination, with the fire box, of a number of water sections A³, arranged on edge in a horizontal series and communicating with each other, and the hollow base G, serving as a support for said sections, and as a soot and dust collector, substantially as set forth. 5th. In a sectional boiler, the combination, with the fire box, of a number of water sections A³, communicating with each other and arranged diagonally in a horizontal series, and the downwardly tapering inclined tubes a⁴, connecting the sides of each section together, substantially as set forth. 6th. In a sectional boiler, the combination, with the fire box, of a series of water sections A³, each having an upper horizontal tube, and a lower horizontal tube of smaller diameter than said upper tube, and a number of downwardly tapering cross tubes connecting said upper and lower tubes together, substantially as set forth. 7th. In a sectional boiler, the combination, with the sections A¹, forming the fire box, of the tubes a², extending across said sections and inclined alternately in opposite directions, the bridge wall section, and the water sections A³, arranged beyond said bridge wall and having communications with each other, and with said other sections, substantially as set forth.

No. 34,852. Bed Pan. (*Vase-de-lit.*)

John Henry Worsell, Clinton, Ont., 12th August, 1890; 5 years.

Claim.—1st. The combination of an opening on the side of a pan, metallic or other substance, with a solid and perforated cork having tubing attachment, substantially as and for the purposes hereinbefore set forth. 2nd. The combination of a bed pan with the opening on the top extending to the front A. 3rd. The combination of a bed pan, metallic or other substance, with opening on the top having a lid with splasher and notches and handle attached, substantially as and for the purposes hereinbefore set forth. 4th. The combination of a metallic bed pan with rounded edges C, C, and rings O, O, and P, substantially as and for the purposes hereinbefore set forth.

No. 34,853. Ventilator for Carriages, etc.

(*Ventilateur de voitures, etc.*)

Arnold William James Swindells, William S. Peel, and George Frederick Freeman, all of Manchester, Eng., 12th August, 1890; 5 years.

Claim.—1st. An exhaust ventilator for vehicles, composed of an inlet compartment, opening in two directions, an exhaust compartment opening in two directions, and a bent or curved contracted injection tube or passage leading from the inlet and opening in the direction of the outlet chamber, substantially as described. 2nd. In a ventilator, the combination, with the trumpet mouth inlet B, of the contracted injection tube bent to U-shape, with both orifices opening in the same direction. 3rd. The combination, with the air inlet B, and bent or curved contracted injection tube C, of the chamber E, with outlets E', substantially as described. 4th. The combination, with the air inlet, and bent or curved contracted injection tube C, of the outlet chamber E, with outlet openings E' and flaps F, substantially as described. 5th. The combination of the inlet passage B, the curved or bent tube C, with flap valve D, and contracted orifices c, through which a current of air is impelled or injected by the movement of the vehicle, the outlet chamber E, (below which the contracted orifice of the tube C opens) with outlets E', and the flap doors F, through which the injected air escapes, again inducing a current which carries away the foul or vitiated air.

No. 34,854. Fifth Wheel. (*Rond d'avant-train.*)

John Scandlan, jr., and George A. Gross, both of Broken Straw, State of New York, U.S., 12th August, 1890; 5 years.

Claim.—1st. The combination, with the axle and the head block recessed near their centres, the two-part fifth-wheel, whose members are mounted upon the head block and beneath the axle, and bolts passing through said members, and through the head block and axle at each side of the recess, of a reach pivoted upon the king bolt within said recess, and adapted to move between the two members of the fifth wheel, substantially as described. 2nd. The combination, with the axle and head block, the two-part fifth-wheel, its upper member comprising a ring 5, mounted upon the head block, bolts passing through the upper and lower members of the fifth wheel, and through the head block and axle, other bolts 3, connecting said members in rear of the axle, and a king bolt and reach, of a bolster pivoted on the king bolt above the head block, and friction rollers on the lower side of the bolster traveling upon the upper member of the fifth wheel, substantially as described. 3rd. The combination, with the axle and head block recessed at their centres, and the two-

part fifth-wheel, comprising a ring shaped upper member 5, and a half-ring lower member 6, projecting rearwardly from the axle and head block and secured thereto, of the vertical king bolt passing through said recess, the reach pivoted thereon, and friction rollers 7, journaled in bearings on the upper and lower side of the reach, and bearing against the inner faces of the two members of the fifth wheel, substantially as described. 4th. The combination, with the axle and the king bolt, of the half-ring 6, secured to the lower side of the axle, the diametric strap 9, parallel with the axle, the diametric strap 10, at right angles to the axle and provided with an eye 11, at its front end, the king bolt passing through said straps at their point of intersection, and the tongue pivoted in said eye, substantially as described. 5th. The combination, with the axle A, the clips C, near the ends thereof, the half-ring 6, on the lower side thereof around the king bolt, the strap 9, connecting the sides of the half-ring, the strap 10, at right angles to the strap 9, and the eye 11, in the front end of said strap and in alignment with the eyes in the clips, of the tongue T, having ears t, embracing said eye 11, a pivot bolt through them, and the rearwardly-diverging hounds connected with the tongue and pivoted at their rear ends in the clips, substantially as described.

No. 34,855. Hay Carrier. (*Monte-foin.*)

Jerome A. Cross, Fultonville, N.Y., U.S., 12th August, 1890; 5 years.

Claim.—1st. In a hay carrier, the combination of the carriage consisting of the frame C, supported by trolley-wheels resting on the track A, the pulley wheels D, D, and the latch E having legs e, e, extending above the rest of the carriage, and also having the lower parts f, f, the catch F, with inclined edges k, k, throat l, and shoulders m, m, supported above the track, the rope G, and the travelling pulley H, as and for the purpose described. 2nd. In a hay carrier, the combination of the carriage consisting of the frame C, supported by trolley-wheels resting on the track A, the pulley wheels D, D, and the latch E, composed of the two jaws, the spring and the pivot bar b, whereby the jaws are united and secured to the frame C, said jaws having the legs e, e, extending above the rest of the carriage, and the lower parts f, f, of the catch F, with inclined edges k, k, throat l, and shoulders m, m, located above the track, the rope G, and the travelling pulley H, as and for the purpose described. 3rd. In a hay carrier, the combination of the carriage, consisting of the frame C, trolley-wheels, pulley wheels D, D, the latch E, having the legs e, e, extending above the rest of the carriage, and the lower parts f, f, the rope G, the travelling pulley H, and the catch F, with inclined edges k, k, throat l, and shoulders m, m, pivoted to a support above the track, and in one position engaging with the latch E, and in another position allowing the carriage to pass freely by it, substantially as and for the purpose described. 4th. In a hay carrier, the combination of the carriage having the frame C, pulley wheels D, D, and pawls p, p, and the rope G having the enlargements v, v, constructed and operated substantially as described. 5th. In a hay carrier, the combination of the carriage, consisting of the frame C, having the pawls p, p, with stops r, r, and springs s, s, the trolley-wheels, the pulley wheels D, D, and the latch E, having the legs e, e, extending above the rest of the carriage and the lower part f, f, the catch F, with inclined edges k, k, throat l, and shoulders m, m, located above the track, the rope G, having the enlargements v, v, and the travelling pulley H, constructing and operating substantially as shown and described. 6th. In a hay carrier, the combination of the carriage provided with pulley wheels D, D, the rope G having the enlargements v, v, the travelling pulley H, and the catch F, above the track, the frame C of the carriage being constructed with lugs a, a, to which are pivoted the pawls p, p, having stops r, r, and springs s, s, and which also form bearings for the pivot bar b, of the latch E, the legs e, e, of which extend above the rest of the carriage and engage with the catch F, substantially as and for the purpose described.

No. 34,856. Ventilated Shoe.

(*Chaussure ventilée.*)

Henry Falkner, Cambridge, Mass., U.S., 12th August, 1890; 5 years.

Claim.—1st. A ventilated boot or shoe, having, in combination, a perforated inner sole, and air-admitting and air-expelling tubes between the outer material and the lining of the upper, a separate and independent system of longitudinal passage-ways between the inner and the outer sole communicating with each of said tubes, and an operating bulb in the heel, all arranged and operating, substantially as and for the purposes described. 2nd. A ventilated boot or shoe, provided between the inner and the outer soles with a central longitudinal air-admitting passage-way b¹, and independent air-expelling passage-ways b², on either side thereof, in combination with a bulb C, and an air-admitting tube G, communicating with said central passage-way b¹, and provided with suitable valves, a perforated inner sole, and air-expelling tubes H, communicating with the passage ways b², all arranged and operating, substantially as and for the purposes described.

No. 34,857. Feed Water Heater.

(*Réchauffeur de l'eau d'alimentation.*)

Charles Cochran and William McMonagle, both of Hantsport, Nova Scotia, Can., 12th August, 1890; 5 years.

Claim.—1st. A feed water heater, consisting of vertical tubes having their terminations in tube plates A, concavo-convex expansion plate or head F, secured to the upper tube plate around its edge, a shell surrounding or enclosing the tubes, and the lower portion of said shell divided diametrically by a partition J, and the valve box or covering M, enclosing the outlet to the boiler, having a double valved stem N, as set forth, for the purpose described. 2nd. A feed water heater, having a steam space and a feed water chamber at top, separated by an expansion head or plate F, said feed water

chamber receiving and returning the flow through the tubes, a steam space around said tubes and enclosed by the shell A, and inlet and outlet water compartments H, I, in which the tubes terminate, as set forth. 3rd. The outlet chamber or compartment I, having a box or cover M, enclosing the outlet, and provided with double valves O, P, to cause and direct and indirect passage through said compartment from the tubes to the outlet, as set forth, for the purpose described.

No. 34,858. Two Wheeled Vehicle.

(Voiture à deux roues.)

Jacob Laschinger, New Hamburg, Ont., 12th August, 1890; 5 years.

Claim.—1st. The thills A, having a joint forwardly of the draft bar, and connected by a spring plate I, bolted above the joint to the thills, and a stop attached to the thills below the joint to limit the tension of the spring, as set forth. 2nd. The combination, with the divided thill A, connected by a spring plate I, of the elbow stop b, and U-shaped stop c, bolted to the thill, and interposing one another, and the bolt I, connecting said stops, and provided with an elastic cushion L, to limit the tension of the spring, as set forth. 3rd. The combination of the thills A, the open bracket F, bolted to the rear extremity, the seat spring C, having elongated eyes, and the pin or bolt and roller supporting the spring, whereby it will freely elongate as set forth.

No. 34,859. Steam Boiler.

(Chaudière à vapeur.)

William M. Glasson, Socorro, New Mexico, U.S., 12th August, 1890; 5 years.

Claim.—1st. The combination, with the boiler and its tubes, of the water compartment surrounding the same and extending below the water-line, the upper row of tubes being extended through said water compartment, substantially as shown and described. 2nd. The combination, with the boiler, of the water compartment around said boiler, and secured thereto below the water-line, and the upper set of tubes extended through the ends of the boiler, and through the ends of the water compartment, and one inch from the horizontal portion thereof, substantially as shown and described. 3rd. The combination of the boiler, with its water compartment, of the tubes extended through the end of the boiler and through the ends of the water compartment, and the outer water jacket or compartment surrounding said boiler and the furnace, as shown and described. 4th. The combination of the boiler with its water compartment, of the tubes extended through the ends of the boiler and through the ends of the water compartment, and the outer water jacket or compartment surrounding said boiler and the furnace, as shown and described, and the blow-off pipe extending the full length of the boiler and one inch from the bottom of the same, with holes in bottom of said pipe to receive the sediment that may be lying on the bottom of the boiler and the boiler surrounded by water.

No. 34,860. Mouse Trap. (Souricière.)

Homer J. Barry, Fargo, Mich., U.S., 12th August, 1890; 5 years.

Claim.—1st. In an animal trap, the combination, with the case having an entrance opening, of perforated walls on each side of the said opening, and the bait receptacle on the inner side of the said perforated walls, substantially as described. 2nd. In an animal trap, the combination, with bait-boxes on each side of the entrance opening, of perforated walls on each side of the said opening, forming a side of the said bait-boxes, substantially as described. 3rd. In an animal trap, the combination, with the case having cover D, of the two trap-doors placed below the cover, and the glass partition arranged in line with the meeting ends of the said doors, substantially as and for the purpose described. 4th. In an animal trap, the doors E and E', closing the space between the front ends of the case, and the front portions of the said trap-doors, substantially as and for the purpose described. 5th. In an animal trap, the combination, with a wall having an entrance, as k, and a guard projecting from at the upper end of the said entrance, of the needles L pivotally supported and the stop M bent in a series of return folds, and adapted to limit the downward movement of the said needles, substantially as set forth. 6th. The herein specified trap, composed of the case having E and E', about on a level with the tops of the ends, and placed some distance below cover D, glass partition b, in line with the inner ends E and E', sliding doors F, below the front portion of doors the bait-boxes on each side of said perforated walls and the needles between them, the partition K, the guard and needles protecting the opening in partition K, and the glass door closing an opening in the end B' of the case, substantially as specified.

No. 34,861. Tug Attachment for Safety Connecting Trace and Hames. (Mancelle de collier.)

Marcel E. Lyburner and John E. Mathews, Montreal, Que., 12th August, 1890; 5 years.

Claim.—A metal tug attachment, with clip for affixing to hames, and provided with metal loops, under which trace is passed, and metal pin which passes through trace, substantially as shown and described.

No. 34,862. Automatic Button Turning Lathe. (Tour automatique à tourner les boutons.)

Dilman B. Shantz, Berlin, Ont., 13th August, 1890; 5 years.

Claim.—1st. In a machine for turning buttons and similar articles, the combination of cutting tools having means for revolving them, and for automatically and alternately bringing them forward and drawing them back, and grips provided with means for automatically opening and closing them for the purpose of receiving, holding and allowing the discharge of the material operated upon, and provided with means under the control of the operator for preventing the opening of the grips, substantially as described. 2nd. In a lathe for turning buttons and similar articles, the combination of cutting tools having means for revolving them and for automatically and alternately bringing them forward and drawing them back, and provided with means for changing simultaneously the position of the cutting tools, and connections to the right or left, as may be desired, substantially as described. 3rd. In a lathe for turning buttons and other similar articles, the combination of grips for holding the material operated upon, and provided with means for automatically opening and closing the same, and with means under the control of the operator for preventing the opening of the grips, when desired, substantially as described. 4th. In a lathe for turning buttons and similar articles, the combination of cutting tools having means for revolving them, and for automatically and alternately bringing them forward and drawing them back, and provided with means for changing the position of the cutting tools and connections simultaneously to the right or left, and grips, having means for automatically opening and closing them, and with means under the control of the operator for preventing the opening of the grips when desired, substantially as described. 5th. In an automatic lathe for turning buttons and similar articles, the combination of means to regulate and control the forward and backward movement of the cutting tools and connections to the right or left, and means for discharging the material operated upon, substantially as described. 6th. In a machine for turning buttons and similar articles, the combination with cutting tools, and means for operating the same, of grips consisting of a movable jaw and a stationary jaw, said movable jaw being operated through suitable connections by a cam on a driving shaft, substantially as described. 7th. In a lathe for turning buttons and similar articles, the combination, with cutters and means for operating the same, of a grip for holding the material to be operated upon, a cam for actuating said grips through suitable connections, and means for throwing said cam into and out of engagement with said connections, substantially as described. 8th. In a lathe for turning buttons and other similar articles, the combination, with revolving cutters and means for operating the same, of a grip for holding the material to be operated upon, consisting of a stationary jaw, and a movable jaw, connections between the movable jaw and operating lever, a cam for actuating said lever, mounted upon a driving shaft, a shaft, a rod in said driving shaft, a pin on said rod engaging in a notch in the cam, and means for reciprocating said rod, whereby the cam is engaged and disengaged from the driving shaft, substantially as set forth. 9th. In a lathe for turning buttons and similar articles, the combination, with revolving cutters and means for operating the same, of a grip for holding the material to be operated upon, consisting of a movable and a stationary jaw, connections between said movable jaw and an operating lever, a cam mounted on a hollow driving shaft for actuating said lever, a slidable rod fitting in said shaft, having a projecting pin extending through a slot in said shaft and engaging with a notch in the cam, a spring bearing against said rod, and a rod and lever for operating said sliding rod, substantially as described. 10th. In a lathe for turning buttons and similar articles, of revolving cutters, reciprocating slide rods, and mandrels connected with said cutters, levers connected with the slide rods, cams mounted on a driving shaft and actuating said levers, substantially as set forth. 11th. In a lathe for turning buttons and similar articles, the combination with the revolving cutters, mandrels and connected slide rods, of levers connected with said slide rods, cams mounted on a drive shaft for actuating said levers and connections, and means for shifting said levers, substantially as and for the purpose described. 12th. In a lathe for turning buttons and similar articles, the combination, with revolving cutters, reciprocating mandrels and slide rods, pivoted levers connected with said slide rods, cams mounted on a driving shaft for actuating said levers, and means for shifting the levers to change the positions of the cutters, of a grip, consisting of a movable and stationary jaw, connections between the movable jaw and an operating lever, and a cam for actuating said lever, substantially as described.

No. 34,863. Button Turning Lathe.

(Tour à tourner les boutons.)

Dilman B. Shantz, Berlin, Ont., 13th August, 1890; 5 years.

Claim.—1st. In a machine for automatically turning buttons and similar articles, the combination of revolving cutting tools, provided with means for alternately bringing them forward and drawing them back, grips, having means for receiving, holding and allowing the discharge of the articles operated upon, a hopper for holding blanks and automatic feeding device connecting with the hopper grips and cutting tools, by which a blank from the hopper is carried to the grips, and then held until the cutting tools have performed their operation, substantially as described. 2nd. In a button turning lathe, the combination, with the bed A, of two head stocks C, C, having sliding mandrels F, F, and slide rods G, G, for actuating the mandrels, a driving shaft H, a cross shaft I, geared with shaft H, and carrying cams I¹, I², levers J, J', rods K, K', and means for feeding and holding the blanks in position, substantially as described. 3rd. In a button turning lathe, the combination of the bed A, of two headstocks C, C, having sliding mandrels F, F, with pulleys F', F', and slide rods G, G, for actuating said mandrels, driving shaft H, a cross-shaft I, geared with shaft H, and carrying cams I¹, I², levers J, J', and rods K, K', substantially as described. 4th. The combi-

nation of bracket M¹¹, having screw M⁶, and slide M⁵, the rocker N, having facing n, pitman M⁷, and feed hook N¹, substantially as described. 5th. The combination of bracket O, having ring O¹, and spring pawl o¹¹, slide bed O¹¹, guides o¹¹¹, slide O¹¹¹, ring O⁴, and grip Q, substantially as described. 6th. The combination of bracket O, having ring O¹, spring pawl o¹¹, slide bed O¹¹, slide O¹¹¹, ring O⁴, grips Q, lever R, hopper P, spring P¹, rocker N, feed-hook N¹, pitman M⁷, bracket M¹¹, slide block M⁶, and adjusting screws M⁶ and M⁴, substantially as set forth. 7th. The combination of the slide bed O¹¹, slide O¹¹¹, having slot o⁶, stud r, lever R, and spring R¹, substantially as set forth. 8th. The combination of the shaft I, cam S¹, lever S, bar S¹¹, guide s, lever R and bracket O, substantially as set forth. 9th. The combination, with a revolving mandrel and cutting tool, of a stationary mandrel, and a chuck having its tail piece secured therein, and means whereby said chuck can be opened and closed, substantially as described. 10th. The combination, with a mandrel, a chuck having a tail piece D secured therein, of the sleeve D¹¹, provided with collars d⁶ and d⁷, spring d⁸, coiled upon said sleeve between said collars, the slide rod E, spring e, and bracket E¹, substantially as described. 11th. The combination, with a mandrel, a chuck having a tail piece D, a piece D¹ secured to said tail piece endwise, and split and formed into elastic sides with lip d¹¹¹, a sleeve D¹¹ encasing said piece, and part of the tail piece provided with collars d⁶ and d⁷, a spring D¹¹¹, in piece D¹, actuating the rod D⁴, and with collar d⁴, and pressing the same outward, and being retained by a rim d⁸, substantially as described. 12th. In a button turning lathe, the combination of the shaft I, cam M¹, crank shaft M, in bearings M O, with crank m, and crank pin m¹, crank M¹¹, with lugs m¹¹, adjusting screw M⁴, radial slots m⁶ and set screw m⁴, bracket M¹¹, female screw m⁶, slot m⁶, slide nut M⁶ and adjusting screw M⁶, substantially as described.

No. 34,864. Finishing End for Railroad Rails. (*Machine pour finir les bouts des rails des chemins de fer.*)

Nathaniel C. Foster, Fairchild, Wis., U. S., 13th August, 1890; 5 years.

Claim.—1st. A switch rail, frog, or other rail of a railroad track, constructed with a detachable finishing protection end of hard metal, as hard iron or steel, substantially as described. 2nd. The solid finishing protection end A of hard metal, as iron or steel, formed with rearwardly extending bolting portions a, substantially as described.

No. 34,865. Machine for Clipping, Scouring, Cleaning, Grading and Separating Grain. (*Machine à rogner, écurer, nettoyer, dresser et séparer le grain.*)

William Wallace Ingraham, Chicago, Ill., U. S., 13th August, 1890; 15 years.

Claim.—1st. The combination, with the receiving hoppers of the suction trunk or chute, the two being connected together by an upwardly inclined passage, with a transverse strip, substantially as specified. 2nd. The combination, with the screens in the shaker, of the oppositely inclined boxes adapted to deliver grain from different screens at opposite sides of the apparatus, substantially as described. 3rd. The combination of the shaker and its screens, of the separating trunks r and the inclined spouts H, and passages t, whereby the grain may be conducted either to the clipping or scouring mechanism, or directly to the third separation. 4th. The combination of the feeding spouts H, inclosing case I, the drum carrying the wall-overs, the base plate provided with suitable openings, and the discharge valves X, substantially as described. 5th. The combination, with the drum L, with its casing I, the valve chambers and air inlets between said chambers and casing, whereby air is admitted into the said chambers when the valves are closed, substantially as specified. 6th. The combination, with the drum L, the cylinder or casing I, made double, the valve chambers, the intermediate base plate provided with slots, as described, whereby the air is readily admitted through the grain as it is operated upon by the clipping and scouring mechanism, substantially as specified. 7th. The combination, with the drum and its casing, of the valves to receive the grain as it passes from said clipping and scouring mechanism, and the valve shafts carrying said valves and provided with weighted arms, said shafts being connected to the valves upon the side and near its bottom, substantially as specified. 8th. The scouring drum and casing, the wall-overs mounted on said drum, and each consisting of a horizontal body, provided with diagonal series of vertical pins, substantially as specified. 9th. The combination, with the drum and casing, of wall-overs mounted on the drum or forming a part thereof, arranged spirally with air spaces between them, each wall-ower having grooved or inclined ribs, substantially as specified. 10th. The combination, with the wall-ower, carrying mechanism mounted on a shaft, the wall-overs having horizontal bodies provided with ribs and pins, and the outer casing provided with grooved and ribbed linings, substantially as specified and shown.

No. 34,866. Clothes Pin. (*Épingle à linge.*)

George A. Le Baron, Sherbrooke, Que., (assignee of Charles Barlow, Cookshire, Que.,) 13th August, 1890; 5 years.

Claim.—1st. A wire clothes pin, formed of two clamping arms, the one of which is formed with a guide loop and shouldered, and the other with a spring arm extending into said guide loop, within the aforesaid shouldered portion, and forming, in connection with the latter, a space or opening for the clothes line, substantially as and for the purpose hereinbefore set forth. 2nd. A clothes pin, comprising two clamping arms A, B, the arm A, being bent on itself to form guide loop a¹, shouldered, as at a², and the arm B, being bent to form spring arm b¹, having curved portion b², the latter forming in conjunction with shoulders a², a space for the clothes line, sub-

stantially as and for the purpose hereinbefore set forth. 3rd. A clothes pin, comprising the two clamp arms A, B, the arm A, being bent on itself to form the guide loop a¹, and formed with shoulders a², and offset a³, and the arm B, being bent to form spring loop b¹, and the spring arm b², the latter being curved, as at b³, substantially as and for the purpose hereinbefore set forth. 4th. The combination, with the handle D, formed with internal grooves d¹, of the clothes pin held therein, and consisting of two spring arms, one of which is composed of two members formed respectively with shoulders a², and the other of which is bent to pass between the members of the other arm and over the shoulders a², substantially as and for the purpose hereinbefore set forth.

No. 34,867. Clothes Line. (*Corde à linge.*)

George A. Le Baron, Sherbrooke, Province of Quebec, Can., (assignee of Charles Barlow, Cookshire, Province of Quebec, Can.,) 13th August, 1890; 5 years.

Claim.—1st. A clothes line, comprising a metallic core, and a loose spirally wound covering of a wire thereon, substantially as and for the purpose hereinbefore set forth. 2nd. The combination, in a clothes line, of a wire core, and a loose spirally wound wire covering having its ends free, substantially as and for the purpose hereinbefore set forth.

No. 34,868. Horse Shoe Nail Clincher.

(*Machine à river les clous de fer à cheval.*)

William Drake Misener, Watertown, Province of Ontario, Can., and John W. Cummins, of Watertown, aforesaid, 13th August, 1890; 5 years.

Claim.—1st. In a horse shoe nail clincher, a handle formed with jaws at one end, between which is pivoted a movable corrugated lever, a spring to elevate it, and a depressing lever pivoted between the jaws of the handle for operating on the said movable lever, substantially as and for the purpose specified. 2nd. In a horse shoe nail clincher, the handle A, constructed with a corrugated jaw end c, jaws B, B, clincher lever C, pivoted to said jaws B, by pin d, and formed with corrugated surface b, b, and the depressing lever E, pivoted to the jaws B, by a pin a, and formed with the projecting end f, and the spring D, to elevate, the movable lever C, all constructed substantially as and for the purpose specified.

No. 34,869. Letter, Symbol or Ornament.

(*Lettre, symbole ou ornement.*)

James Leckie Morrison, Toronto, Province of Ontario, Can., (assignee of George J. Bellamy Rodwell, Toronto, Province of Ont., Can.,) 13th August, 1890; 5 years.

Claim.—1st. An improved sign-letter, or symbol, formed recessed in its front or obverse side, as set forth. 2nd. An improved sign-letter, or symbol, formed recessed in its front, or obverse side, and raised correspondingly on its back or reverse side, as set forth. 3rd. A sign-letter, or symbol, formed recessed in its front or obverse side, and with an attaching edge on said side, as set forth. 4th. A sign-letter, or symbol, formed recessed in its front or obverse side, and with an attaching edge on said side, and raised correspondingly on its back or reverse side, as set forth. 5th. A sign letter, or symbol, formed V-shaped in cross section of its body, the said recess being on its front or obverse side, as set forth. 6th. A sign, or advertisement, composed of letters, or symbols, formed recessed in their obverse sides, and secured thereat on the inner side of a glass pane, as set forth. 7th. A sign-letter, symbol, or ornament, recessed in its front side, the said recess being polished, gilded, or otherwise ornamented, the attaching edge surrounding said recessed face to receive the cement, which holds the sign-letter, symbol, or ornament in position, with its polished, gilded, or otherwise ornamented face next the glass, or other transparent material, as set forth. 8th. A sign-letter, symbol, or ornament, recessed in its front or obverse side, the said recess being polished, gilded, or otherwise ornamented, a transparent cover being placed over the recessed face, as set forth. 9th. A sign-letter, symbol, or otherwise ornamented, a transparent cover being polished, gilded, or said recessed face, as set forth. 10th. A sign-letter, symbol, or ornament, having an angularly recessed, polished, gilded, or otherwise ornamented face, surrounded by an edge to receive the cement which secures it to the glass, with its gilded face next to said glass, as set forth.

No. 34,870. Harvester Reel Support.

(*Support de râtelier de moissonneuse.*)

The Milwaukee Harvester Co., Milwaukee, Wis., U. S., (assignees of James A. Graham, of Milwaukee, Wis., U. S.,) 13th August, 1890; 5 years.

Claim.—1st. In a harvester, or similar machine, the combination, with an adjunctive part adjustably connected therewith, of an adjusting lever connected with and serving to adjust said adjunctive part, and a locking device by which said lever is secured in place, said lever being provided with a handle transverse to its axis capable of turning on a line transverse to the fulcrum of the lever, and connected with and serving alone to operate both the locking device and the lever, substantially as and for the purposes set forth. 2nd. In a harvester, the combination of a reel support pivoted at its lower end to the frame of the machine, a reel bearing arm pivoted to said support so as to be movable forward and backward, an adjusting lever capable of turning on an axis transverse to its fulcrum, and a locking device arranged to hold said reel bearing arm in a determinate position with reference to said forward and backward movement, and to be operated by the axial movement of said lever, substantially as and for the purposes set forth. 3rd. In a harvester, the

combination of a reel bearing arm, pivoted to a suitable support so as to permit of the vertical adjustment of the reel, an adjusting lever having suitable connections therewith and capable of turning on an axis transverse to its fulcrum, and a locking device arranged to hold the reel at a determinate point in its vertical movement and to be operated by the axial movement of said lever, substantially as and for the purposes set forth. 4th. In a harvester, the combination of a suitable reel support, a tubular reel bearing arm pivoted to said support, and a spring inserted in said arm and having a bearing arm therewith, substantially a little below the pivotal connection of said arm therewith, substantially as and for the purposes set forth. 5th. In a harvester reel support, the combination of two supporting members pivoted at their lower ends to a fixed base, their upper ends joined to a coupling piece by pivoted connections therewith, a reel bearing arm pivoted to the coupling piece, two sectors, one upon the upright, and the other upon the reel bearing arm, with locking mechanism held between said sectors and adapted to lock either one or both of them to the coupling piece, an operating lever pivoted on the reel support, extending longitudinally toward the driver's seat giving an axial motion to release the locking mechanism, and an up and down and forward and backward motion to adjust the position of the reel, substantially as set forth. 6th. In a harvester reel support, the combination of two supporting members pivoted at their lower ends to a fixed base piece, their upper ends joined to a coupling piece by pivotal connections therewith, a reel bearing arm pivoted to said coupling piece and support at their joint, and provided with a sector concentric with its pivotal hinge, a locking mechanism co-acting with said sector and coupling, and an operating lever extending longitudinally backward toward the driver, adapted to release the locking mechanism by an axial motion of said hand lever, and to adjust the reel upward and downward by a vertical motion of the hand lever, substantially as described. 7th. In a harvester reel support, the combination of two supporting members pivoted at their lower ends to a fixed base-piece, their upper ends joined to a coupling piece by a pivotal connection therewith, one of said supporting members provided with a sector, a locking mechanism to engage with said sector, and coupling a reel bearing arm pivoted to said support, and means to hold the same in operating position, and an operating lever adapted to engage said locking mechanism, and to release the same by an axial movement of said lever, and to adjust the reel forward and backward on a nearly horizontal line, by an endwise movement of the lever, substantially as specified. 8th. In a harvester reel support, the combination of the arms C, and D, pivoted at their lower ends to a fixed base-piece, their upper ends joined to the coupling E, the reel bearing arm F, made in tubular form adapted to support the reel, the open spring K, placed within the tube of said arm, one end resting against the end of said tube, the other engaging the support below the pivot of the reel bearing arm, adapted to balance the said arm and reel supported thereon in vertical adjustment, substantially as set forth. 9th. In a harvester reel support, the combination of the arms C and D, pivoted at their lower ends to a fixed base-piece, their upper ends joined to the coupling E, the reel bearing arm F, made in tubular form to furnish a suitable receptacle for spring K, cup K², or rod K¹, engaging one end of the spring K, the other end resting against the end of the tube, and rod K¹, engaging the reel support below the pivot of the reel supporting arm, adapted to support and to balance the reel in its vertical adjustment, substantially as specified. 10th. In a harvester reel support, the combination of the supporting arm C, and brace arm D, having at its upper end the sector D¹ formed upon it, and pivoted to the base piece B, the coupling E joined to the upper ends of the supporting arms, a locking pin in the coupling piece to engage with the sector D¹, a reel supporting arm pivoted to said support with means for controlling the same, and an operating lever extending longitudinally toward the driver adapted to operate the locking pin by an axial motion of the lever, and to adjust the forward and backward movement of the reel by an endwise motion of the hand lever, substantially as described. 11th. The combination of the base piece B, arms C and D pivoted thereto, coupling E joined to said arms, the reel bearing arm F provided with its sector F¹ pivoted to the coupling E and support C, a locking pin to engage said sector and coupling, an operating lever pivoted to said coupling of the reel support and extending longitudinally backward toward the driver, adapted to engage the locking pin by an axial motion of said lever, and to adjust the reel vertically by an upward and downward movement of said lever, substantially as set forth. 12th. The combination of the base piece B, supporting arm C, brace arm D provided with its sector D¹, said arms pivoted at their lower ends to the base-piece, coupling E connecting said arms at their upper ends, its sector F¹ pivoted to the coupling, and upright support provided with coupling, and locking pins adapted to unite said sectors with the coupling, and an operating lever pivoted to the coupling and extending longitudinally toward the driver, adapted to operate the locking pins by an axial motion of the lever, and to adjust the reel, substantially as specified. 13th. In combination of the supporting arm C, the brace arm D provided with its sector D¹, pivoted at their lower ends to the base piece B, the coupling E joined to their upper ends, the reel support, with sector F¹ pivoted to arm C at its coupling, and an operating lever pivoted to the coupling of the support and extending backward toward the driver, adapted to operate the locking pins by an axial motion of the hand lever, and by a proportioned length of the arm C and D to move the reel forward and backward in a nearly horizontal plane, substantially as specified. 14th. In a reel support for harvesters, the combination of the coupling E, lever H pivoted thereon, provided with the plunger pins I, I² located transverse to said lever, said plunger pins held in operating position by the interposed spring i, two adjustment sectors with which the plunger pins engage with means for operating said pins in adjusting the reel, substantially as set forth. 15th. In a harvester reel support, the hand lever H provided with two transverse holding pins, or devices, seated therein, and with a longitudinal rod H² turning on its axis, and having releasing fingers fastened thereon adapted to withdraw the locking pins from adjacent sectors, substantially as set forth. 16th. In a harvester reel support, the hand lever H made of a cast piece to hold a locking device seated transversely therein, a wrought tubular extension from

the same, and a longitudinal rod having a bearing within the tubular part and adapted to operate the locking device by an axial motion, substantially as specified. 17th. In a harvester reel support, the combination of the plunger pins I, I², provided with the lugs i¹, i², and i³, with a recess between said lugs to receive the open coiled spring i, with a seat to hold the same, two adjustment sectors in which said plunger pins engage, and an operating lever provided with fingers, or means, adapted to withdraw the plunger pins from the sectors and to adjust the position of the reel, substantially as described. 18th. In a harvester reel support, the reel bearing arm F, its forward end having the transverse sleeve L¹ to support the reel shaft, its rearward end branched to give a more secure fastening pivoted to its fellow member on a line parallel to the reel shaft, the body of the arm formed tube like open at the rear end adapted to support the reel and to provide a seat and end abutment for spring K, substantially as specified. 19th. In a harvester reel support, the combination of the base-piece B, arm C and brace arm D, having the sector D¹ pivoted thereto at their lower ends, arm F pivoted to arm C and coupling E, its forward end adapted to bear the reel, and its rearward end having the sector F¹, spring K seated in arm F, the hand lever pivoted to coupling E, its forward end connected to arm F by rod h, locking pins I¹ and I² and spring i to hold said pins in contact with the adjustment sectors D¹ and F¹ and coupling B, the whole operating substantially as and for the purposes set forth.

No. 34,871. Attachment for Vises.

(Appareil à étaux.)

James M. Lockey, (assignee of Charles Wies,) Faulkton, S. Dak., U.S., 13th August, 1890; 5 years.

Claim.—1st. An attachment for vises, consisting of the two sections A, and B, one adapted to be clamped to the vise jaw, and the other pivoted to rock on the other section, substantially as set forth. 2nd. The attachment for vises, consisting of the section A, having ears a, a, and clamp screw C, and the section B, pivoted to section A, substantially as set forth. 3rd. The improved attachment for vises, consisting of the section A, having ears a, a, and lug D, and the section B, having a socket A, receiving said lug D, and all being arranged and adapted for use, substantially as set forth.

No. 34,872. Slide Valve. (Tiroir de vapeur.)

Edward Leslie, Orangeville, Ont., 14th August, 1890; 5 years.

Claim.—1st. In a slide valve, an outer valve actuated by the valve gear, and arranged so that the central portion of its top will at all times register with the exhaust port. 2nd. A slide valve, comprising an outer valve section, an inner valve section having an open top, substantially as described. 3rd. A valve comprising an outer valve section, and an inner valve section having an open top and an upwardly extending flange that abuts against the under side of the outer valve section, substantially as described. 4th. A valve, comprising an outer valve section formed with inwardly-extending flanges and an inner valve section having an open top, and a flange which abuts against the under side of the outer valve section, and an outwardly extending flange that is overlapped by the inwardly extending flanges of the outer valve section, substantially as described. 5th. A slide valve, comprising an outer valve section operated by the valve stem and formed with corner apertures, and an inner valve section, having an open top, and formed with a flange which abuts against the under side of the top of the outer valve section within the line of the corner apertures, substantially as described. 6th. A slide valve, comprising an outer valve section having a continuous bearing face k, inwardly-extending flanges e, and a flange d, and an inner valve section having an open top, an upwardly extending flange which abuts against the under side of the top of the outer valve section, and a surrounding flange f, that is overlapped by the bearing face k, and the inwardly-extending flanges of the outer valve section, space o being left between the flanges f and d, substantially as described. 7th. A slide valve, comprising an outer valve section and an inner valve section, between which sections there is a chamber that is at all times in free communication with the motive agent, substantially as described. 8th. A slide valve, comprising an outer valve section, actuated by the valve gear, and an inner valve section, having an open top, whereby a portion of the top of the outer valve section will at all times register with the exhaust port through the inner valve section.

No. 34,873. Slide Valve. (Tiroir de vapeur.)

Edward Leslie, Orangeville, Ont., 14th August, 1890; 5 years.

Claim.—1st. A slide valve, comprising an outer valve, actuated by the valve gear and controlling the inlet ports, and inner valve contained within the outer valve for controlling the exhaust of the motive agent, and adapted to be operated by the said outer valve, sufficient play or lost motion being had between the two valves, and a plate fitted into the open top of the outer valve and resting on the top of the inner valve, substantially as shown and described. 2nd. A slide valve, comprising an outer valve operated by the valve stem, a top plate held loosely in the said outer valve, and an inner valve having lost motion or play within the outer valve, and provided with top ridges on which rests the said top plate, substantially as shown and described. 3rd. In a slide valve, an outer valve actuated by the valve gear, and provided in the underside of its sides with grooves registering at all times with the exhaust port, substantially as shown and described. 4th. In a slide valve, the combination, with an outer valve controlling the inlet ports, of a yoke fitted around the said outer valve, and adapted to slide upward, a valve stem held on the said yoke, and an inner valve contained within the outer valve and operated by the same, play or lost motion being had between the two valves. 5th. In a slide valve, the communication with an outer valve controlling the inlet ports, of a yoke fitted around the said outer valve and adapted to slide upward, a valve stem held on the same yoke, an inner valve contained within the outer valve and operated

rated by the same, play, or lost motion being had between the two valves, and a plate fitted in the open end of the said outer valve and resting on the top of the inner valve, substantially as shown and described. 6th. In a slide valve, the combination, with an outer valve controlling the inlet ports, of a yoke fitted around the said outer valve, and adapted to slide upwards, a valve stem held on the said yoke, an inner valve contained within the outer valve and operated by the same, play, or lost motion being had between the two ridges formed on top of the said inner valve, and a plate fitted into the top of the outer valve and resting on said ridges, substantially as shown and described. 7th. A slide valve, comprising an outer valve formed by an open frame, an inner valve controlled by the said outer valve and provided in its under side with an exhaust cavity and on its top with ridges, and a plate fitted into the open top of the outer valve, substantially as shown and described. 8th. A slide valve, comprising an outer valve formed by an open frame, having in the bottom of its sides grooves registering at all times with the exhaust port, an inner valve controlled by the said outer valve, and provided in its underside with an exhaust cavity and on its top with ridges, and a plate fitted into the open top of the outer valve, substantially as shown and described. 9th. In a slide valve, the combination, with an outer valve controlling the inlet ports, and having part of its under surface exposed to the exhaust port, so as to be held on its seat by the pressure of the motive agent inside of the chest, of an inner valve controlling the exhaust and contained within the said outer valve, and having lost motion, or play, with the latter, the said inner valve being held on its seat by the pressure of the motive agent within the chest, substantially as shown and described. 10th. In a slide valve, the combination with an outer valve controlling the inlet ports, and having in its under side grooves registering at all times with the exhaust, so as to permit steam passing under the said valve to escape through the exhaust, of an inner valve controlling the exhaust of the motive agent, and contained within the said outer valve, and having lost motion within the latter, and a plate held loosely in the top of the outer valve and resting on top of the said inner valve, so as to hold the latter on its seat by the pressure of the motive agent inside the chest, substantially as shown and described.

No. 34,874. Separator. (*Séparateur.*)

Edward Leslie, Orangeville, Ont., 14th August, 1890; 5 years.

Claim.—1st. A separator, provided with a screen mounted to swing, and having an intermittent fast and slow motion, substantially as shown and described. 2nd. In a separator, a screen mounted to swing, and having a slow inward stroke, a rapid outward stroke, and sudden stop at the end of the outward stroke, substantially as shown and described. 3rd. In a separator, the combination, with a screen mounted to swing, of an intermittent fast and slow motion mechanism connected with the said screen, substantially as shown and described. 4th. In a separator, the combination, with a screen mounted to swing, of a mechanism for giving a rapid outward stroke and sudden stop at the end of the outward stroke to the said screen, substantially as shown and described. 5th. In a separator, the combination, with a screen mounted to swing, of an elevator discharging on the said screen, and a mechanism actuated from the said elevator and imparting an intermittent fast and slow motion to the said screen, substantially as shown and described. 6th. In a separator, the combination, with a screen mounted to swing, of an elevator discharging on the said screen, and a mechanism actuated from the said elevator, and imparting an intermittent fast and slow motion to the said screen, and suddenly stopping the latter on its fast motion, substantially as shown and described. 7th. In a separator, the combination, with a screen mounted to swing, of an intermittent fast and slow motion mechanism connected with the said screen, to impart an alternate slow and fast stroke to the said screen, and means, substantially as described, for suddenly interrupting the fast stroke, as set forth. 8th. In a separator, the combination, with a disk, provided on its face with pins, of a pivoted arm provided with a bend adapted to be successively engaged by the said pins, a rod connected with the said pivoted arm, a rock shaft connected with the said rod, a spring pulling on the said rod, and a screen mounted to swing and connected with the said rock shaft, substantially as shown and described. 9th. In a separator, the combination, with a disk provided on its face with pins, of a pivoted arm provided with a bend adapted to be successively engaged by the said pins, a rod connected with the said pivoted arm, a rock-shaft connected with the said rod, a spring pulling on the said rod, a screen mounted to swing and connected with the said rock-shaft, and intermediate mechanism for connecting the said screen with the said shaft, substantially as shown and described. 10th. In a separator, the combination, with a disk, provided on its face with pins, of a pivoted arm provided with a bend adapted to be successively engaged by the said pins, a rod connected with the said pivoted arm, a rock-shaft connected with said rod, a spring pulling on the said rod, a screen mounted to swing and connected with the said rock-shaft, and an adjustable guide bracket for the said rod to increase or diminish its throw, substantially as shown and described.

No. 34,875. Extension Ladder.

(*Echelle à rallonge.*)

Richard S. Adley, Muskegon, Mich., U.S., 14th August, 1890; 5 years.

Claim.—1st. In a ladder, the combination of the lower ladder section, having its side bars composed of a flat side provided with right-angled sides, the upper ladder-section having its side bars located within the side bars of the lower ladder-section, and similarly constructed with flat sides provided with right-angled sides, said side bars of the two sections having their recesses or cavities located toward each other, and the devices for sliding the upper ladder-section, and thus extending the length of the ladder. 2nd. The combination of the lower ladder, having side bars consisting of flat sides provided with sides at right angles thereto to form grooves, the rounds secured to the right-angled sides of said side bars, the upper ladder having its side bars composed of flat sides provided with

right-angled side, and the rounds secured to said flat sides of the side bars, the series of rollers arranged in the side bars of the lower ladder and in the side bars of the upper ladder to give said upper ladder a free and easy movement when being manipulated, and the devices for manipulating the same, as described. 3rd. The combination of the lower ladder, having its side bars composed of sides provided with right-angled pieces, the upper ladder having its side bars composed of sides provided with right-angled pieces, said side bars of the upper and lower ladders, having their grooves or recesses located toward each other, the series of rollers arranged in the side bars of the lower ladder and the series of rollers arranged in the side bars of the upper ladder, the operating shaft carrying gears engaging toothed bars on the upper ladder, and the dogs for holding the upper ladder in its extended position, as specified. 4th. The combination of the lower ladder with its hollow side bars provided with a series of rollers, the upper ladder with its hollow side bars located within the side bars of the lower ladder, and thus presenting its cavity or recess opposite that of the lower ladder, and similarly provided with a series of rollers, the shaft with its gears engaging racks on the side bars of the upper ladder, the large guide-wheel at the upper end of the upper ladder, and the dogs for holding the upper ladder, when extended, as specified.

No. 34,876. Water Wheel. (*Turbine.*)

James Lee Shelton, Inez, Virginia, U.S., 15th August, 1890; 5 years.

Claim.—1st. In a turbine, the herein described casing, comprising the bottom plate having the guides formed integrally therewith, extending upwardly therefrom, and provided at their corners with screw-threaded pins, in combination with the top plate having grooves and perforations to receive the upper edges of the guides and the screw-threaded pins of the latter and the connecting nuts, substantially as set forth. 2nd. The combination of the casing having the guides of the pivoted gates, the operating levers mounted upon the upwardly extending pivoted pins of said gates, the boss formed centrally upon the top plate of the casing, the ring supported upon said boss and having downwardly extending pins engaging the inner ends of the operating levers, the pedestal mounted centrally upon the top plate of the casing, and having a flange bearing against the upper side of the said ring, a segmental rack mounted upon the latter, and a pinion mounted upon a shaft journaled in the top plate of the casing, and in a suitably arranged bracket, and engaging the said segmental rack, substantially as and for the purpose set forth.

No. 34,877. Vehicle and Carriage Spring.

(*Ressort de voiture.*)

George Robb, Knowlton, Que., 15th August, 1890; 5 years.

Claim.—The combination, with a carriage, or vehicle, spring, of the shoe or bearing G, and the fixed lower half leaf E, and sliding lower half leaf F, sliding within and upon the bottom of the shoe, or bearing G, substantially as and for the purpose hereinbefore set forth.

No. 34,878. Furnace. (*Fourneau.*)

John Manney Ayer, Chicago, Ill., U.S., 15th August, 1890; 5 years.

Claim.—1st. A generator for abstracting inflammable gases from fuel, and delivering them, commingled with atmospheric air, all in a highly heated state, to the place of ignition, comprising in combination a primary combustion chamber, an additional chamber, partly inclosing the primary combustion chamber, and communicating with the interior thereof, and also with the external air, whereby the commingling of atmospheric air with the gaseous products of combustion is effected, an auxiliary heating means within the inclosing chamber, and a conduit leading from the inclosing chamber to the place of ignition, substantially as described. 2nd. A generator, for abstracting inflammable gases from fuel, and delivering them, commingled with atmospheric air and steam, all in a highly heated state to the place of ignition, comprising in combination a primary combustion chamber, an additional chamber, partly inclosing the primary combustion chamber, and communicating with the interior thereof and also with the external air, a steam injector for delivering steam into the primary combustion chamber, an auxiliary heating means within the inclosing chamber, and a conduit leading from the inclosing chamber to the place of ignition, substantially as described. 3rd. A generator for abstracting inflammable gases from fuel, and delivering them, commingled with atmospheric air, all in a highly heated state, to the place of ignition, comprising in combination the primary combustion chamber B, with its ash pit D, and draft regulating doors, chambers G, and G¹, partly inclosing the primary combustion chambers and ash pit, and communicating through one or more openings F, with the interior of the primary combustion chamber, and through openings E, with the interior of the ash pit, steam coils L, within the chambers G, and G¹, and a draft flue leading from these chambers to the place of ignition, substantially as described. 4th. A generator for abstracting inflammable gases from fuel, and delivering them, commingled with atmospheric air and steam, all in a highly heated condition to the place of ignition, comprising in combination the primary combustion chamber B, with its ash pit D, and draft regulating doors, chambers G, and G¹, partly inclosing the primary combustion chamber and ash pit, and communicating through one or more openings F, with the interior of the primary combustion chamber, and through openings E, with the interior of the ash pit, steam coils L, within the chambers G, and G¹, and a draft flue leading from these chambers to the place of ignition, substantially as described. 5th. A generator for abstracting inflammable gases from fuel, and delivering them, commingled with atmospheric air, all in a highly heated condition to the place of ignition, comprising in combination the primary combustion chamber B, with its ash pit D, and draft regulating doors, chambers G, and G¹, partly inclosing the primary combustion chamber and ash pit, and communicating through one or

more openings F, with the primary combustion chamber, and through openings E, with the interior of the ash pit, a chamber I, below the ash pit, communicating through one or more openings H with the rear chamber G, steam coils L within the chambers G, G¹ and L, and a draft flue K, leading from the chamber I to the place of ignition, substantially as described.

No. 34,879. Mattress. (*Matelas*.)

Harriette Jeannette Webb, Lockport, N.Y., U.S., 15th August, 1890; 5 years.

Claim.—1st. As an improved article of manufacture, a mattress provided with a recess in its edge, and a removable section, and a hinged section fitted to the said recess, substantially as and for the purpose specified. 2nd. The combination, with a mattress having a recess produced in one edge, of a removable section contacting with the inner wall of said recess, and a hinged section attached to one side wall of the recess, the said sections essentially filling the said recess when in place, substantially as and for the purpose specified. 3rd. The combination, with a mattress provided with a recess in one edge, of a section hinged to one side wall of the recess near its outer end, a detachable section contacting with the inner wall of the hinged section and the rear or inner wall of the recess, loops attached to one side wall of the recess and the opposed free end of the hinged section, and a strap passed through said loops and through an aperture produced in one of its ends, said strap being adapted for attachment to the hinged section and the mattress, substantially as shown and described.

No. 34,880. Mineral Separator. (*Séparateur de minerais*.)

George Hutton Patterson, Montreal, P.Q., Can., 15th August, 1890; 5 years.

Claim.—1st. In a mineral separator, the combination of the casing *a*, having duct *c*, provided with a blast of air as described, also having a duct *d*, adapted to receive the said blast of air, with a hopper as described adapted to present the material to the said blast in a thin sheet of falling material, or extended form, substantially as and for the purposes set forth. 2nd. In a mineral separator, the combination of the casing *a*, having duct *c*, provided with a blast of air, also having duct *d*, adapted to receive said blast of air, with hoppers *b*, and *f*, constructed and arranged as described to present the material to be separated in a thin sheet or extended form of falling material, the whole substantially as described for the purposes set forth. 3rd. In a mineral separator, the combination of the casing *a*, having duct *c*, provided with a blast as described, with duct *d*, adapted to receive the said blast, said duct *d*, being further provided with the obstructions *s*, and with a hopper adapted to present the material to be separated in the form of a thin falling sheet of material, the whole substantially as described.

No. 34,881. Stock Car. (*Char à bestiaux*.)

John Milton Burton and Duncan Alexander McNicol, Wichita, Kansas, U.S., 22nd August, 1890; 5 years.

Claim.—1st. The combination, in a stock car provided with the side posts P, and the sheathing N, extending down at the car sides a distance from the top and forming the outer wall of the hay-receptacle, and the slats G, secured to the inner sides of said posts, extending up a distance from the car floor and forming the lower portion of the side walls of the car, of the troughs C, pivotally secured to the inner sides of said posts above said slatting G, by means of their connected bearings adapting them to turn between said posts, the folding racks R, hinged to said posts at their lower part and forming the inner wall of said hay-receptacle, the side sections B, having the arms *a*, *a*¹, hinged to the side of said posts at the base of said sheathing, wherein arms *a* are arranged extending into the car adjacent said racks, the links L, connecting the lower portion of section B, with troughs C, and the mechanism consisting of rods J, J¹, crank arms *z*¹, *z*², shaft S, and lever *z*, connected with arms *a*, of said side sections through the medium of said rods, whereby the said side sections and troughs can be turned, and the racks unfolded into position for use, substantially as specified. 2nd. The combination, in a stock car provided with the side posts P, and the sheathing N, secured to the outer upper part of said posts and forming the outer wall of the hay-receptacle, and the slats G, secured to the lower inner portions of said posts and forming the lower portion of the side walls of the car, of the troughs C, pivotally secured to the inner bearings adapting them to turn between said posts, sections B having arms *a*, *a*¹, hinged to the sides of said posts at the base of said sheathing, wherein arms *a* are arranged extending into the car within section B, with said troughs, and the mechanism consisting of rods J, J¹, crank arms *z*¹, *z*², shaft S, and lever *z*, connected with arms *a* of said sections through the medium of said rods, whereby the said side sections and troughs can be turned into or out of position for use, substantially as set forth. 3rd. The combination, in the stock car described, provided with the side posts P, and the sheathing N, secured to the outer upper part of said posts and forming the outer wall of the hay-receptacle, of the folding racks R, hinged to the upper inner part of said posts at their lower portion and forming the inner wall of the hay-receptacle, the side wall sections B, having arms *a*, hinged to the upward into the said receptacle adjacent said racks, and the mechanism consisting of the rods J, J¹, crank arms *z*¹, *z*², shaft S, and lever *z*, connected with arms *a*, of said sections, through the medium of said rods, whereby the said sections are turned and the said racks are unfolded into position for use, substantially as specified. 4th. The combination, in the stock car described, provided with the side posts P, and the sheathing N, secured to the outer upper part of said posts and forming the outer wall of the hay-receptacle, of the fold-

ing racks R, hinged at their lower portion to the inner upper part of said posts and forming the inner wall of the hay-receptacle, the spring arms F, or their equivalent, arranged to bear against said racks to yieldingly hold them folded, the side wall sections B, having arms *a* hinged to the side of said posts at the base of said hay-receptacle, and extending upward into said receptacle adjacent said racks, and the mechanism consisting of the rods J, J¹, crank arms *z*¹, *z*², shaft S, lever *z*, connecting said arms *a*, by means of said rods, whereby the said wall sections are turned and the racks unfolded into position for use, and the racks automatically folded when hay in the receptacle is consumed or removed, substantially as specified. 5th. The combination, in a stock car provided with hay receptacles in the upper part of its side walls, of the racks R, hinged at their lower part and forming the inner wall of said receptacle, the spring-arms F, or their equivalent arranged to bear against said racks to yieldingly hold them folded, and the mechanism consisting of arms *a*, of the side wall sections B, shaft S, boxed longitudinally in the upper part of the car lever *z*, and crank arms *z*¹, *z*², secured on said shaft and rods J, J¹, connecting said crank with said arms, whereby said arms are operated to unfold said racks into position for use, substantially as specified. 6th. The combination, in a stock car provided with the side posts P, and the sheathing N, secured to the outer upper part of said posts and forming the outer wall of the hay-receptacle, of the folding racks R, hinged at their lower part to the inner upper part of said posts and forming the inner wall of the hay-receptacle, the side wall sections B, having the arm *a*, hinged to said posts at the base of said receptacle and extending into said receptacle adjacent said racks, the canvas ends or folds *e*, arranged to protect said arms from contact with hay in the receptacle, and the mechanism consisting of shaft S, crank arms *z*¹, *z*², and lever *z*, secured thereon, and rods J, J¹, connecting said cranks with said arms, whereby the said sections and arms are turned, and said racks unfolded into position for use, substantially as specified. 7th. The combination, in a stock car, provided with the side posts P, of the troughs C, arranged between and pivotally secured to the inner side of said posts by means of their connected bearings *g*, the side wall sections B, having arms *a*, hinged to the side of said posts and extending into the car links L, connecting the lower portion of said sections with said troughs, and the shaft S, longitudinally arranged in the upper part of the car, the lever *z*, secured on said shaft and arranged extending through a slot in the car roof, catches *v*, *v*¹, for holding said lever, the crank arms *z*¹, *z*², secured on said shaft, and the rods J, J¹, connecting said cranks with said arms *a*, whereby the said side wall sections and troughs are turned into or out of position for use by means of said lever from the car roof, substantially as specified. 8th. The combination, in a stock car, of the pivoted side sections B, having arms *a*, *a*¹, rods B¹, connecting rods J, J¹, crank arms *z*¹, *z*², shaft S, and lever *z*, substantially as and for the purpose set forth. 9th. The combination, in a stock car, of the pivoted side sections B, having arms *a*, *a*¹, rods B¹, pivoting said sections, links L, pivoted watering troughs C, folding hay racks R, connecting rods J, J¹, crank arms *z*¹, *z*², shaft S, and lever *z*, substantially as and for the purpose set forth. 10th. The combination, in a stock car, of the pivoted side sections B, having arms *a*, *a*¹, rods B¹, pivoting said sections, watering troughs C, pivotally arranged below said sections, links L, for connecting said sections and troughs, connecting rods J, J¹, crank arms *z*¹, *z*², shaft S, and lever *z*, and catches for holding said lever, substantially as and for the purpose specified. 11th. The combination, with the side posts of the car, of the pivoted side sections adapted to lie turned on their pivots to open the car sides to increase the head space adjacent the watering troughs, substantially as set forth. 12th. The combination, with the side wall posts of the car, of the pivoted trough sections provided with their bearings to one side from their center, and adapted to be turned up into position for use centrally between the posts, and turned down out of position for use flush between said posts, substantially as set forth. 13th. The combination, with the pivoted folding hay racks, of the car, of the springs for yieldingly holding the racks folded, substantially as and for the purpose set forth. 14th. The combination, in the car described, of the shaft S, longitudinally arranged in the roof frame work of the car, of the crank arms and lever secured thereon, and of the side extending connecting rods, pivotally connected side extending connecting rods, pivotally connected with said arms for operating the pivoted side sections and watering troughs, substantially as set forth.

No. 34,882. Stock Car. (*Char à Bestiaux*.)

John Milton Burton and Duncan Alexander McNicol, Wichita, Kan., U.S., 22nd August, 1890, 5 years.

Claim.—1st. A stock car, provided with receivers fixed in the roof frame work, accessible through doors in the car roof, with main pipes seated in pockets in the car lines adjacent to the car roof, arranged along each side of the car in communication with the receivers, and with side lead pipes in communication with said mains for independently supplying water to each trough section through the car, substantially as set forth. 2nd. A stock car, provided with supply pipes seated in pockets in the car line, adjacent the car roof, along either sides of the car, in communication with a receiver or receivers into which the water is introduced into the car, and with side lead pipes communicating with said supply pipes arranged within the walls of the car, for independently and simultaneously supplying the several trough sections through the car with water, substantially as set forth. 3rd. In a stock car, the combination with pivoted watering troughs adapted to being turned into or out of position for use, of the shaft S seated in bearings in the car lines to one side from the car centre, of the lever L, fixed to and adapted to rock the shaft of the crank arms C¹ and C², the former of which is shorter than the latter, of the connecting rods *g* and *g*¹ and *e*, and the bell cranks J and J¹, substantially as and for the purpose specified. 4th. In the stock car, described, the combination with the pivoted cross-sections C and the rock shaft S and the lever L thereof, of the crank arms C¹ and C², fixed on the shaft, the former of which is shorter than the latter, of the connecting rods *g* and *g*¹, the former of which is proportionately longer than the latter, and the bell cranks and connecting rods *e*, substantially as and for the purpose specified. 5th. In a stock car, provided with side wings extending either way from

each side door way, the bracket for holding the wing sheathing and slating adjacent to door posts, where the doors slide back, consisting of the bars a and a^1 , holding the said sheathing and slating between them, and provided with horizontal extensions at their upper portion for securing them to the car plates, and with a hole at their lower portion for the reception of one end of a swiveled crank bolt, and the crank bolt a^2 for connecting said bracket bars with the door posts, substantially as and for the purposes set forth. 6th. The combination, in a stock car, provided with side extending wings, of the bracket for securing the wings sheathing and slating adjacent to the door posts where the side doors slide back, consisting of the bars a and a^1 , and bracketed to the car at their upper portions, of the crank bolt a^2 , swiveled in holes in the lower end portion of said bracket and the door post, and of the doors B , provided with the slot or recess B^1 , across their body between their styles for the reception of the crank portion of said bolt, substantially as and for the purpose set forth. 7th. In a stock car, provided with sliding side doors and depending hasps secured to the doors, as a means of fastening the doors when closed, the combination with the hasp V , of greater length than the fellow hasp, and of the guide block V , secured to the car sill adapted to be engaged by the hasp when the door is opened, substantially as and for the purpose set forth. 8th. In the stock car described, the combination with the rock shaft S , of the lever L , provided with the square socketed hub S^1 , and curved in body, substantially as and for the purpose set forth. 9th. In a stock car, provided with side extending wings, the combination with the wing frame or ribs of the plates K thereof, substantially as and for the purpose set forth. 10th. A stock car, provided with hay racks, consisting of a lower rail seated in offsets of the side posts of the car, and of bars secured at their lower end to said rails, and at their upper ends at the lower inner side of the roofs hay doors, and curved in body to reduce the width of the lower portion and increase the width of the upper portion of the hay receptacle, substantially as and for the purpose specified. 11th. In a stock car, the combination, with pivoted watering troughs adapted to be turned into and out of position for use of the shaft, of two sections seated in bearings in the car lines to one side from the centre of the lever L , provided with the square socket hub, into which the shaft sections are socketed, of the crank arms C^1 and C^2 , the former of which is shorter than the latter, and of the connecting rod and bell crank mechanism for connecting the troughs, substantially as and for the purpose specified.

No. 34,883. Grain Harvester. (*Moissonneuse.*)

The Milwaukee Harvester Company (assignees of James A. Graham) Milwaukee, Wis., U.S., 22nd August, 1890; 5 years.

Claim.—1st. The combination in a grain harvester, of a tilting lever of tubular form, having a rearward projecting arm, terminating with an operating handle, the transverse axis of which is placed at about a right angle with the plane of movement of the lever, the locking plunger and the operating handle connecting rod formed into a single piece, the connecting rod constituting a pivot for the operating handle and the locking plunger, a spring for holding the locking plunger in engagement with the notches upon the lever sector, and a sector secured to the harvester frame upon which the lever is pivoted, substantially as set forth. 2nd. The combination, in a grain harvester, of a tilting lever of tubular form, having a rearward projecting arm, terminating in an operating handle, connected with the locking plunger by means of a connecting rod, the connecting rod constituting a pivot for the operating handle and the locking plunger, and located within and enclosed by the rearward projecting arm of the lever, a coiled spring encircling the connecting rod operating to hold the locking plunger in its engagement with the lever sector, and the sector secured to the harvester frame, substantially as set forth. 3rd. In a harvester tilting lever, having a pivot piece a , cast in one piece, and having lugs upon its lower side for connecting it with its sector, its rearward projection constituting a clasp in connection with the pipe C , terminating in a pivoted handle, the locking plunger a , and its handle connecting rod c , in combination with the lever sector secured to the harvester frame, the oblique brace e , and the harvester seat plank E , substantially as set forth. 4th. In a harvester tilting lever, having a pivot piece a , cast in one piece, and having lugs upon its lower side for connecting it with its sector, its forward projection provided with an eye for connecting the lever to the harvester pole by means of the rod f , the elongated slot for the reception and passage of its sector, the rearward projecting arm of the lever terminating with an operating handle, the operating handle connected with the locking plunger by rod c , which also serves as their pivot for locking or unlocking the lever, with the notches formed upon its sector, and the lever sector secured to the upright b , in combination with the harvester frame and the harvester pole, substantially as set forth. 5th. In a harvester, the combination with the frame and pole having a hinged connection therewith, of a tilting lever fulcrumed to the frame and connected with the pole, a locking device by which the lever is secured in the desired position, and a handle connected with the locking device by a rod capable of turning axially, said handle serving to operate both the lever and the locking device, substantially as and for the purpose set forth.

No. 34,884. Lawn Rake and Sweeper.

(*Balai et rateau à gazon.*)

Marshall E. Pontious and Fried Volk, Cleveland Ohio, U.S., 22nd August, 1890; 5 years.

Claim.—1st. The main frame, having side plates with master wheels at the front, and a roller at the rear to support the frame, in combination with a box or receptacle attached to said frame at its front and having wheels at the rear, and a rake and rotary sweep, substantially as described. 2nd. A lawn rake and sweep, having a rake with teeth to slide over the lawn, and a rotary sweep over the said rake, in combination with a receptacle for the rakings, and a shield above the rake and behind the sweep to prevent the sweepings from working out at the front of the receptacle, substantially

as described. 3rd. The side plates, provided with adjustable bearings at their rear, and a roller in said bearings, and master wheels with gear on the outside of said plates at their front, in combination with a rotary sweep driven from said master wheels, a rake, and a receptacle for the sweepings, substantially as described. 4th. The rake, having a flat platform or plate back of the teeth, the side plates of the main frame, having flanges on their inner sides, between which said rake plate passes, and set screws in said flanges to set the elevation or depression of the points of the rake, substantially as described. 5th. The main frame, having supporting wheels, in combination with a detachable receptacle, having wheels secured at the sides of the main frame, a rake, and a revolving sweep, substantially as described. 6th. The main frame, provided with master wheels at the front, and at the rear an adjustable roller and side flanges for supporting the rake, in combination with a receptacle to carry the rakings, having a bent-up portion at its front, and a receptacle attached thereto, and screws in the said flanges to determine the pitch of the rake, substantially as described.

No. 34,885. Friction Clutch.

(*Embrayage à friction.*)

Hans P. Claussen, Milwaukee, Wis., U.S., 22nd August, 1890; 5 years.

Claim.—1st. In a friction clutch, the combination of friction rings or jaws, one of which is provided with a hub, a collar connected with and adjustable lengthwise of said hub, bell crank levers fulcrumed to said collar and pivoted by one set of arms to and carrying the other ring or jaw, and means for forcing the other set of arms outwardly from the axis of the clutch, so as to bring the friction surfaces into engagement, substantially as and for the purposes set forth. 2nd. In a friction clutch, the combination, with clamping rings or jaws movable towards or from each other, and an interposed disk or ring arranged to be engaged on opposite sides by said clamping rings or jaws, of angular levers connected with said clamping rings or jaws and provided with inclines, and a collar fixed on the clutch shaft, with which said inclines engage to move said clamping rings or jaws out of engagement with the interposed disk or ring, substantially as and for the purposes set forth. 3rd. In a friction clutch, the combination, with a pair of clamping rings movable towards and from each other lengthwise of the shaft upon which they are mounted, an interposed ring arranged to be engaged on opposite sides by said clamping rings, levers fulcrumed to one of said clamping rings and connected with the other, and having projections which engage with a fixed collar on said shaft, and a sleeve movable lengthwise of said shaft and linked to said levers, substantially as and for the purposes set forth. 4th. In a friction clutch, the combination of a pair of clamping rings, one of which is provided with a hub movable lengthwise of the shaft upon which it is mounted, angular levers fulcrumed to said hub and having their shorter arms pivoted to the other clamping ring, an interposed ring arranged to be engaged on opposite sides by said clamping rings, and a sleeve movable lengthwise upon said shaft and linked to the longer arms of said levers, substantially as and for the purposes set forth. 5th. In a friction clutch, the combination of a pair of clamping rings movable towards and from each other lengthwise of the shaft upon which they are mounted, an interposed ring arranged to be engaged on opposite sides by said clamping rings, levers fulcrumed to one of said clamping rings and having their shorter arms pivoted to the other, a sleeve movable lengthwise of said shaft and linked to the longer arms of said levers, and means of adjusting the connections between said levers and one of said clamping rings, whereby wear on the working faces of the clutch is taken up, substantially as and for the purposes set forth. 6th. In a friction clutch, the combination of a pair of clamping rings or jaws, one of which is provided with a hub movable lengthwise of the shaft upon which it is mounted, a collar connected with and adjustable lengthwise of said hub, angular levers fulcrumed at their angles to said collar, and having one set of arms pivoted to and carrying the other clamping ring or jaw, an interposed ring arranged to be engaged on opposite sides by said clamping rings or jaws, and means for forcing the other set of arms of said levers outwardly from the axis of the clutch, so as to move said rings or jaws into engagement with the interposed ring, substantially as and for the purposes set forth. 7th. In a friction clutch, the combination, with a pair of clamping rings movable towards and from each other (lengthwise of the shaft upon which they are mounted), an interposed ring arranged to be engaged on opposite sides by said clamping rings, and angular levers fulcrumed to one of said rings and connected with the other and having projections adapted to engage with a collar fixed on said shaft, whereby said clamping rings are moved out of contact with said interposed ring, substantially as and for the purposes set forth.

No. 34,886. Car-Coupling.

(*Atelage de chars.*)

Alfred Howard Renshaw and Howard Hart Burden, Troy, N. Y., U.S., 22nd August, 1890; 5 years.

Claim.—1st. The combination, with a knuckle form coupler-part, which is constructed and arranged to swing into the draw-head when connecting, and out of the same when disconnecting, of a push block arranged within said draw-head to bear against the inner end of the coupler part, and a rod extending through the sides of said draw-head and engaging with said push block, said rod being adapted to be moved laterally, and to move said push block against the inner end of, and so open the coupler part, and to be restored to position by the inner end of the coupler part, substantially in the manner and for the purposes set forth. 2nd. The combination, with a knuckle form coupler part, constructed to swing within the draw-head of a lock block hinged on a rod on which it rises to allow the inward movement of the coupler part, and arranged to automatically swing down to lock the coupler part, and a push block arranged to engage with said rod, and to be moved inwardly by it to push open said coupler part, substantially in the manner and for the purpose set forth. 3rd. The combination, with the knuckle form coupler

part, constructed to swing within the draw-head of a lock block, a push block and a rod arranged to operate both the locking block and the push block, substantially as described. 4th. The combination, with a knuckle form coupler part, constructed to swing within the draw-head of a rocking lock block and a reciprocating push block, a rod connected to and operating both the lock and the push block, the rod being formed, substantially as described, to oscillate the lock block and reciprocate the push block, substantially as described. 5th. The combination, with a knuckle form coupler part, constructed to swing within the draw-head of an oscillating lock block, a reciprocating push block, and a rod passing through both blocks being free to move laterally in the lock block, and free to rotate in the push block, substantially as described.

No. 34,887. Wire Nail and Machinery for the Manufacture of Wire Nails.
(*Clou de fil de fer et machine pour sa fabrication.*)

William Osborne Tyers, Smethwick, Stafford, England, 22nd August, 1890; 5 years.

Claim.—1st. Making on one or more of the sides of wire nails having a triangular or other angular figure in cross section, a series of cross or rib like projections either at right angles to the axis of the nail or inclined thereto, the said projections, when made on adjacent sides of the nail, preferably alternating with each other for the purpose, and substantially as hereinbefore described and illustrated in the accompanying drawings. 2nd. The combination, in machinery, for the manufacture of wire nails, of feeding rolls which also act as shaping rolls, that is, give a triangular or other angular figure to the cylindrical wire fed into the machinery, and when desired form cross or rib like projections on one or more sides of the shaped wire, substantially as hereinbefore described and illustrated in the accompanying drawings. 3rd. The construction of the feeding and shaping rolls, and the arrangement or combination, of parts for giving a reciprocating motion to the rolls for effecting the feeding and shaping of the cylindrical wire, and the formation of the cross or rib like projections on one or more sides of the wire, substantially as hereinbefore described and illustrated in the accompanying drawings.

No. 34,888. Knotter for Grain Binders.
(*Machine à nouer pour lieuses à grain.*)

John Senior Woodhouse, and Albert Ernest Woodhouse, Amberley, Canterbury District, New Zealand, 22nd August, 1890; 5 years.

Claim.—1st. A knotter, consisting of a shaft, a head extending laterally from the shaft, tapering at the end, and with one or more retaining grooves, substantially as described. 2nd. A knotter, consisting of a cylindrical head extending transversely from a revolving or vibrating shaft, said head being provided with a transverse opening, and a slot connecting said opening with the exterior of the head to admit the cord to the opening, substantially as described. 3rd. A knotter, consisting of a cylindrical head extending transversely from a revolving shaft, said head having a tapered outer end, a transverse opening at the base of the tapered portion, a transverse slot extending outward from the opening, said slot and opening forming reversely directed overlapping points, substantially as described. 4th. A knotter, consisting of a cylindrical head extending transversely from a revolving shaft, said head having a transverse inclined slot, a transverse opening at the base of said slot, and grooves upon its surface radiating from said opening, substantially as described. 5th. A knotter, consisting of a cylindrical head extending transversely from a revolving or vibrating shaft, said head having an inclined transverse opening, and an inclined or spiral slot extending into the opening and forming a hook upon the side of the slot opposed to the shaft, substantially as described.

No. 34,889. Needle. (*Aiguille.*)

Eva Jennie Hall, Stillwater, Minnesota, U. S., 22nd August, 1890; 5 years.

Claim.—1st. In a needle, in combination with the shank having the open sided eye, the spring for closing such eye extending upward close to the shank, and having its upper end bent outward to stand away from the side of the latter, a fixed hood on the shank having a tongue extending outside of the spring end, and engaging the same spring below the bend close against the needle shank, while the spring end stands away therefrom, substantially as and for the purpose described. 2nd. In a needle, in combination with the shank the eye and extending upward past the latter, and having its upper end bent outward and standing normally away from the shank, and wards outside of and past the spring end, substantially as and for the purpose described.

No. 34,890. Saddle for Velocipedes.
(*Selle de velocipèdes.*)

Arthur Lovett Garford, Elyria, Ohio, U. S., 22nd August, 1890; 5 years.

Claim.—1st. In a saddle for a bicycle or tricycle, the substantially U-shaped spring B, having the rear end of its upper leg curved upward and provided with means for attaching thereto the back frame of the saddle seat, substantially as described. 2nd. In a saddle for a bicycle or tricycle, a substantially U-shaped spring having the rear end of its upper leg curved upward, a clamp C, provided with a suitable hole in which the lower leg of said spring is adjustably held, and provided also with a second hole below the first and

adapted to fit the L saddle support of a tricycle or bicycle, and set screws for securing said clamp to said spring and saddle support respectively, substantially as described. 3rd. In a saddle support for a bicycle or tricycle, the combination of the substantially U-shaped spring, the upper leg of which is curved upward at its rear end, a substantially vertical spring secured to the forward end of said upper arm with a saddle seat suitably attached at its rear end to the upper end of the U-shaped spring, and at its front end to the free end of the other spring, substantially as and for the purpose specified. 4th. In a saddle for a bicycle or tricycle, in combination a substantially U-shaped spring, the upper leg of which is curved slightly upward at its rear end, a spring d, a clamp for securing one end thereof to the upper leg of the U-shaped spring, and a saddle seat suitably attached at its rear end to the upper end of the U-shaped spring and at its forward end to the free end of said spring d, substantially as and for the purpose specified.

No. 34,891. Process of Manufacturing Wheels. (*Appareil pour la fabrication des roues.*)

Thomas William Meachem, Syracuse, N. Y., U. S., 22nd August, 1890; 5 years.

Claim.—The process of manufacturing wheels, consisting in cutting from a sheet of rawhide a plurality of disks all of the same or approximately the same diameters, perforating said disks at coinciding positions, inserting a pin or pins vertically in the perforation or perforations of one of said disks, then slipping the remainder of the disks successively on to the aforesaid pin or pins, and piling said disks one upon the other and upon the first disk, and applying cement to the adjacent faces thereof, and then compressing the tier of disks in a direction at right angles to the planes of the disks.

No. 34,892. Multitubular Flue for Steam Boilers. (*Chaudière à vapeur multitubulaire.*)

William Cook, Salt Lake City, Utah, U. S., 22nd August, 1890; 5 years.

Claim.—1st. A flue tube of a steam boiler whose delivery end extends beyond the flue sheet, said extension being exteriorly screw threaded, in combination with an interiorly screw threaded ferrule, as and for the purpose set forth. 2nd. A flue tube of a steam boiler whose delivery end extends beyond the flue sheet, said extension being exteriorly screw threaded, in combination with an interiorly screw threaded ferrule, having oil ducts or passages, as and for the purposes set forth. 3rd. A flue tube of a steam boiler whose receiving end has a retaining lip formed with an annular chamber 8, for a packing gasket at the junction of the receiving end of the flue with the tube sheet 6, and whose delivery end extends beyond the flue sheet for a screw-threaded retaining ferrule formed with an annular chamber 10, for a packing gasket at the junction of the flue with the tube sheet 6.

No. 34,893. Hanger for Electric Lamps.
(*Support de lampe électrique.*)

Allen G. Ingalls, and Richard T. Allen, Ottawa, Ontario, Canada, 22nd August, 1890; 5 years.

Claim.—1st. A hanger for electric lamps, consisting of a pivoted arm, caused to steadily swing from the lowest to the higher level by means of a rack and pinion, which causes the lamp to be raised or lowered while being continually under the control of the operator, as set forth. 2nd. The combination, in an electric lamp hanger, with the arm B, having the base block d, the shaft e, and the screw or threaded part of the shaft f, the nut f', and the loose collar f'', the cross trees h, h, the arm i, and the part or number σ , carrying the cables a, a, a, of the brace c, the elevating arm G, having the holes s, s, s, the brace t, the way k, k, the roller j, the link l, and rack E, substantially as set forth. 3rd. The combination, in an electric lamp hanger, with the pinion D, acting in its notched bearing, with the rack E, the link l, the brace t, and the arm G, substantially as set forth. 4th. The combination in an electric lamp hanger of the cam or detent n, with the rack E, as set forth.

No. 34,894. Washing Machine.
(*Machine à blanchir.*)

Andrew Fayette Boyle, (assignee of Joseph Warren Baker,) Corry, Pennsylvania, U. S., 22nd August, 1890; 5 years.

Claim.—The combination in a washing machine, of an oscillating tub A, having a semi-elliptical shaped bottom A', and a fluted wash board B therein, with a fluted compression roller M, mounted in vertically moving bearings L, L, having compression springs k, k, secured to said bearings and to the frame, substantially as and for the purpose set forth.

No. 34,895. Pitman. (*Bielle.*)

James M. Lookey, Faulkton, S. Dak., U. S., (assignee of Charles Wies, of same place,) 22nd August, 1890; 5 years.

Claim.—1st. An improved pitman, having its head formed with upper and lower arms toothed on their adjacent faces, and arranged to engage the diametrically opposite edges of the same wheel in reverse movements of the pitman, substantially as set forth. 2nd. The combination of the toothed wheel, the pitman having its head formed with upper and lower toothed arms arranged to alternately engage the opposite sides of said toothed wheel, and devices by which the said arms may be alternately held in engagement with the wheel, substantially as set forth. 3rd. The combination of the

wheel, and pitman, having arms arranged to alternately engage the opposite sides of said wheel as the pitman is reciprocated, substantially as set forth. 4th. The combination of the toothed wheel, the disks on opposite sides of said wheel and arranged to project to form keeper flanges alongside the wheel, the pitman having its arms toothed to engage the wheel, and alternately engaged with the opposite sides thereof as the pitman is reciprocated, substantially as set forth. 5th. The combination of the shaft, the fixed fly wheel on the shaft, the disk D, the toothed wheel, the disk E, the fly wheel threaded on the shaft up against the disk E, the pitman having upper and lower arms arranged to alternately engage opposite sides of the wheel as the pitman is reciprocated, and devices by which the said arms may be alternately held in engagement with the wheel, all substantially as set forth. 6th. The combination of the wheel, the pitman having arms engaging the opposite sides of said wheel, and provided with a lug or portion J, and the guide rail or plate K, arranged to receive the bearing of the said lug or portion, substantially as described, whereby the arms of the pitman may be alternately held in engagement with the wheel, as and for the purpose set forth. 7th. The combination of the toothed wheel, the pitman having arms arranged to alternately engage opposite sides of the wheel as the pitman is reciprocated, the guide plate K, a lug J, on the pitman arranged to bear above and below said rail in the reverse movements of the pitman, and a bearing M, arranged for engagement by the pitman, substantially as and for the purposes set forth.

No. 34,896. Collapsible Railway Car. (*Moyens d'empêcher les collisions des chars de chemin de fer.*)

Louis C. Zolk, Bowling Green, Kentucky, U.S., 22nd August, 1890; 5 years.

Claim.—1st. A collapsible railroad car, comprising an outer section closed at its rear end, and an inner longitudinally sliding section likewise closed at its rear end and acting as a piston or buffer in the outer section, substantially as set forth. 2nd. A collapsible railroad car, comprising an outer box-like section having an inwardly extending annular flange at its open front end, and a longitudinally sliding section having an outwardly extending flange at its rear end, substantially as set forth. 3rd. In a collapsible railroad car, the combination of an outer box-like section having a narrow V-shaped slot in its bottom, and a longitudinally sliding section having a closed rear end, substantially as and for the purpose set forth. 4th. In a collapsible railroad car, the combination, with the outer box-like section having interiorly arranged longitudinal grooves, of the longitudinally sliding section having guide rails to engage said grooves, substantially as set forth. 5th. In a collapsible railroad car, the combination with the collapsible sections, of a catch or device to prevent said sections from collapsing or telescoping together under normal conditions, substantially as set forth. 6th. In a collapsible railroad car, the combination, with the collapsible sections, of a catch pivoted in a slot in one section, and having a cam shaped projecting head adapted to bear against the other section, and provided with a downwardly extending shank having a weight at its lower end, substantially as and for the purpose set forth. 7th. In a collapsible railroad car, the combination, with the collapsible sections having solid rear ends, of the spring cushions mounted upon the adjacent faces of said rear walls, substantially as and for the purpose set forth. 8th. In a collapsible railroad car, the combination, with a closed box-like outer section, of a longitudinally sliding inner section having a solidly closed rear end, access to which may be had through a door or doors at the front end, substantially as and for the purpose set forth. 9th. In a collapsible railroad car, the combination of the box-like outer section mounted upon trucks and having an inwardly extending flange at its open front end, the longitudinally sliding section having its front ends supported upon trucks and provided at its rear end with an outwardly extending flange, a pivoted catch to prevent the sections from collapsing under normal conditions, a slot in the bottom of the outer section for the escape of compressed air, and spring cushions or buffers upon the adjacent faces of the rear walls of the said collapsible sections, substantially as and for the purpose set forth.

No. 34,897. Windmill Tower. (*Charpente de moulin à vent.*)

Charles Bingley Putnam, Marion, Iowa, U. S., 22nd August, 1890; 5 years.

Claim.—1st. In combination, with a superposed wind wheel frame turning in a horizontal plane and having a depending pivot, an annular turn-table casting, having vertical cells open at bottom, and corresponding drilled and tapped bosses, provided with set screws, and converging corner posts having vertical upper extremities fastened in the respective cells by said set screws, substantially as hereinbefore specified. 2nd. The combination in a windmill tower, of converging corner posts having vertical upper extremities, an annular turn-table casting, having vertical cells fitted to said post extremities, and set screws fastening the latter in said cells, a superposed wheel-frame casting, having a depending pivot, an annular casting having radial arms, with concave outer ends fitted to the posts within a converging portion of the tower, and a collar fastened on said pivot below the casting last named, substantially as hereinbefore specified. 3rd. The combination of the corner posts A, turn-table B, wheel frame casting C, tubular pivot D, collar E, casting F and band G, substantially as hereinbefore specified.

No. 34,898. System and Apparatus for Protecting Railway Trains. (*Appareil pour protéger les chars de chemin de fer.*)

William H. Rushforth, Rutherford, N.J., U.S. (assignee of Virgil A. Krepps, Kenico, N.Y., U.S.) 23rd August, 1890; 5 years.

Claim.—1st. The method of protecting railway trains by electrically signalling to a given point the fact of a stoppage, from two

other points, one adjacent to the front and the other to the rear of the train, substantially as set forth. 2nd. The method of protecting railway trains by electrically signalling the fact of a stoppage from two points, one adjacent to the front and the other to the rear of the train, to another given point, and there recording such signals. 3rd. The combination, with the main line circuit, of an electrical system of a set of instruments, consisting of a call box, a sounder and a switch, with an electrical circuit from the latter through the call box and sounder, and a spring, whereby the switch is normally held in position to cut out the call box and sounder and complete the main circuit, but when the spring is depressed will shut the circuit through said call box and sounder, substantially as set forth.

No. 34,899. Table. (*Table.*)

Edwin Harrison, Strathroy, Ont., Canada, 25th August, 1890; 5 years.

Claim.—1st. A combination table and writing desk, having a hinged drop rail desk, and compartments forming pigeon holes on either or both sides of said desk, substantially as and for the purpose hereinbefore set forth. 2nd. In combination, table top A, drop rail B, drawer C, the top of which forms a writing desk and compartments D, substantially as set forth.

No. 34,900. Cornice and Self-Mitring Moulds. (*Corniche et moule à onglet automatique.*)

Lauson Lighthouse, Strathroy, Ont., Canada, 25th August, 1890; 5 years.

Claim.—A pair of cornice and mitring moulds, consisting of mould plate or pattern D, attached to face plate B, which is attached angularly on the shoe A, and having the brace or handle C connecting the back of face plate to upper side of shoe, arranged and operated substantially as shown and specified.

No. 34,901. Attachment for Feed Water Injectors. (*Appareil pour injecteurs à eau d'alimentation.*)

Columbus Phillips, Birmingham, Ala., U. S., 25th August, 1890; 5 years.

Claim.—1st. The combination, with a boiler of a chamber G, adapted to receive feed water from an injector secured to the boiler above the water line, and opening through its bottom directly into the boiler and provided with check valves between it and the injector, a valve within said chamber adapted to fit into the opening between the chamber and the boiler to shut off the steam from the boiler, and means for operating said valve from the outside, substantially as set forth. 2nd. The combination, with a boiler, of a chamber G, adapted to receive feed water from an injector secured to the boiler above the water line, and provided with check valves discharging against each other, as and for the purpose specified. 3rd. The combination, with the boiler of a chamber communicating directly through its bottom with the steam space in the boiler secured thereto, and provided with check valves through which said chamber is adapted to communicate with an injector, and a spark-blower connected with the chamber, substantially as described.

No. 34,902. Umbrella Stand. (*Porte-parapluie.*)

George R. Davis, St. John, Canada, N.B., 25th August, 1890; 5 years.

Claim.—An improved, convenient and cheap umbrella stand, consisting of a frame A, bearing B, ring C, pan D, substantially as and for the purpose hereinbefore set forth.

No. 34,903. Evaporating Apparatus. (*Appareils évaporatoires.*)

Ross Jones Hoffman, Binghamton, N. Y., U. S., 25th August, 1890; 5 years.

Claim.—In combination, with the still for treating hydrocarbon oils, a steam pipe within said still arranged to substantially cover the surface exposed to the heat, the said pipe being placed close to said surface, and being provided with discharge orifices opening directly against the said surface, whereby the jets of steam are caused to impinge directly on the surface to be protected, as and for the purpose set forth.

No. 34,904. Two-Wheeled Vehicle. (*Voiture à deux roues.*)

Alvin J. Glick, Millersville, Ill., U.S., 25th August, 1890; 5 years.

Claim.—1st. The combination of the carriage spring secured to and projecting forward from the axle, the body and the bracket secured to the bottom of the body, projecting forward therefrom, and having its front end pivoted to the front end of the spring, as set forth. 2nd. The combination of the spring, the body, the bracket secured to the body and pivoted to the spring, the brace secured to the body, and the link extending between the body and the spring, as set forth. 3rd. The combination of the spring, the shafts, the clips secured to the shafts and the spring, the clip plate thereof having a perforated lug, the T-shaped brace secured to the body, the link extending between said brace and the said perforated lug, and the bracket secured to the body and pivoted to the spring, as set forth.

No. 34,905. Book Attachment.*(Accessoires pour livres.)*

Thornton Flemming Gregg, New York, N. Y., U. S., 25th August, 1890; 5 years.

Claim.—1st. The combination, with the index or similar book, of the cover of heavy paper or similar material, the flap or leaf *g*, formed as a continuation of one cover, and having a turned over edge portion *g'*, the strip *h*, in part attached to the upper face of the folded edge, and the adjacent faces of the portions *g'* and strip *h*, being surfaced with adhesive material, substantially as specified. 2nd. The combination, with the index or similar book, of the cover of heavy paper or similar material, the flap or leaf *g*, formed as a continuation of one cover and having a turned over edge portion *g'*, the strip *h*, attached to the upper face of the folded edge, and the adjacent faces of the portion *g'*, and strip *h* being surfaced with adhesive material, and the strip *i*, of binders' board secured to the upper face of the free edge of the strip *h*, substantially as and for the purposes set forth.

No. 34,906. Barrel Trunk. *(Valise-baril.)*

Sophia Bethena Jones, Atlanta, Ga., U. S., 25th August, 1890; 5 years.

Claim.—1st. In a barrel trunk, the combination, with the body having recesses provided with cross-bars, of the detachable feet having their ends bent to form braces abutting against the body of the trunk, said feet being provided at their upper ends with bent portions adapted to be inserted into the said recesses over the cross bars, substantially as set forth. 2nd. In a barrel trunk, the combination with the trunk body, having recesses provided with cross-bars, as described, of the spring feet having braces to abut against the body of the trunk, and bent ends adapted to be inserted into the recesses over the cross bars, and to be retained in said recesses by the spring catches formed by the bent ends engaging the cross bars, substantially as set forth. 3rd. In a barrel trunk, the combination, with the body having the hinged lid or cover, of the semicircular lids 12, hinged to a horizontal partition in one end of the trunk, and the tray supported removably upon longitudinal cleats adjacent to the front and rear sides of the cover, substantially as set forth.

No. 34,907. Alphabetical Letters and Numerical Figures, for Signs, Advertising and other Purposes.*(Lettres alphabétiques et chiffres, pour enseignes, annonces et autres.)*

Robert Fergus Smith, Dunedin, New Zealand, 25th August, 1890; 5 years.

Claim.—The combination, for the production of letters or numerals of the parts 1 to 9, inclusive, as shown and described for the purpose set forth.

No. 34,908. Means for Advertising and for Indicating the Departure, Arrival and Stopping Places of Trains. *(Moyen d'annonce et indicateur du départ, de l'arrivée, et des arrêts des trains.)*

Alfred William Armstrong, London, Eng., 25th August, 1890; 5 years.

Claim.—1st. The combination, with a magic lantern, having pictures or slides arranged to be moved successively into position between the light and lens, of a mirror so arranged that the rays of light, passing through the said lens and reflected by the said mirror, will fall obliquely upon a vertical, or nearly vertical, surface beneath or at either side of the said lens, for the purpose specified. 2nd. The combination of a frame or case, a magic lantern, and means comprising a suitable electrical circuit and electrical contacts, and clock work adapted to periodically make and break the said circuit, and thus through an electro-magnet release and permit the periodical operation of other clock-work, for automatically changing or shifting the pictures or slides enclosed in the said frame or case, and a mirror, whereby the rays of light passing through the said lens will be reflected upon the said frame or case, or upon a surface in front of the same, for the purpose specified. 3rd. The combination of the electric lighter *x*, the cock or valve *y*, electro-magnet *v* and the contact pieces *Y*¹, *Z* and *Z'*, for automatically lighting the lamp *w*, when the supply of the illuminant is turned on, and for closing or completing the electric circuit to the clock-work mechanism by the same operation, substantially as described. 4th. The combination of the disc *H*, electro-magnet *L*, armature *K*, pawl or tooth *K'*, and contact springs or pieces *I* and *G*, for automatically extinguishing the light at any predetermined time. 5th. The arm or lever, having a suitable extension, and acted upon by a spring, and the shutter or sliding or obscuring the light during the changing of the pictures or slides, as and for the purpose specified. 6th. In an apparatus for exhibiting pictorial and other advertisements, at night or in dark places, a screen of semi-opaque glass, on the exterior of which the advertisement or the like will be projected or reflected, and on the interior of which the direct rays from the lamp will fall, for the purpose specified.

No. 34,909. Sad Iron. *(Fers à repasser.)*

John H. Dubrow, Cleveland, Ohio, U. S., 25th August, 1890; 5 years.

Claim.—1st. The sad iron, having its supply tank or holder connected thereto by a pipe passing through the top of the iron, and having an arm within the iron, extending out beyond one end or edge of the iron, and outward and downward, and uniting at its

lower end with an upward and outward inclined arm, having a plug valve closing a jet opening in its lower end, and the burner having an upward and outward inclined tube, the upper end of which stands opposite and slightly away from the jet opening of said latter pipe arm, substantially as set forth. 2nd. The sad iron, having its supply tank or holder connected thereto by a pipe passing through the top of the iron, and having an arm within the iron extending out beyond one end or edge of the iron, and outward and downward, and uniting with an upward and outward inclined arm, having a plug valve closing a jet opening in the lower end of the latter pipe arm, and the burner having an upward and outward inclined tube, the upper end of which stands opposite and slightly away from the jet opening of said latter pipe arm, the said tank having a valved air tube in its upper end, substantially as specified. 3rd. The sad iron, provided with the burner, and a tank or holder having its discharge pipe connected to the sad iron cover, substantially as shown and described. 4th. The sad iron, provided with the burner having a filling tube projecting upwardly and outwardly through the sad iron, and holder or tank having its discharge pipe connected to the sad iron cover or top, and provided with an air inlet tube or mouth piece, provided with a valve or cock, substantially as shown and described. 5th. The sad iron, provided with the burner having a filling tube projecting upwardly and outwardly through the sad iron, and holder or tank having its discharge pipe connected to the sad iron cover or top, and provided with an air inlet tube or mouth piece, provided with a valve or cock, substantially as shown and described. 6th. The sad iron, provided with a burner or lamp, having a filling tube extending outwardly through the sad iron, and the tank or holder having an air inlet valve in its upper end, substantially as shown and described. 7th. The sad iron, provided with the tank or holder, having the supply pipe running therefrom, and air inlet valve in its upper end containing a series of connected orifices, the opening and closing of which is regulated by a set screw, substantially as shown and described.

No. 34,910. Converting Iron into Steel.*(Acier le fer.)*

Francis Gordon Bates, Philadelphia, Pennsylvania, U. S. A., 25th August, 1890; 5 years.

Claim.—The within described mode of converting into steel, of any desired degree of hardness or quality, iron of any description, or low steel, said mode consisting in packing the articles in a tight flask with carbon silica and alumina in proportions, substantially as specified, and then subjecting the closed flask and its contents to the action of heat, as set forth.

No. 34,911. Flanged Bobbin. *(Bobine à rebord.)*

Joshua Henry Wilson, and John Greenwood, Cornholme, Todmorden, Lancaster, England, 25th August, 1890; 5 years.

Claim.—1st. A flanged bobbin, having two parallel continuous peripheral grooves formed in the rim of the flange or head and having secured thereto a strip or band of metal substantially U-shaped in cross section, the lateral edges of which are wrapped or compressed into the said peripheral grooves to form a protecting and strengthening band, substantially as hereinbefore described. 2nd. A flanged bobbin, having a continuous peripheral groove or recess *b'*, formed in the outer portion of one of the faces of the flange or head, and a parallel groove formed in the rim of said flange intermediate of its two faces, and having a closely fitting protecting strip or band of metal bent around the periphery of the flange and into said grooves, substantially as hereinbefore described.

No. 34,912. Brick Shot. *(Boulettes de brique.)*

Guido Cintio Alexius, Covington, Louisiana, U. S. A., 25th August, 1890; 5 years.

Claim.—1st. As a new article of manufacture, shot formed of suitable earths, substantially as specified. 2nd. Shot formed from suitable earths, and having a rough external surface, substantially as specified.

No. 34,913. Machine for Cleaning or Washing Barley for Brewing Purposes. *(Appareil pour nettoyer ou laver l'orge à l'usage des brasseries.)*

Rudolf A. Baumgartner, Rosenheim, Bavaria, Germany, 25th August, 1890; 5 years.

Claim.—1st. A barley washing machine, consisting of a cylindrical perforated shell divided horizontally into several compartments communicating with each other and provided with adjustable feed inlet discharge and communicating orifices, the lower compartments having their inner shell surface provided with a brush surface, and vertical tubular shaft carrying brush drums on tubular arms, and horizontal brushes in the top or feed compartment, water supply pipes connected with the tubular shaft and with the cylindrical shell enclosing the compartments, means for driving the vertical tubular shaft, a conveyor for removing the cleaned grain, and a water trough serving as a container for the machine, substantially as set forth. 2nd. The combination of the base *d'*, columns *d''*, dividing plates *d*, having orifices *e'*, *e*, *E'*, and perforated cylindrical shell *c'*, forming together a cylindrical perforated casing divided into compartments, a tubular shaft *E*, driven by a shaft *A*, and bevel gearing cylindrical brushes *c*, on tubular arms *a'*, secured to the shaft *E*, the brush surface *c'*, covering the cylindrical shell opposite the brush drums *c*, the horizontal brushes *b*, secured to the shaft *E*, adjustable feed *b'*, water supply pipes *a*, a conveyor for removing the grain, and a trough *A*, to hold the machine, substantially as set forth. 3rd. The combination of a perforated cylindrical casing divided into compartments by plates *d*, and supported on a plate *d'*, by columns *d''* and having feed and delivery, a tubular shaft *E*, brush surface *c'*, on the inner face of the shell, brush drums *c*, carried on tubular arms *a'*, secured to the shaft *E*, and brushes *b*, secured to said shaft, substantially as set forth.

No. 34,914. Wheel for Door Hangers.*(Roue pour coulisses de portes.)*

William J. Lane, Poughkeepsie, N. Y., U. S. A., 25th August, 1890; 5 years.

Claim.—1st. A wheel or sheave, composed of two metallic disks, with an interposed disk of flexible material clamped between the outer disks, said flexible disk being of less diameter than the outer disks, substantially as described. 2nd. A wheel or sheave, consisting of two metallic disks, an interposed flexible disk, a screw threaded axle, and threaded washers adapted to said axle, to clasp the disks together, substantially as described.

No. 34,915. Spring Cotter Key.*(Clavette double.)*

Francis S. McWhorter, Norfolk, Virginia, U. S. A., 25th August, 1890; 5 years.

Claim.—A spring cotter key bent inwardly at its entering end, substantially as and for the purpose set forth.

No. 34,916. Adjustable Chase. (Arrête-chasse.)

Paul Huether, Pittsburgh, Pennsylvania, U. S. A., 25th August, 1890; 5 years.

Claim.—1st. A printers chase, composed of four similar intersecting bars, each provided with two or more superficial notches, substantially as described. 2nd. The combination, with a printers chase, composed of four interlocking bars provided with two or more superficial notches, of sliding clamps which embrace the bars at their intersection, substantially as described.

No. 34,917. Door Hanger. (Coulisse de porte.)

William J. Lane, Poughkeepsie, N. Y., U. S. A., 25th August, 1890; 5 years.

Claim.—1st. In combination, with a wheel frame, the rail E, having inclined slots, an attaching plate for the upper edge of the door, posts secured to said plate, transverse bolts carried by the posts adapted to engage the slots of the rail, and an adjustable connection between the frame and the door plate, substantially as described. 2nd. In combination, with the wheel frame, the rail E, having inclined slots in its lower edge, the plate L, posts secured to said plate, bolts passing through said posts adapted to engage with the slots of the rail, the arm I, turned upwardly, and a screw O, connecting the arm I, and the frame, substantially as described. 3rd. In combination, with the track and hanger frame provided with a rolling support, a lower rail and a projection secured thereto, and extending within a short distance of the lower edge of the track, substantially as described.

No. 34,918. Bread Cutter. (Tranche-pain.)

George W. Langdon, Mercer, Pennsylvania, U. S. A., 25th August, 1890; 15 years.

Claim.—1st. The combination, in a bread cutter, of the base, the band secured around the sides of the base and projecting above the same, and provided with a series of registering perforations on each side of the base, and the guard having its ends arranged to engage the perforations to regulate the thickness of a slice, substantially as described. 2nd. The combination, in a bread cutter, with the knife provided at the end of the blade with a stud 16, projecting from both sides of the same, of the base, the wire frame forming a guide for the knife, and consisting of the similar pairs of vertical wires having their lower ends secured to the base and provided near their upper ends with outward bends, forming openings to enable the knife to be readily inserted, and the transverse handle receiving the upper ends of the wires, substantially as described. 3rd. In a bread cutter, the combination of the base, the band projecting above the base and provided with registering perforations on each side, the wire frame secured to the base and having the handle connected thereto, and the wire guard with the ends adapted to engage the perforations and provided with a vertical bend 14, and a horizontal bend or loop 15, substantially as and for the purpose described.

No. 34,919. Art or Process of Deodorization of Petroleum and its Bi-products. (Art et procédé de désinfection du pétrole et ses produits.)

Emile R. Weston, Bangor, Maine, U. S. A., 26th August, 1890; 5 years.

Claim.—1st. In the deodorization of petroleum or the bi-products of petroleum, the process which consists in adding or mixing the nitrate of copper to or with the petroleum or its bi-products, and then heating the mixture. 2nd. In the deodorization of petroleum or the bi-products of petroleum, the process, which consists in adding or mixing the nitrates of the metals to or with the petroleum or its bi-products, and then heating the mixture.

No. 34,920. Aerial Conduit for Electric Conductors. (Voies aériennes pour les conducteurs électriques.)

Adolphus Alvord Knudson, Brooklyn, N. Y., U. S. A., 26th August, 1890; 5 years.

Claim.—1st. The combination, substantially as herein set forth, of a series of upright columns or pillars, a horizontal conduit supported upon said pillars and composed of two flanged beams or metallic plates bolted together, and carrying electric conductors between their flanges. 2nd. The combination, substantially as hereinbefore set forth, of a series of upright columns or pillars, a conduit horizontally supported upon the said pillars, and composed of flanged beams having their webs bolted together, and supports or shelves for electric conductors secured to the webs between the flanges, as set forth. 3rd. The combination, substantially as hereinbefore set forth, of a series of upright metallic columns or pillars, a conduit supported horizontally upon the same, and composed of two flanged beams having their webs bolted together, longitudinal supports or shelves for conductors secured to the said webs between the flanges, and hinged plates or shutters inclosing the space between the upper and lower flanges of the beams, as set forth.

No. 34,921. Pillow. (Oreiller.)

Andrew G. Gray, Saint John, New Brunswick, Canada, 26th August, 1890; 5 years.

Claim.—1st. The combination of the base A, springs B, having arms b^1 , and b^2 , cross piece C, and elastic covering D, substantially as and for the purposes described. 2nd. A pillow, consisting of a covering of soft light elastic material, stretched over and attached to a frame work formed by springs B, attached to base A, and carrying cross pieces C, substantially as and for the purposes described. 3rd. A pillow, consisting of the springs B, having arms b^1 , attached to a firm base A, and free arms b^2 , bearing the cross pieces C, forming a frame work, and having stretched over and attached said base and cross pieces, the soft, light, elastic covering D, substantially as and for the purposes described. 4th. In a pillow, the combination of an elastic covering, with springs attached to the ends of a firm base, substantially as and for the purposes described.

No. 34,922. Jacket for Bottles. (Enveloppe de bouteilles.)

Harry Clay Youm and Martin Vojtech Kacer, St. Louis, Missouri, U. S. A., 26th August, 1890; 5 years.

Claim.—1st. A bottle cover, having a part 1, fitting the body of the bottle, and a neck portion 3, reduced by folding its two edges over onto one another, so that this portion may fit the neck, and a single staple 7, for securing said overlapping folds together, substantially as set forth. 2nd. The combination, in a bottle cover, of a part 1, adapted to fit the body of a bottle, and having the described indentations 2, and projections upon opposite sides, and an unindented neck or upper part 3, reduced in dimensions and thickened by folding, and secured by a staple 7, substantially as set forth.

No. 34,923. Process for Purifying and Deodorizing Crude Petroleum. (Procédé pour purifier et désinfecter le pétrole.)

Robert Milton Perrine, Cleveland, Ohio, U. S. A., 26th August, 1890; 5 years.

Claim.—The process herein described, of deodorizing and purifying crude petroleum oils, which consists in first agitating or stirring the same with chloride of lime for a period of five hours, more or less, and then adding sulphuric acid to complete the elimination of chlorine gas, and to neutralize and precipitate the alkaline matters and other impurities, and finally drawing off or removing the purified and deodorized oil, substantially as herein described.

No. 34,924. Index for Diaries and other Books. (Index pour livre-journal et autres.)

Arthur James Wells, Syracuse, N. Y., U. S., 28th August, 1890; 5 years.

Claim.—1st. The herein described diary or book, the same being provided with index divisions having characters therein for indicating the months of the year, and with sub-divisions formed in the aforesaid index divisions and having therein characters for indicating the day of the month, substantially as described. 2nd. The herein described diary or book, the same being provided with index divisions at one extremity of its side edge, characters placed on said divisions for indicating the months of the year, sub-divisions in said index divisions at the other extremity of said side edge, and characters upon said sub-divisions for indicating the day of the month, substantially as specified.

No. 34,925. Machinery for Coating Metal Sheets with Metals or Alloys. (Procédé pour plaquer le métal en feuille aux moyens d'alliages métalliques.)

Richard Heathfield, Darlaston, Stafford, Eng., 28th August, 1890; 5 years.

Claim.—1st. In apparatus for coating metal, the rolls a, on the exit side of the pot, whether hung in an inner or outer frame, and whether protected or not from the superfluous flux, in combination with the feed rolls H, substantially as and for the purpose herein set

forth and shown upon the drawings. 2nd. In apparatus for coating metal, the removable main guides *k* and *l*, in combination with the after parts of claim T, substantially as and for the purpose herein set forth and shown upon the drawings. 3rd. In apparatus for coating metal, the boxing in of the exit rolls, substantially as and for the purpose herein set forth and shown upon the drawings. 4th. In apparatus for coating metal, the rolls *b*, in a diagonal position, substantially as and for the purpose herein set forth and shown upon the drawings, by Fig. 3. 5th. In apparatus for coating metal, the removable plane P and P', substantially as and for the purpose herein set forth and shown upon the drawings, by Figs. 4 and 5. 6th. In apparatus for coating metal, the diagonal exit rolls F, in combination with the submerged feed rolls *e*, substantially as and for the purpose herein set forth and shown upon the drawings, by Fig. 4. 7th. In apparatus for coating metal, the pivoting of the feed rolls *h*, whether in combination with the rolls *j*, or not, substantially as herein set forth and shown upon the drawings, by Figs. 6, 7 and 8. 8th. In apparatus for coating metal, elevating and removing exit rolls, substantially as herein set forth and shown upon the drawings. 9th. The improvements in apparatus and machinery for coating metal sheets with metals or alloys, substantially as herein set forth and shown upon the annexed drawings.

No. 34,926. Box, or Crate. (Boîte, ou cranne.)

Charles Enoch Parks, Watertown, Wis., U. S., 28th August, 1890; 5 years.

Claim.—1st. In a box or crate, the combination, with suitable end or side pieces, of a continuous fabric formed of a series of single wires, cords, or wooden strips secured to end strips and having a wooden filling woven in and out or over, and under said wires, cords or strips, said fabric forming the sides or ends and bottom of the box or crate in one continuous strip, and being tacked or otherwise secured to the edges of said end or side pieces, substantially as set forth. 2nd. A box or crate, consisting of suitable end or side pieces, in combination, with a continuous fabric formed of single wires, cords or wooden strips interwoven with wooden slats, tacked or otherwise detachably secured to the edges of said end or side pieces, to form the other sides or ends of said box or crate, and extending beyond said end or side pieces to form a continuous flexible cover for said box or crate, substantially as set forth.

No. 34,927. Machinery for Reducing the Diameter of, and Pointing, Screw Blanks, Sewing Machine Needles and Horse Nails, and for other like Purposes. (Machine pour réduire le diamètre et aiguiser le bout des boulons, aiguilles de machine à coudre, clous de fer à cheval et autres.)

Nettlefolds Limited (assignee of John Sheldon), Birmingham, Warwick, Eng., 28th August, 1890; 5 years.

Claim.—1st. In machinery for reducing the diameter of, and pointing screw blanks, etc., the combination, with an annular series of compressing dies or tools, and means for supporting and operating same in the manner described, of a corresponding series of blank holders, a drum for carrying such holders, means for supporting such drum and imparting to it an intermittent rotary motion, as set forth. 2nd. In machinery for reducing the diameter of, and pointing screw blanks, etc., the combination with means for holding the blanks to be operated upon, of a series of shafts having levers pivoted on one end and carrying the operating tools, sleeves encircling such shafts, means for supporting and means for imparting to such sleeves a partial rotation or lateral reciprocal motion, cams carried by said sleeves adapted to operate said levers and tools, means for keeping said tools in an open position, and means for imparting a longitudinal reciprocal movement to said shafts, as set forth. 3rd. In machinery for reducing the diameter of, and pointing screw blanks, etc., an annular series of compressing dies or tools, and a corresponding series of blank holders arranged and operated, so that the latter is intermittently rotated to bring each blank in succession into such relation with each pair of dies of the series, that each blank or article will be in each operation compressed or reduced in a direction at right angles to that in which it was last operated upon, substantially as hereinbefore set forth. 4th. In machinery for reducing the diameter of, and pointing, screw blanks, etc., the combination with shafts carrying compressing dies, arranged in an annular series around the principal axis of the machine, and with means respectively for supporting such shafts and operating said dies, of disc *K*¹, to which such shafts are connected, adjustable connecting piece *K*², and mechanism for imparting a reciprocating motion to same, for the purpose set forth.

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

- | | |
|--|---|
| <p>1888. D. T. LAWSON, 3rd 5 years of No. 11,687, from the twenty-eighth day of August, 1890. Improvements in Means for Preventing Explosions of Steam Boilers, 1st August, 1890.</p> <p>1889. N. E. REESON, 2nd 5 years of No. 22,230, from the eighth day of August, 1890. Improvements on Gate Opening Devices, 2nd August, 1890.</p> <p>1890. H. W. Hill, 2nd 5 years of No. 22,545, from the twenty-eighth day of September, 1890. Improvements in Friction Clutch Pulleys, 2nd August, 1890.</p> <p>1891. G. C. KUEHM, 2nd 5 years of No. 22,212, from the seventh day of August, 1890. Improvements in Gas Furnaces, 5th August, 1890.</p> <p>1892. L. WALKER, 2nd 5 years of No. 22,211, from the sixth day of August, 1890. Improvements in Harnesses, 5th August, 1890.</p> <p>1893. T. A. STEVENS, 2nd 5 years of No. 22,257, from the nineteenth day of August, 1890. Straw Burning Furnace, 8th August, 1890.</p> <p>1894. A. G. DAILEY, 2nd 5 years of No. 23,386, from the eighth day of February, 1891. Improvements in Railway Snow Ploughs, 11th August, 1890.</p> <p>1895. J. & J. TAYLOR (assignees), 2nd 5 years of No. 22,278, from the 22nd day of August, 1890. Improvements in Burglar Proof Safes, 14th August, 1890.</p> <p>1896. A. L. BURKE, 2nd 5 years of No. 22,255, from the seventeenth day of August, 1890. Combined Washer and Wringing Machine, 15th August, 1890.</p> <p>1897. THE GOODYEAR SHOE SEWING MACHINE CO. (assignees), 2nd 5 years of No. 22,496, from the 19th day of September, 1890. Improvements in Machines for Beating out Welts in the Manufacture of Boots and Shoes, 20th August, 1890.</p> | <p>1898. G. B. DOWSWELL, 2nd 5 years of No. 22,310, from the 26th day of August, 1890. Improvements in Churns, 20th August, 1890.</p> <p>1899. R. McLAUGHLIN, 2nd 5 years of No. 22,304, from the 26th day of August, 1890. Improvements in the Running Gear of Vehicles, 23rd August, 1890.</p> <p>1900. C. C. CANNOM, 2nd 5 years of No. 22,319, from the 31st day of August, 1890. Improvements in Wire Baskets, 29th August, 1890.</p> <p>1901. THE CHATAM MANUFACTURING CO (assignees), 2nd 5 years of No. 22,645, from the 19th day of October, 1890. Improvements in Axle Truss Rods, 29th August, 1890.</p> <p>1902. J. B. SMALL, 2nd 5 years of No. 22,369, from the 2nd day of September, 1890. Improvements on Calf Feeders, 29th September, 1890.</p> <p>1903. J. CARRUTHERS, 2nd 5 years of No. 22,407, from the seventh day of September, 1890. Improvements on Devices for Suspending Machinery, 29th August, 1890.</p> <p>1904. WORTMAN & WARD (assignees), 2nd 5 years of No. 22,432, from the 11th day of September, 1890. Improvements in Double Action Hay Cars, 29th August, 1890.</p> <p>1905. W. S. MARLATT, 2nd 5 years of No. 22,549, from the 13th day of September, 1890. Improvements in Hinges for Entrance Gates, Single or Double, for Farms, Gardens or Private Residences, 29th August, 1890.</p> <p>1906. T. G. OTTERSON, 2nd 5 years of No. 22,445, from the 12th day of September, 1890. Improvements on Gas Can Caps, 30th August, 1890.</p> |
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AUGUST LIST OF TRADE MARKS.

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

3783. ISAAC PITMAN & SONS, of Bath, England. General Trade Mark, 6th August, 1890.
3784. BENJAMIN TOOKE, of Montreal, Que. Shirts, Collars, Cuffs, etc., 6th August, 1890.
3785. GEO. L. WOOD & SON, of New York, N.Y., U.S.A. Varnishes, 9th August, 1890.
3786. }
 3787. } EUREKA FIRE HOSE COMPANY, of New York, N.Y., U.S.A.
 3788. } Cotton and Linen Hose. 11th August, 1890.
 3789. }
3790. } E. MERCK, of Darmstadt, Germany.
 3791. } Antiseptics, 12th August, 1890.
3792. WILLIAM F. BURDITT, of St. John, N.B. Churns, 12th August, 1890.
3793. THE ONTARIO ORIENTAL FLOUR COMPANY, L'd., of St. Thomas, Ont. Patent Corn Flour, known as "Herendeen's Oriental Flour," 12th August, 1890.
3794. HENRY FREDERICK HOERNER, of Montreal, Que. Hats, Caps and Furs, 14th August, 1890.
3795. JAMES MCGARRITY, of Montreal, Que. Medicine, 14th August, 1890.
3796. THE SCOTTISH DRUG DEPOT, LIMITED, of 65 Albert Street, Edinburgh, Scotland. Perfumeries, toilet articles, preparations for the teeth and hair and perfumed soaps, 14th August, 1890.
3797. B. LEVIN & CO., Montreal, Que. General Trade Mark, 22nd August, 1890.
3798. } LYMAN, SONS & CO., Montreal, Que.
 3799. } Perfumery, 22nd August, 1890.
3800. ROBERT MCKAY, of London, England. Tea, 22nd August, 1890.
3801. GEO. L. WOOD & SON, of New York, N.Y., U.S.A. Varnishes, 26th August, 1890.
3802. FINLAYSON, HIRSCH & CO., of Montreal, Que. Whiskey, 26th August, 1890.
3803. WILLIAM JOHNSON COMPANY, of Montreal, Que. Paints and Colors of all descriptions, 27th August, 1890.
3804. W. L. TEMPLE, of Halifax, N.S. Teas, 28th August, 1890.
3805. M. J. PENNINGTON, of Montreal, Que. Cigars and Cigarettes, 29th August, 1890.

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Trade Mark Branch.

5477. ROMANCE OF SIR RICHARD SONNETS AND OTHER POEMS, by Arthur Weir, B.A.Sc., Montreal, Que., 1st August, 1890.
5478. { ABRÉGÉ D'HISTOIRE SAINTE. Ancien et Nouveau Testament, Suivi d'un précis
d'Histoire Ecclésiastique.
5479. { LE SYLLABAIRE GRADUÉ ou Le Premier Livre des Enfants L'Institut de la Con-
gregation de Notre Dame de Montreal, Que., 4 Août, 1890.
5480. A SMUGGLER'S SECRET, by Frank Barrett.
5481. THE MOMENT AFTER, by Robert Buchanan.
5482. THE GREAT MILL ST. MYSTERY, by Adeline Sergeant. }
John Lovell & Son, Montreal, Que., 8th August, 1890.
5483. Bell Telephone Company of Canada, MONTREAL EXCHANGE, SUBSCRIBERS' DIRECTORY, August 1890. Bell Telephone Company of Canada, Montreal, Que., 9th August, 1890.
5484. THE OTTAWA DIRECTORY, 1890-91. R. L. Polk & Co., Toronto, and A. S. Woodburn, Ottawa, Ont., 9th August, 1890.
5485. THE TORONTO DIRECTORY, 1890-91. R. L. Polk & Co., Toronto, Ont., 9th August, 1890.
5486. SELECTIONS FROM LONGFELLOW, with Notes by Strang and Moore. The Copp, Clark Co., L'd., Toronto, Ont., 13th August, 1890.
5487. GOOD BUTTER: HOW TO MAKE IT, (book). Smallfield & Son, Renfrew, Ont., 14th August, 1890.
5488. THE IMPERIAL BAND BOOK, by H. L. Clarke. Whaley, Royce & Co., Toronto, Ont., 14th August, 1890.
5489. RECUEIL DE DEVOIRS. Exercices sur l'application des Regles Grammaticales, &c., &c., par B. Lippens. J. A. Langlais, Quebec, Que., 14 Aout, 1890.
5490. DAISY. No. 1. }
5491. ROSE. " 2. } Opus 111—BRIGHT FLOWERS,
5492. CARNATION. " 3. } by Heinrich Lichner.
5493. TULIP. " 4. }
5494. PANSY. " 5. }
5495. CONVULVULUS. " 6. }
I. Suckling & Sons, Toronto, Ont., 15th August, 1890.
5496. MOUNTAIN VIOLETS. No. 1. }
5497. IN THE MEADOWS. " 2. }
5498. HAPPY HOURS. " 3. } Op. 95, by Heinrich Lichner.
5499. SPRINGTIME. " 4. }
5500. JOYOUS MAY. " 5. }
5501. A DREAM OF BEAUTY. " 6. }
I. Suckling & Sons, Toronto Ont., 16th August, 1890.
5502. BRIDAL ROSE WALTZES. Op. 45 by Byron C. Tapley, St. John, N.B., 21st August, 1890.
5503. ECHOES OF THE BALL, (Loin du Bal), by Ernest Gillet. I. Suckling & Sons, Toronto, Ont., 22nd August, 1890.
5504. SCOTCH DAINTIES, (Brose, Parritch, Kail, Haggis an' Bannocks.) Words by John Imrie; Music by E. Corlett. Imrie & Graham, Toronto, Ont., 22nd August, 1890.
5505. HENDERSON'S MANITOBA AND NORTH WEST TERRITORIES AND BRITISH COLUMBIA GAZETTEER AND DIRECTORY 1890. The Henderson Directory Co., Winnipeg, Man., 22nd August, 1890.
5506. HOBLEY'S SYSTEMATIC PRICE BOOK FOR MERCHANTS, MANUFACTURERS AND OTHERS. Thomas Neale Hobley, Barrie, Ont., 22nd August, 1890.
5507. CRADLE SONG, (Berceuse.) Musique de l'Abbé I. Champagne. J. L. Orme & Son, Ottawa, Ont., 22nd August, 1890.
5508. CANADA'S PRIDE. Portraits of nine celebrated draught horses. William Weld, London, Ont., 23rd August, 1890.
5509. A HAPPY HOLIDAY, by Grace E. Denison, Toronto, Ont., 23th August, 1890.
5510. A PETITION AND PRAYER IN BEHALF OF THE LOWER ANIMALS. Revised. Archibald McBean, Winnipeg, Man., 27th August, 1890.
5511. THE BELLS OF ST. MARY'S. Words by Frederic E. Weatherly ;
Music by Paul Rodney.
5512. COMRADES. Words and Music by Felix McGlennon ;
Arranged by E. Jonghman.
5513. DOCTOR HYMEN. Words and Music by Henry Pontet.
5514. THE GIRL HE LEFT BEHIND. Words by Arthur Chapman ;
Music by Frederic Bevan.
5515. I COULDN'T, COULD I? Words by Dr. S. H. Emmens ;
Music by Joseph L. Roedel.
The Anglo-Canadian Music Publishers' Association, L'd., London, England, 29th August, 1890.

5516. WORDS OF LIFE. Sermons by the Rev. A. J. Mowatt. Herman H. Pitts, Fredericton, N.B., 29th August, 1890.
5517. NOTES ON "Le Chien du Capitaine par Louis Enault," and on "La Belle Nivernaise par Alphonse Daudet," by E. J. McIntyre, B.A. The Copp, Clark Co., L'd., Toronto, Ont., 29th August, 1890.
5518. GLIMPSES OF GLORY, or, Incentives to Holy Living. Richard Strachan, Meaford, Ont., 30th August, 1890.
5519. THE CLANCY WALTZES, by W. N. Andrews, Wallaceburg, Ont., 30th August 1890.



THE

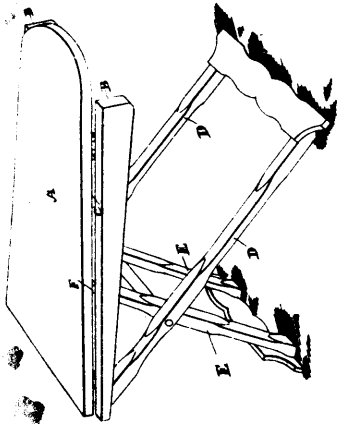
CANADIAN PATENT OFFICE RECORD

ILLUSTRATIONS.

Vol. XVIII.

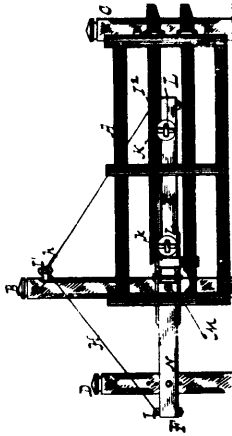
AUGUST, 1890.

No. 8.



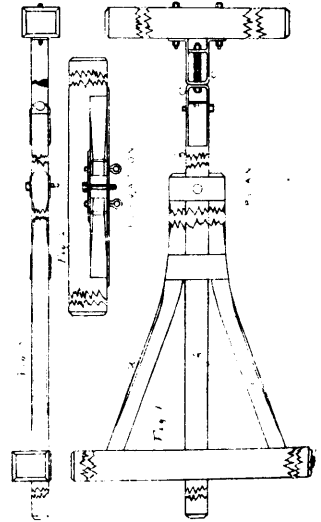
34783

Hawke's Table.



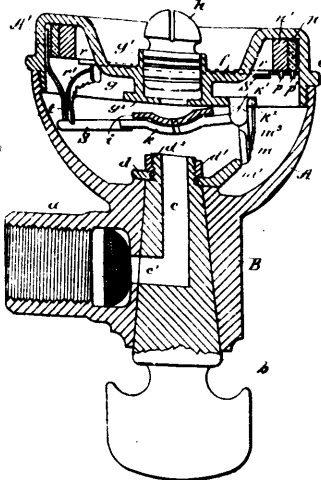
34784

Hopkins' Gate.



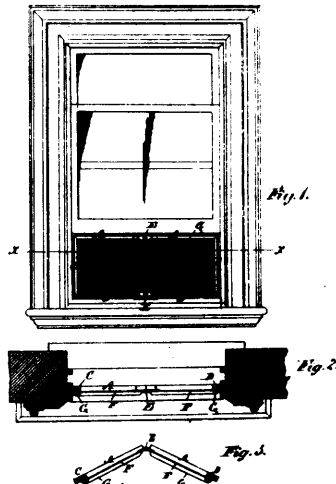
34785

Douglass' Coupling Bob Sleighs.



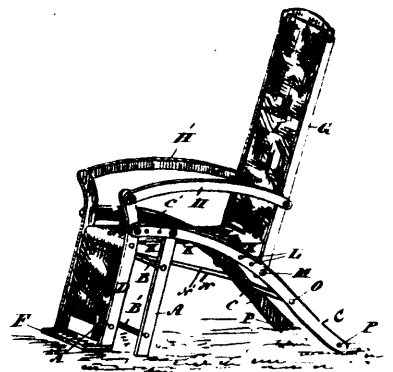
34786

Frechette & Dupuis' Gas Burner.



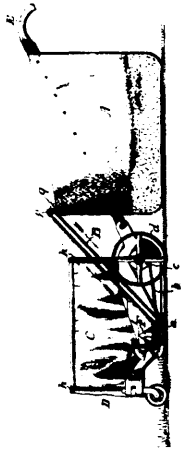
34787

Kaufman's Window Screen.

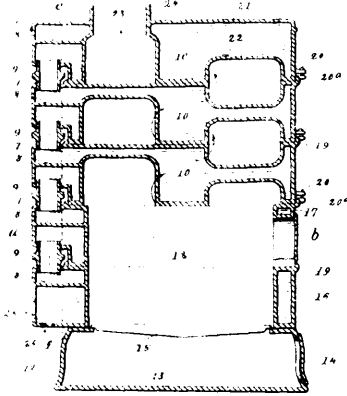


34788

Chambers' Hammock Chair.



34789 Braithwaite's Lawn Mower.



34791 Bond's Sectional Boiler.

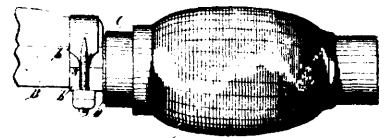


Fig 1

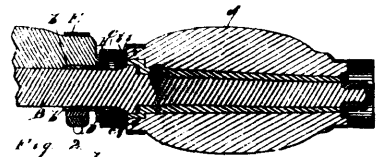


Fig 2

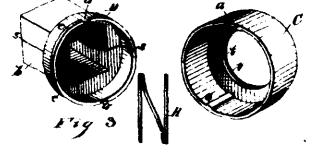
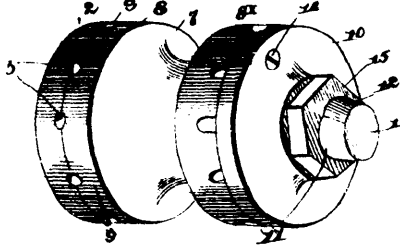
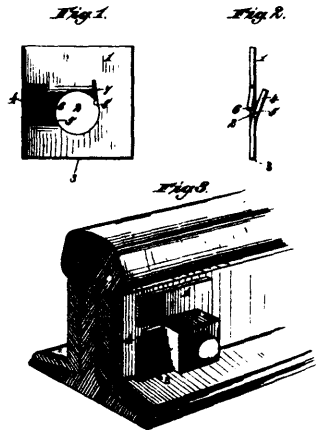


Fig 3

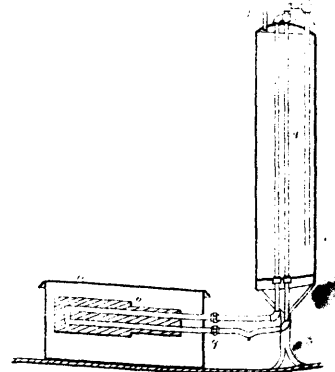
34792 Smith's Sand Band.



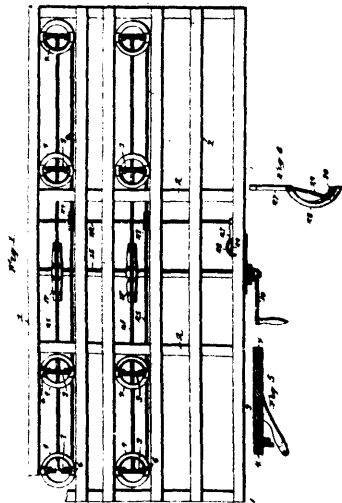
34793 Young's Wheel.



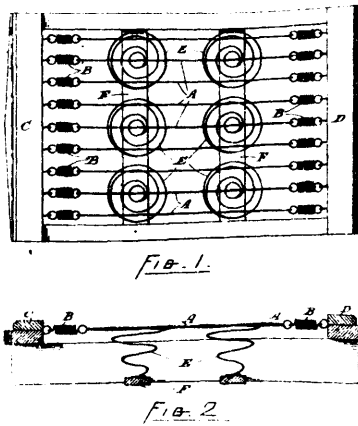
34794 Thompson's Nut Lock.



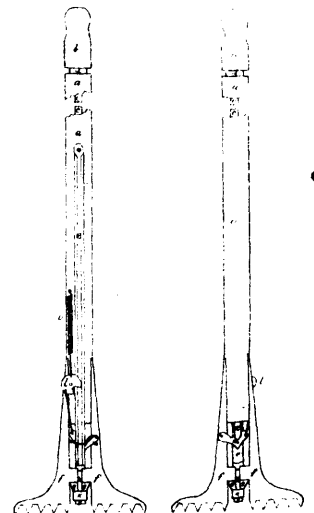
34795 Grace's Stand Boiler.



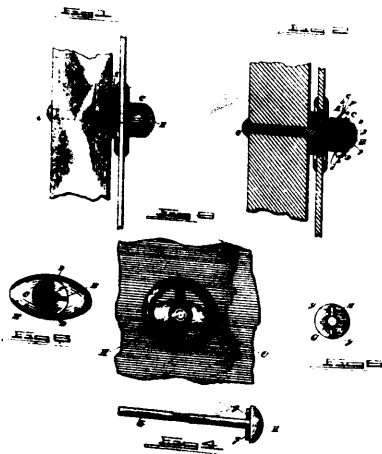
34796 Springer's Waggon.



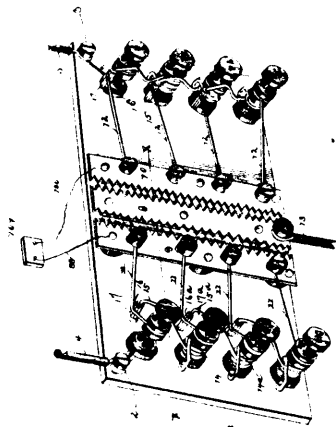
34797 Butterfield's Spring Bed.



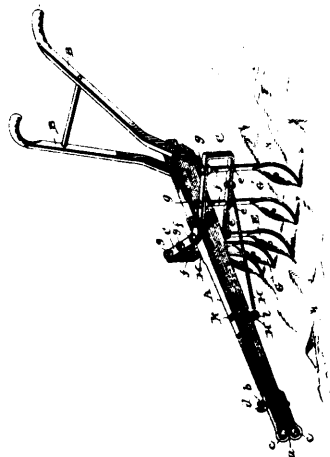
34798 Cavers' Carpet Stretcher.



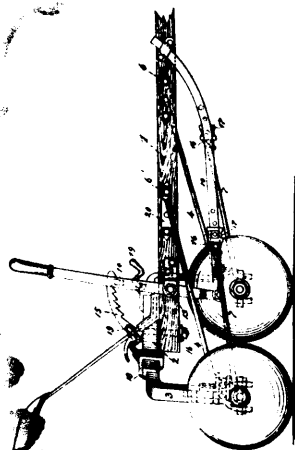
34799 Scott's Curtain Fastener.



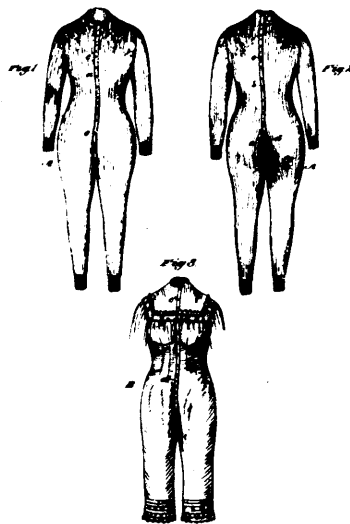
34800 Bayne's Lightning Arrester



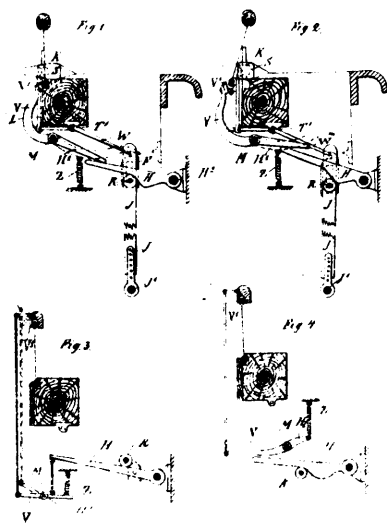
34801 Blakeley's Cultivator



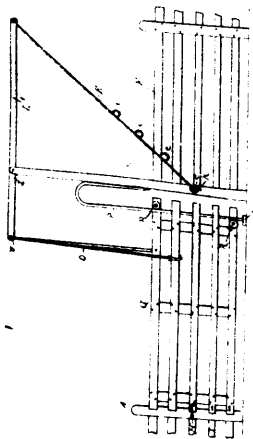
34802 Hill's Disk Mower



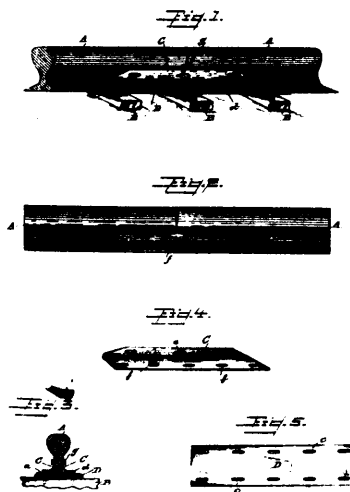
34803 Tozer's Invalid's Garment.



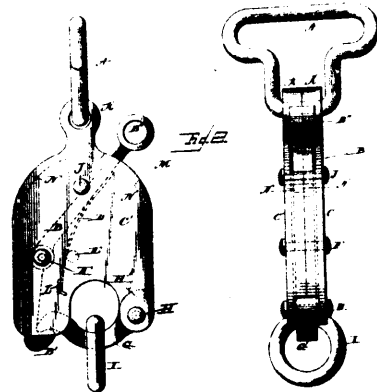
34804 Povel's Shuttle Guard



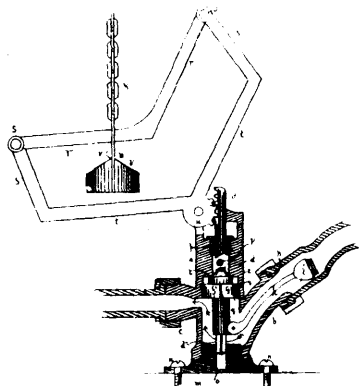
34805 Gunder's Gate.



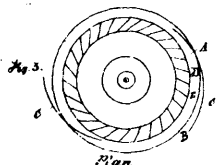
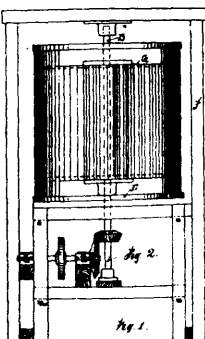
34806 Lyon's Metal Plate and Rail Joint



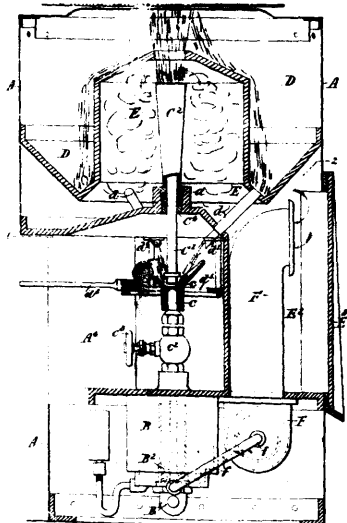
34807 Moran's Fetter Lock.



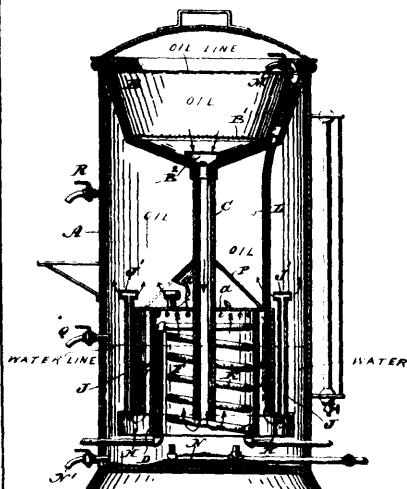
34808 Mueller's Cock.



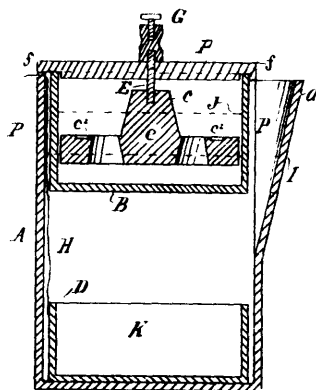
34809 Thurber's Wind Mill.



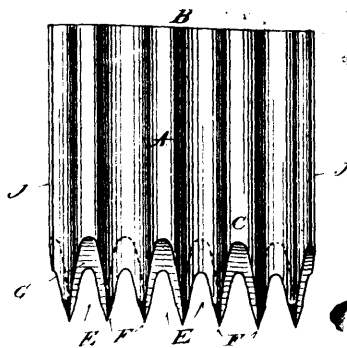
34810 Matheison's Sand Blast Apparatus.



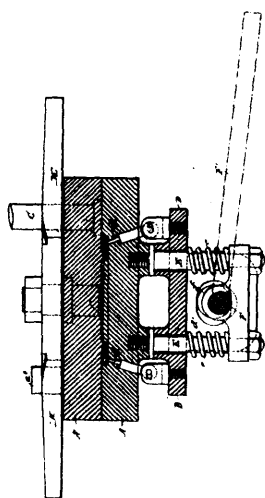
34811 Noppel's Apparatus for Purifying and Refining Oil.



34812 Hussey's Electric Battery.



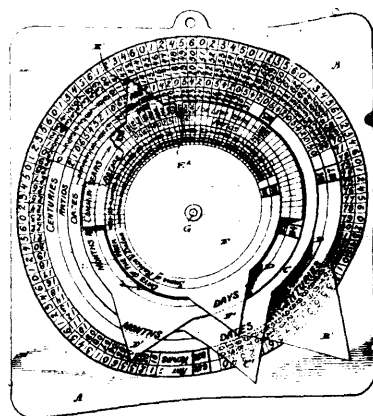
34813 Staff's Fastener.



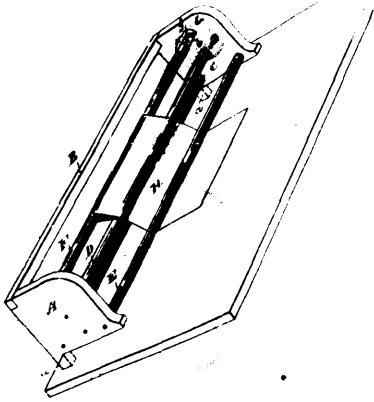
34814 Vernon's Apparatus for Manufacturing Horse Shoes.

1890							JULY							1890																																		
SUN	MON	TUES	WED	THUR	FRI	SAT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31											
								1	2	3	4	5		6	7	8	9	10	11	12		13	14	15	16	17	18		19	20	21	22	23	24		25	26	27	28	29	30		31					

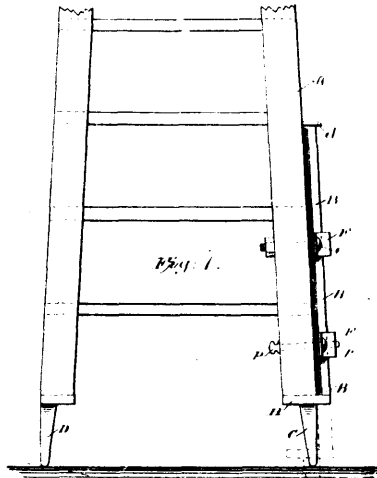
34815 Robinson's Calendar.



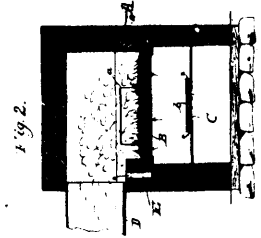
34816 Palmersten's Calendar.



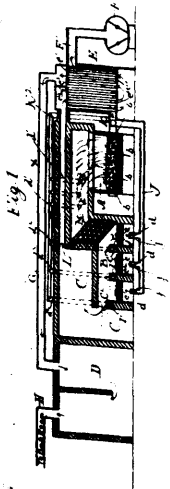
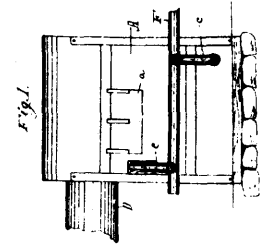
34817 Jefferies' Blocking Extension.



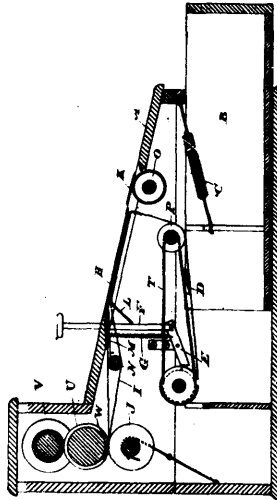
34818 Stokles' Ladder.



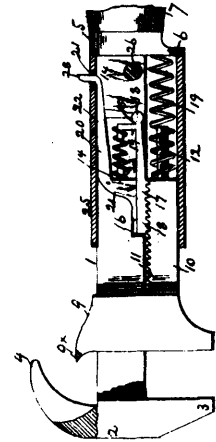
34819 Bartlett's Process of Treating Ores.



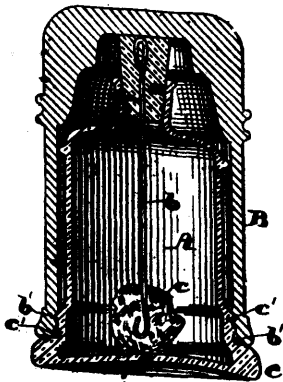
34820 Bartlett's Apparatus for Manufacturing Pigments.



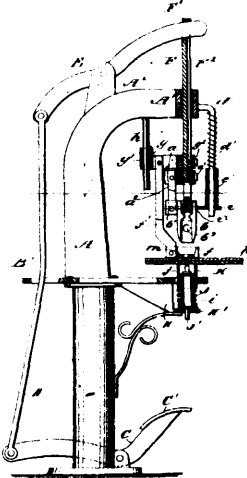
34821 Johnston's Cash Drawer, etc.



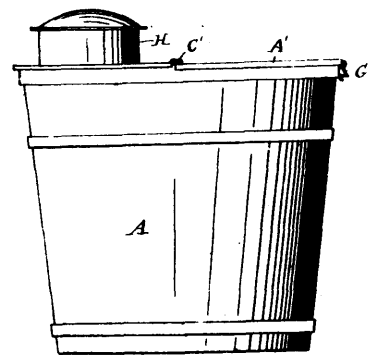
34822 King's Wrench.



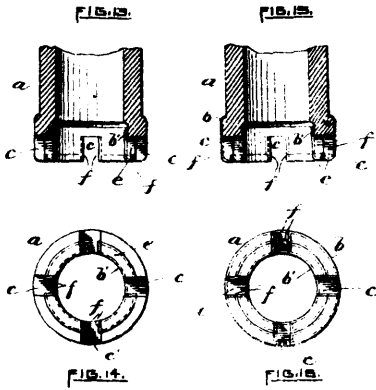
34823 Wales' Safety Package.



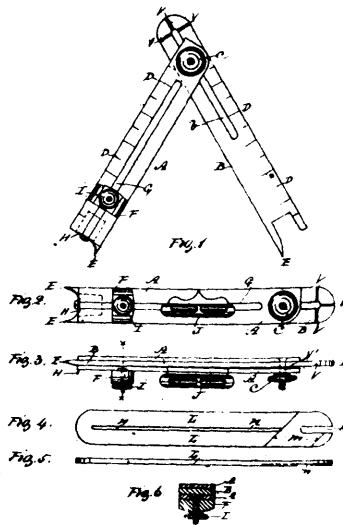
34824 Carl's Rivetting Machine.



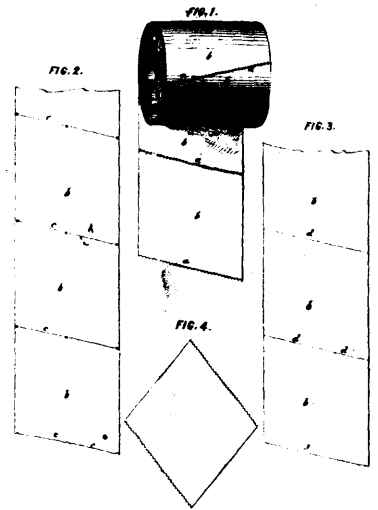
34825 Hamm's Tobacco Moistener.



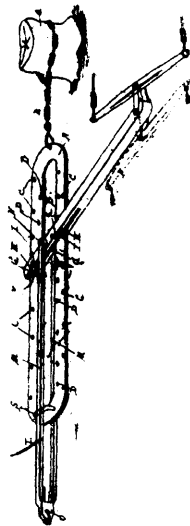
34826 Keen's Bobbin.



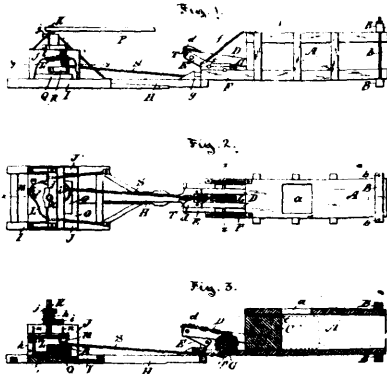
34827 Woodruff's Multiform Tool.



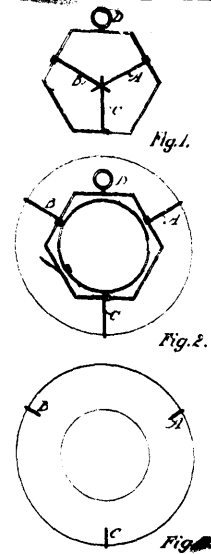
34828 Wheeler's Toilet Paper Roll.



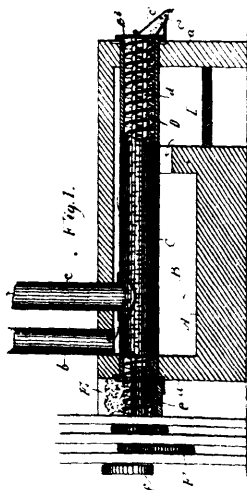
34829 Manson's Stump Extractor



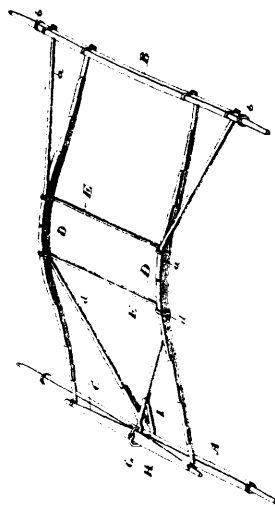
34830 Larose & Prive's Hay Press.



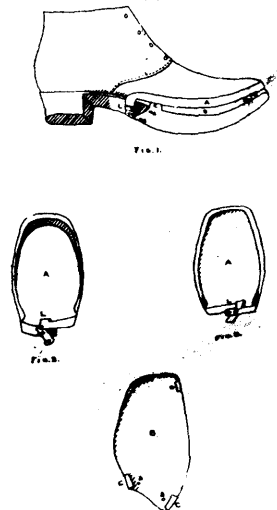
34831 Rice's Press-Manger for Plaques



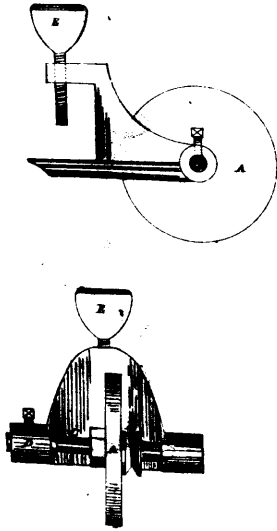
34832 Bartlett's Apparatus for Refining Fumes.



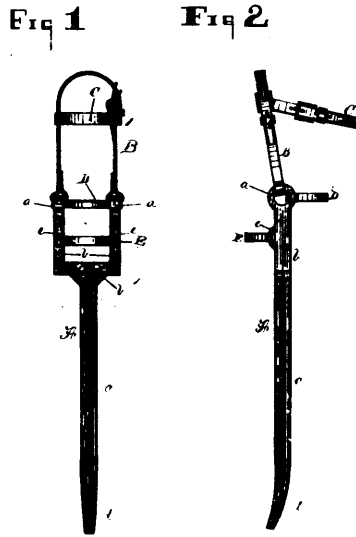
34833 Storey's Gear for Vehicles.



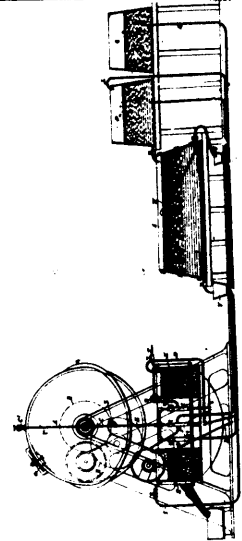
34834 Ross' Boot and Shoe.



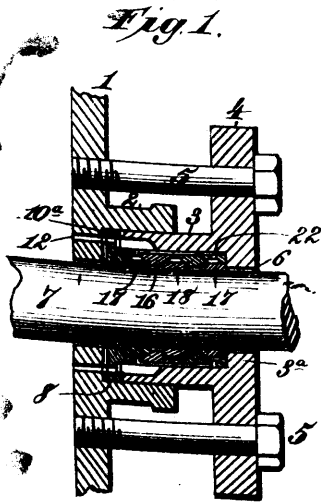
34835 Huggins' Machine for Affixing Emery Wheels to Sewing Machines, etc.



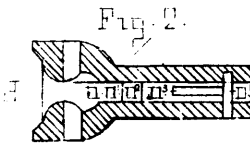
34836 Lytle's Horse Poke.



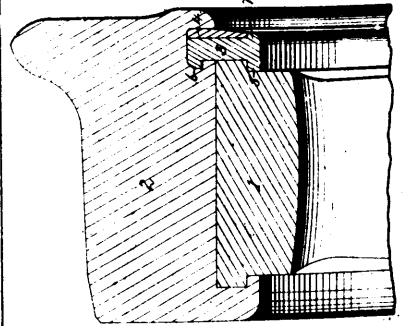
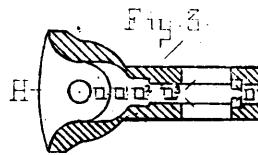
34837 Potlock's Method of Extracting Gold from Ores.



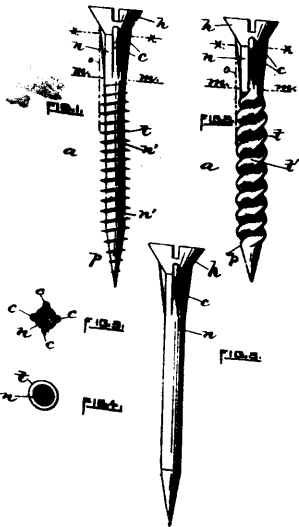
34838 Martin's Roll Packing.



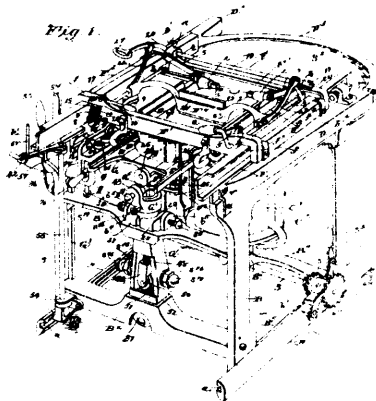
34839 Avery's Car Coupling.



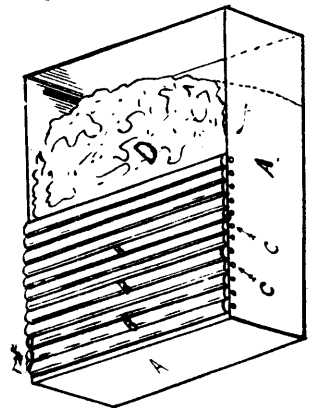
34840 Stoudley's Wheel for Railway Vehicles.



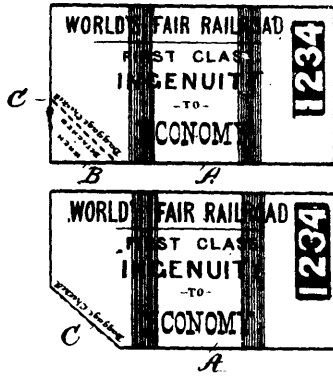
34841 Roger's Wood Screw.



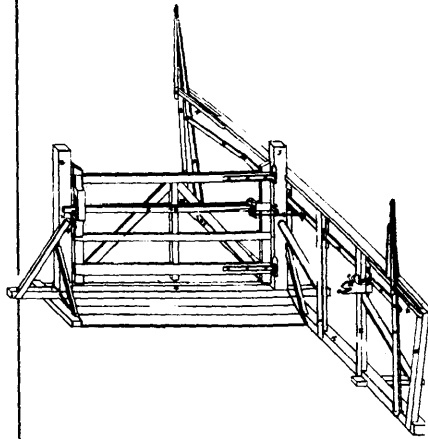
34842 Putrow's Shingle Sawing Machine.



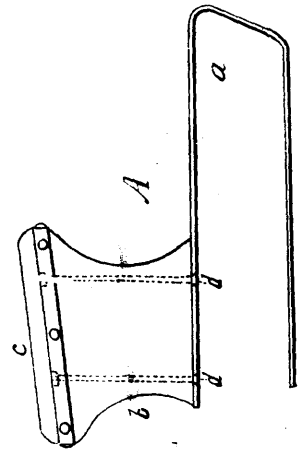
34843 Hager's Machine for Moistening Postage Stamps.



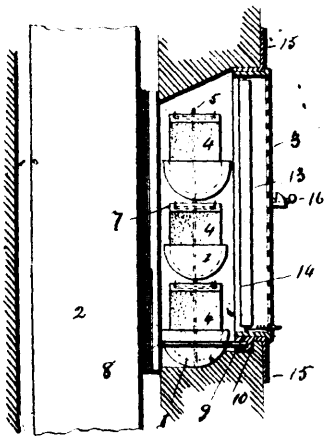
34844 Marston's Railway Ticket.



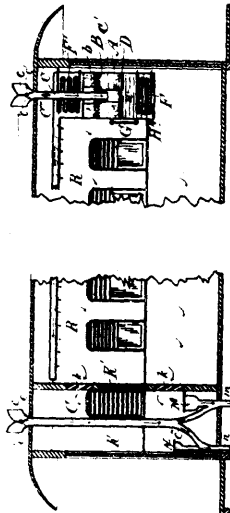
34845 O'Neill's Gate.



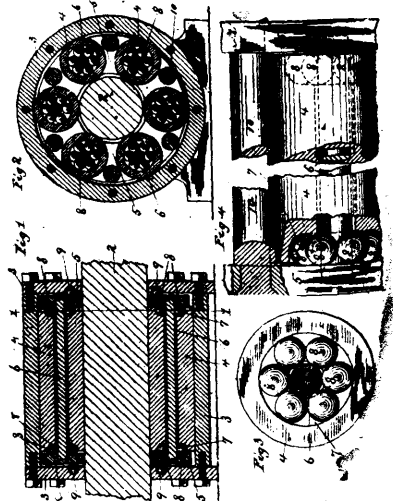
34846 Rowdell's Carriage Seat.



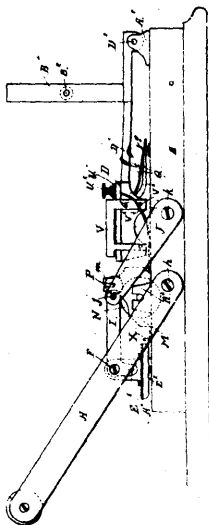
34847 Renald's Air Moistening Device.



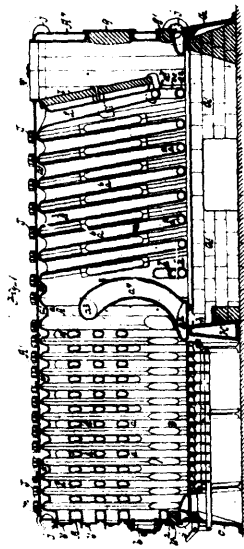
34848 Hughes' Method of Ventilating Railway Cars.



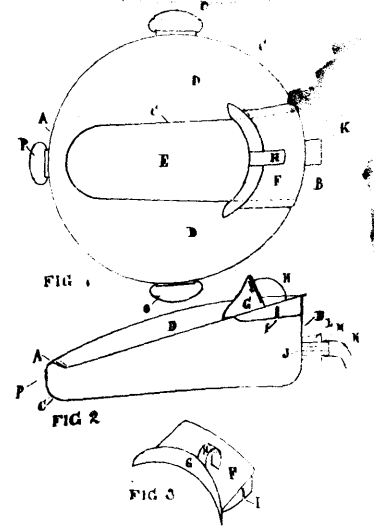
34849 Rowdell's Journal Bearing.



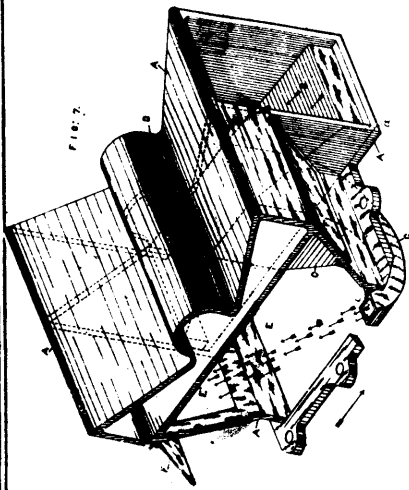
34850 Borle's Machine for Affixing Postage Stamps, etc



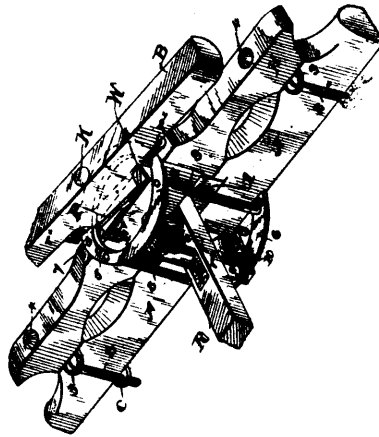
34851 Kelth's Sectional Water Boiler.



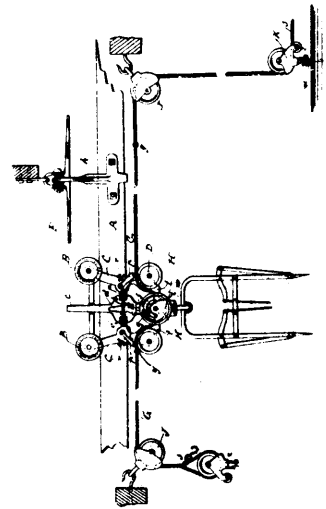
34852 Worsell's Bed Pan.



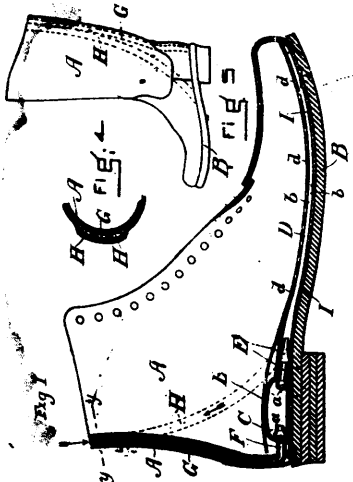
34853 Swindell's, Peel & Frost's Ventilator for Carriages, etc.



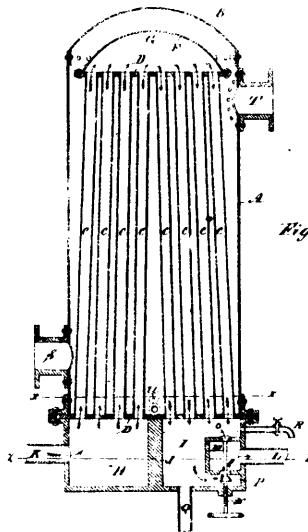
34854 Scandlan & Gross' Fifth Wheel.



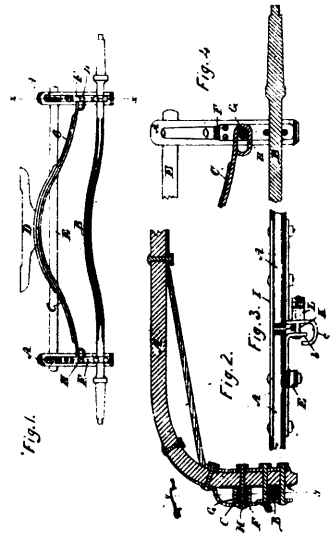
34855 Cross' Hay Carrier.



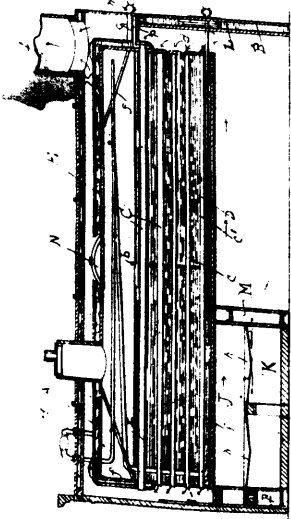
34856 Falkner's Ventilator, &c.



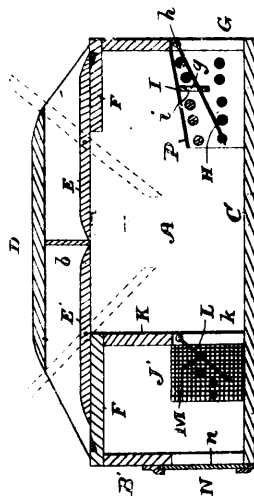
34857 Cochran & McMonagle's Feed Water Heater.



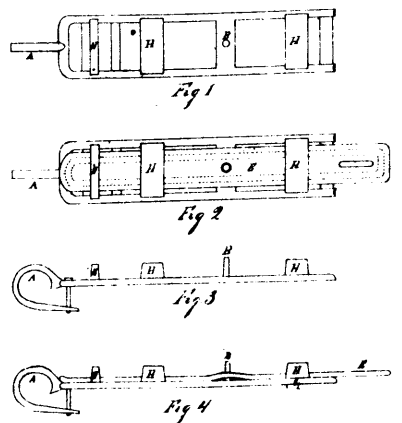
34858 Laschinger's Two Wheeled Vehicle.



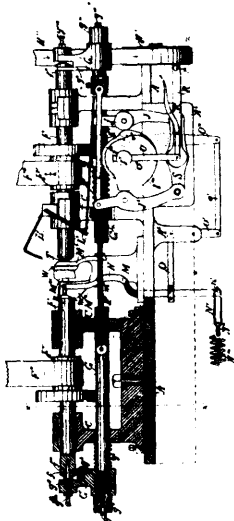
34859 Glasson's Steam Boiler.



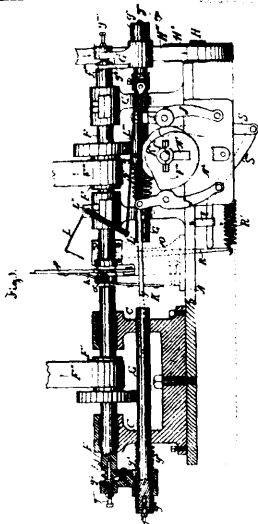
34860 Barry's Mouse Tray.



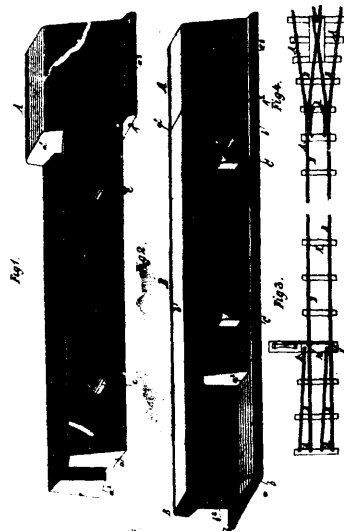
34861 Lymburner & Mathews' Connection for Trace and Hames.



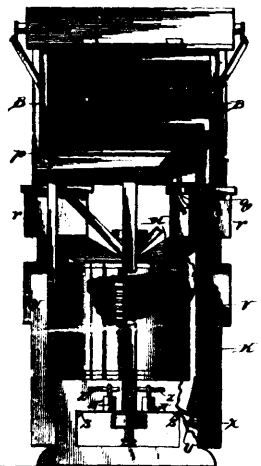
34862 Shantz's Button Turning Lathe.



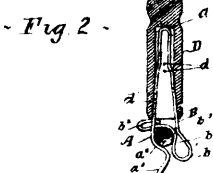
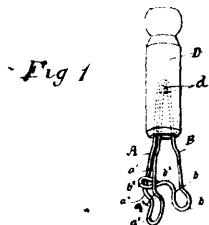
34863 Shantz's Button Turning Lathe.



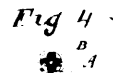
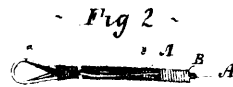
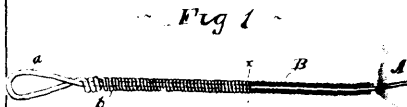
34864 Post's Method of Finishing Rail Ends.



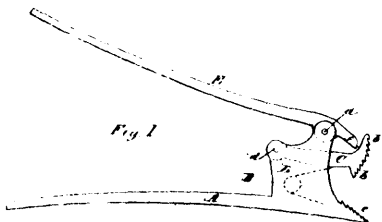
34865 Ingraham's Machine for Preparing Grain.



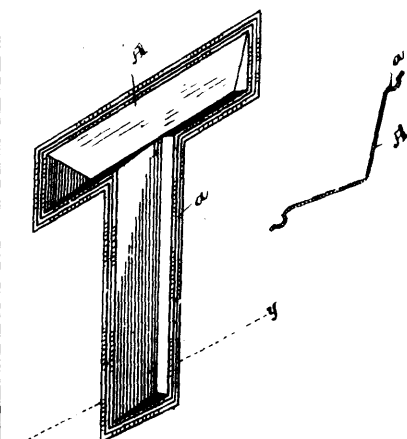
34866 Barlow's Clothes Pin.



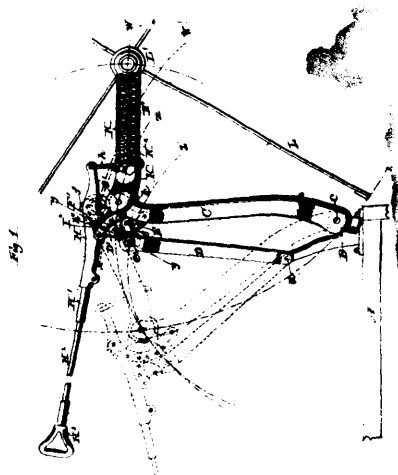
34867 Barlow's Clothes Line.



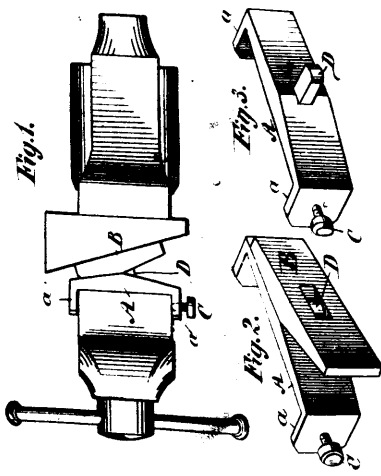
34868 Misener's Horse Shoe Clincher.



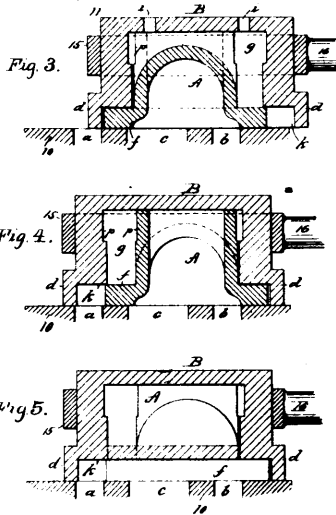
34869 Rodwell's Letter, Symbol, or Ornament.



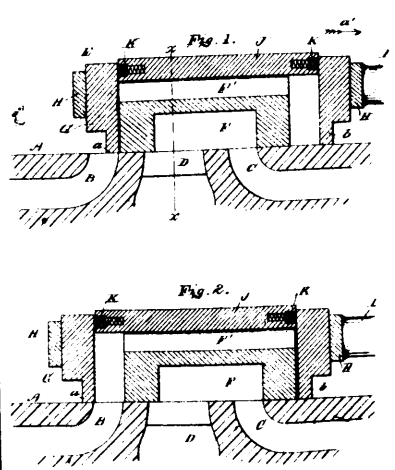
34870 Graham's Harvester Reel Support.



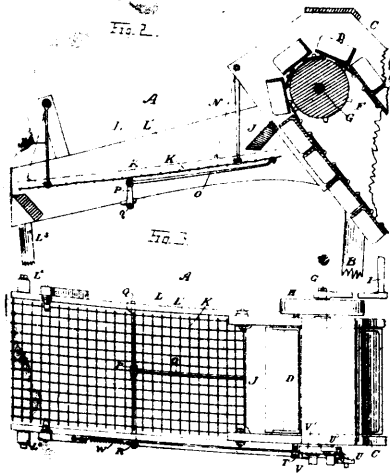
34871 Wiese's Vise Attachment.



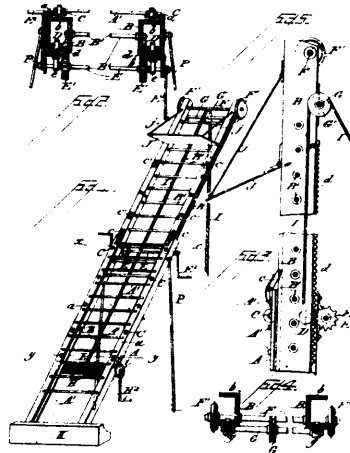
34872 Leslie's Slide Valve.



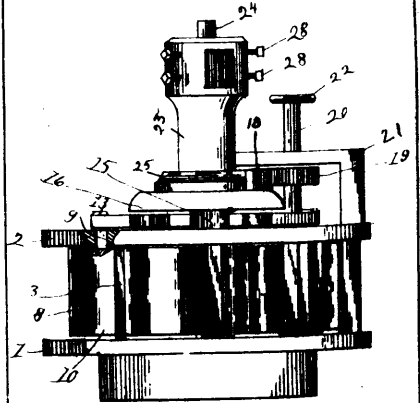
34873 Leslie's Slide Valve.



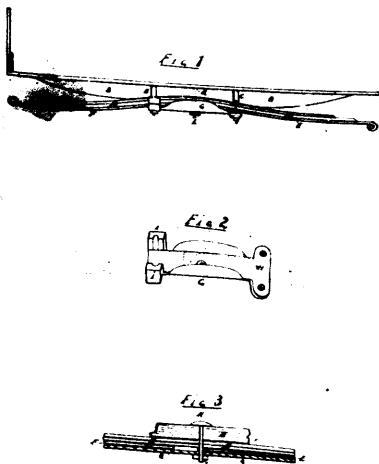
34874 Leslie's Separator.



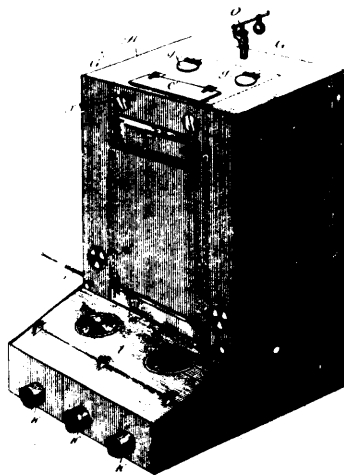
34875 Adley's Extension Ladder.



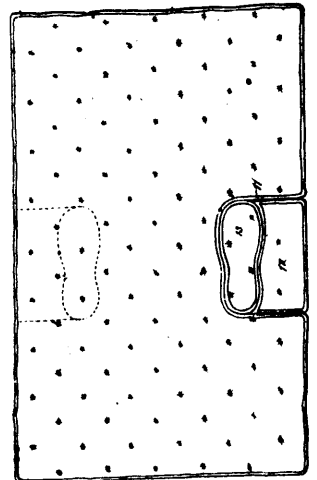
34876 Shelton's Water Wheel.



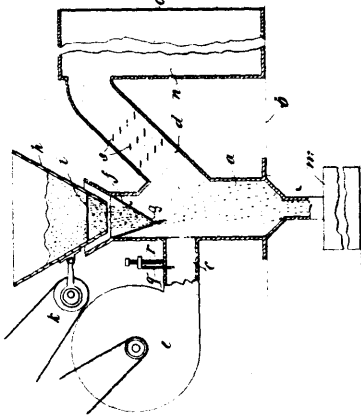
34877 Robb's Vehicle Spring.



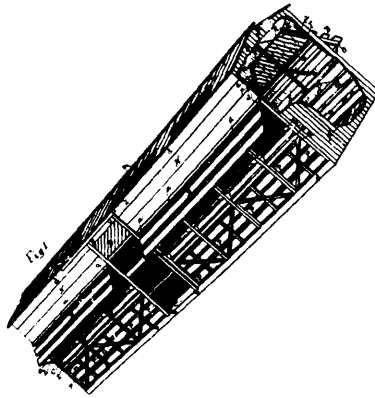
34878 Ayer's Furnace.



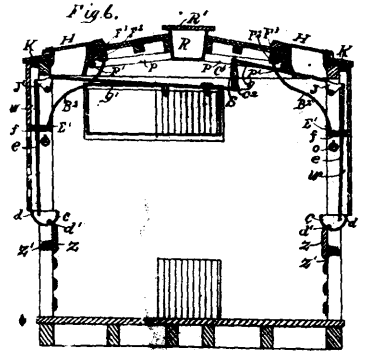
34879 Webb's Mattress.



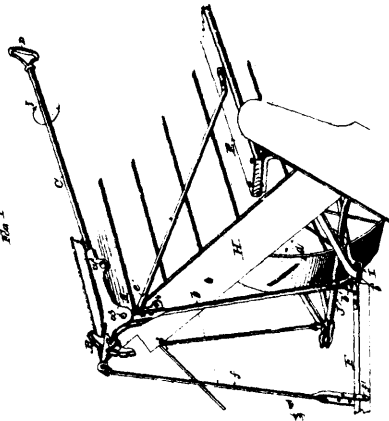
34880 Patterson's Mineral Separator.



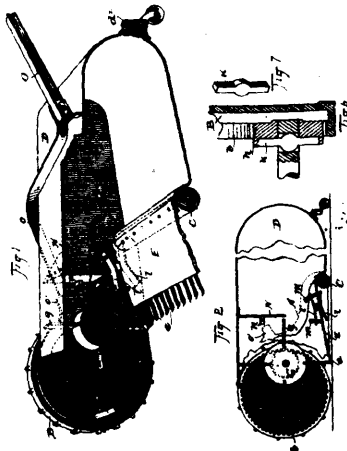
34881 Burton's Stock Car.



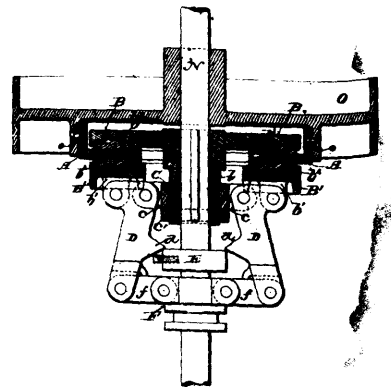
34882 Burton's Stock Car.



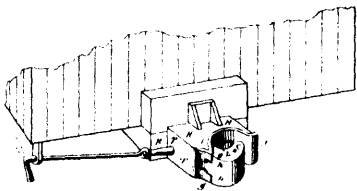
34883 Graham's Grain Harvester.



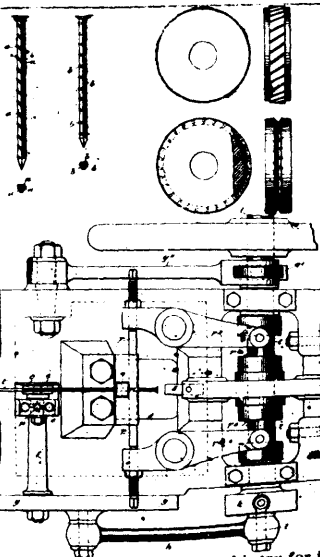
34884 Pontious' Lawn Rake and Sweeper.



34885 Johnson's Friction Clutch.



34886 Benschaw & Burden's Car Coupling.



34887 Tyers' Wire Nail and Machinery for its Manufacture.



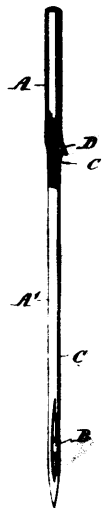
Fig. 1.

Fig. 2.



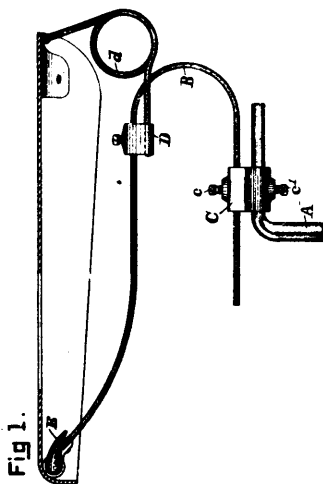
Fig. 3.

34888 Woodhouse's Knotter for Grain Binders.



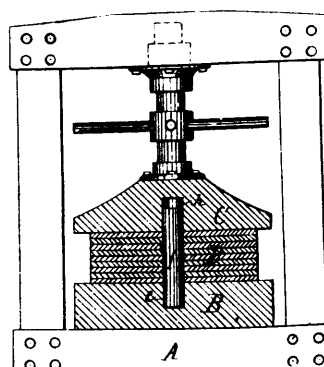
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Hall's Needle

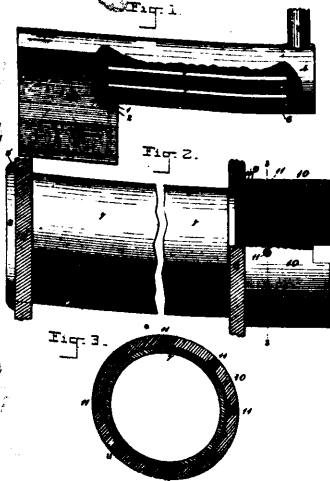


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Garford's Saddle for Velocipedes.

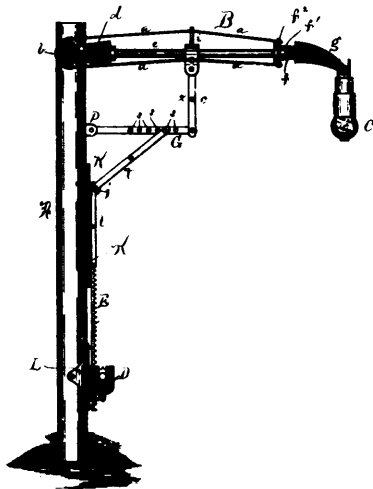


34891 Meachem's Method of Manufacturing Wheels.



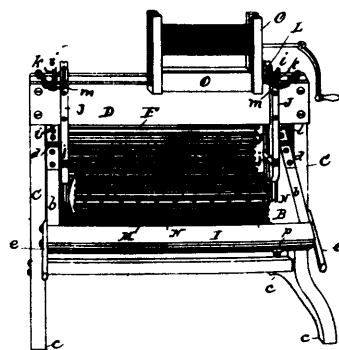
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Cook's Multistage Plug.



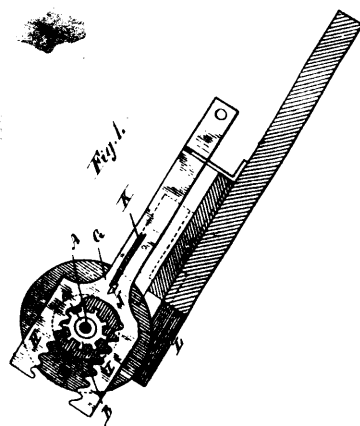
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Ingall's Hanger for Electric Lamps.



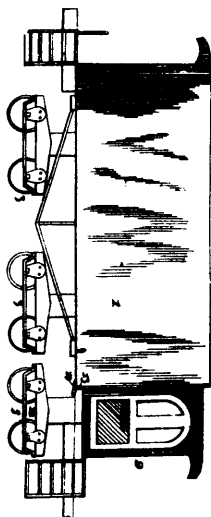
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Baker's Washing Machine



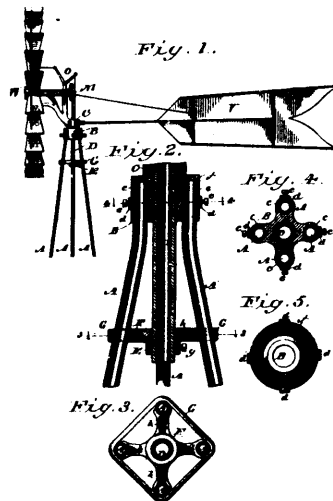
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Lockey's Pitman.



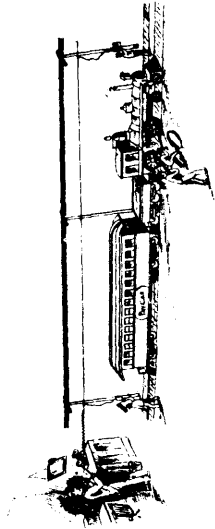
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Zolk's Collapsible Railway Car.

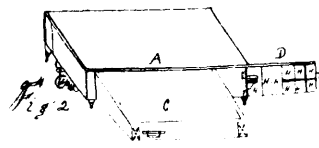
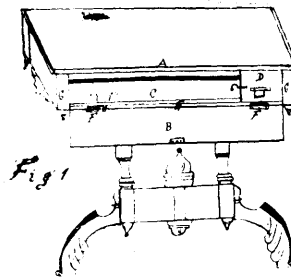


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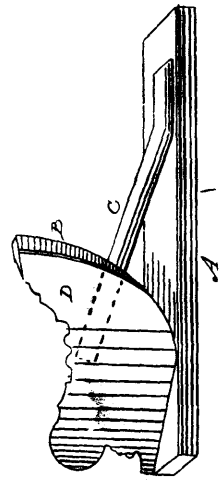
Putnam's Windmill Tower.



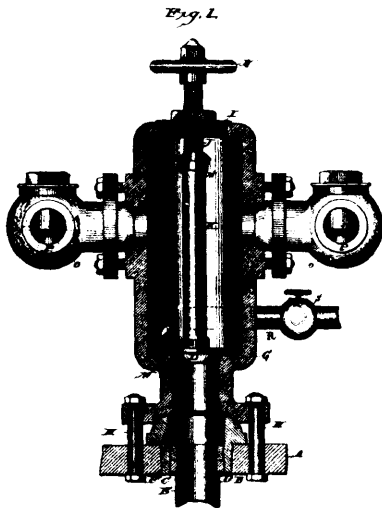
34898 Krepps' System of and Apparatus for Protecting Railway Trains.



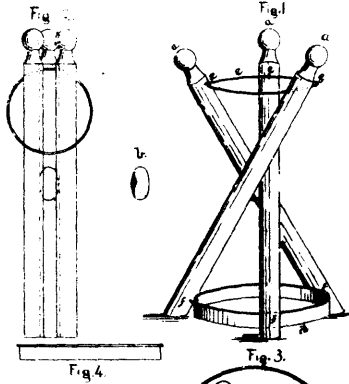
34899 Harrison's Table.



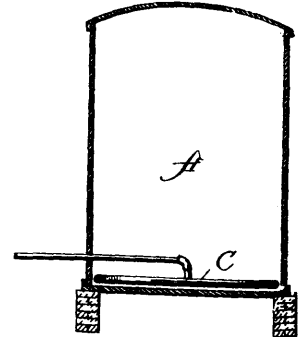
34900 Lighthearts' Cornice and Self-mitting Mould.



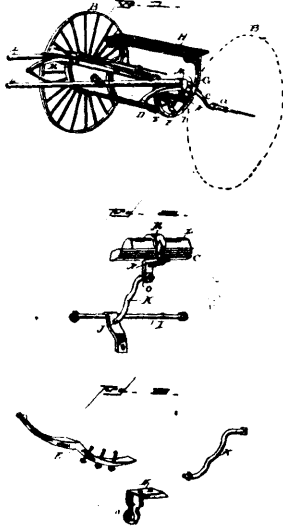
34901 Phillips' Attachment for Feed Water Injectors.



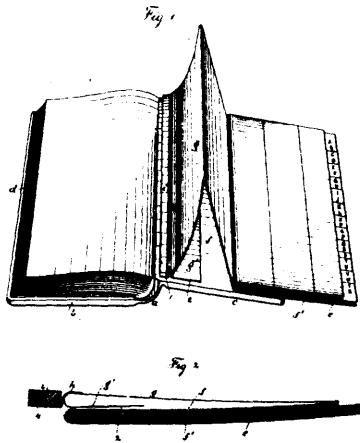
34902 Davis' Umbrella Stand.



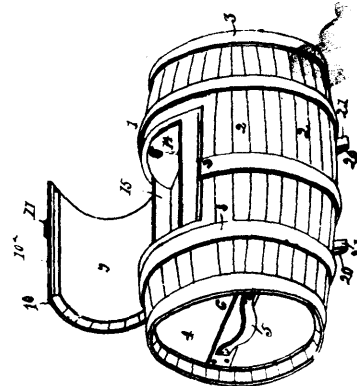
34903 Hooper's Evaporating Apparatus.



34904 Glick's Two Wheeled Vehicle.

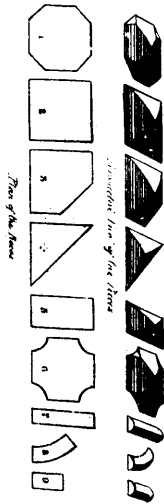


34905 Gregg's Book Attachment.

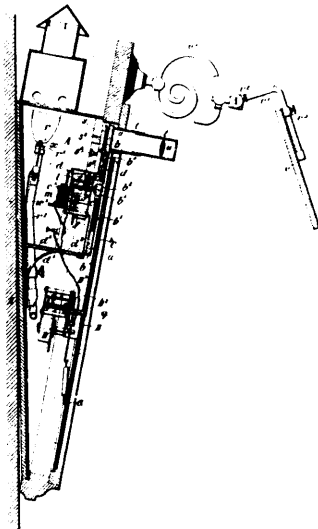


34906 Jones' Barrel Trunk.

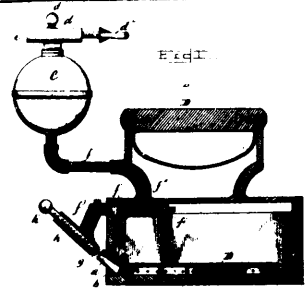
PLAN 1.



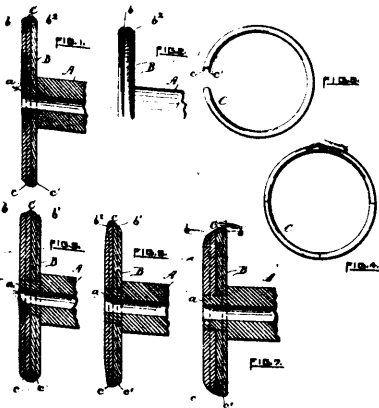
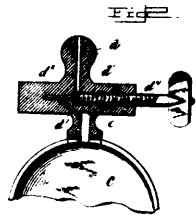
34907 Smith's Letter and Number, for Signs, etc.



34908 Armstrong's Means for Advertising and Station Indicator.

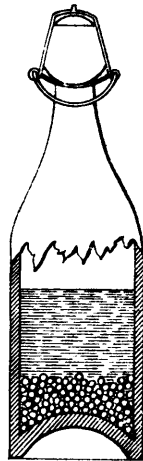


34909 Dubrow's Sad Iron.

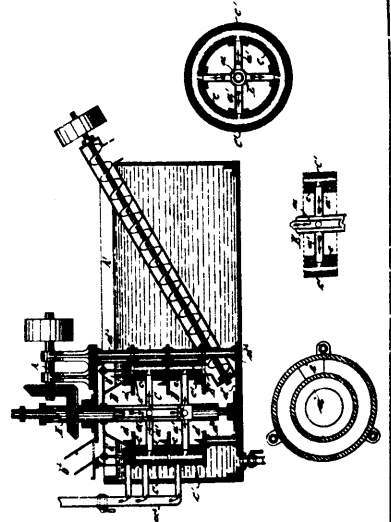


34911 Wilson & Greenwood's Flanged Bobbin.

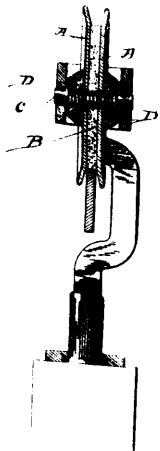
Fig. 1



34912 Alexius' Brick Shot.

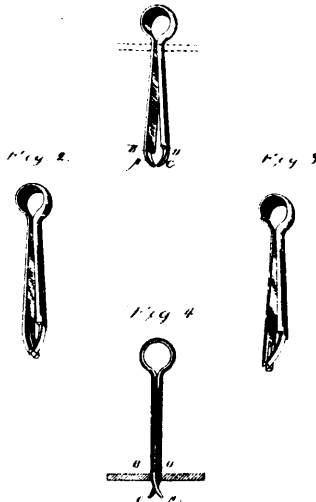


34913 Baumgartner's Machine for Preparing Barley.

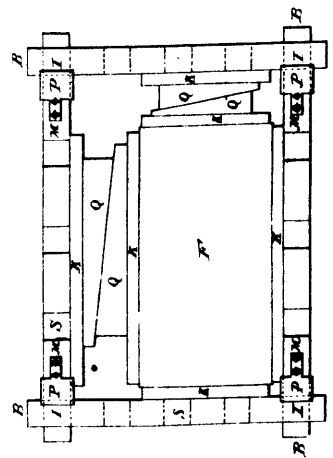


34914 Lane's Wheel for Door Hangers

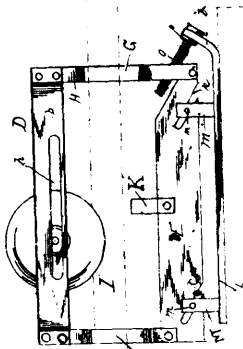
Fig. 1



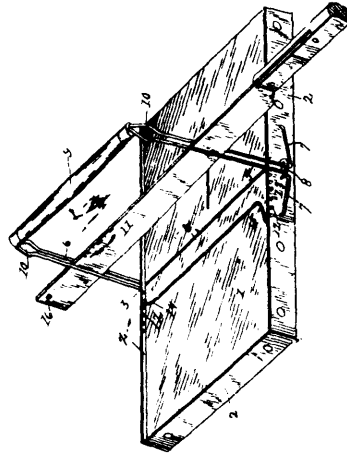
34915 Whorter's Spring Cotter Key.



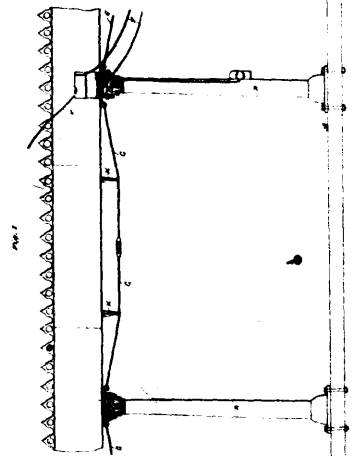
34916 Huether's Printers' Chase



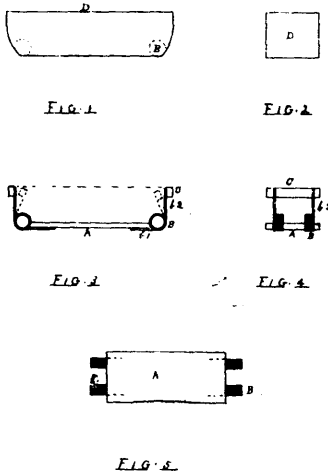
34917 Lane's Door Hanger.



34918 Langdon's Bread Cutter.



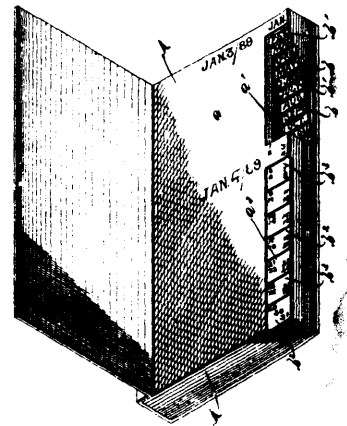
34920 Knudson's Aerial Conduit for Electric Wires.



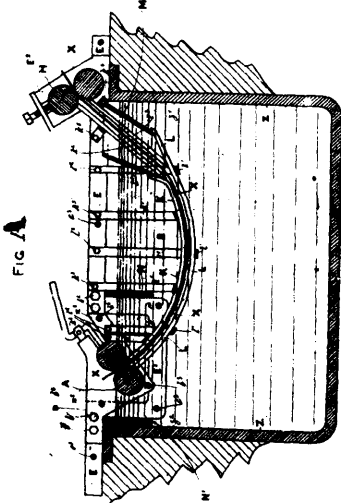
34921 Gray's Pillow



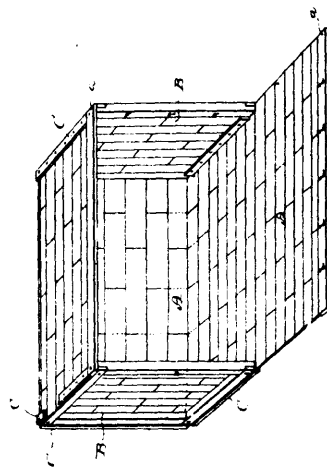
34922 Yocum & Vojtech's Jacket for Bottles.



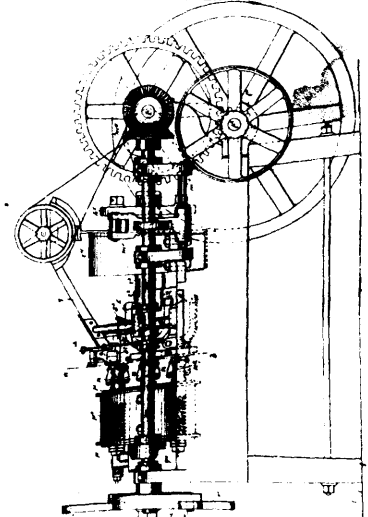
34924 Wells' Index for Books.



34925 Heathfield's Machinery for Coating Metal Sheets with Metals, or Alloys.



34926 Parks' Box, or Crate.



34927 Nettlefolds (limited) Machine for Preparing Screw-Blanks, Needles, Horse Nails, etc.