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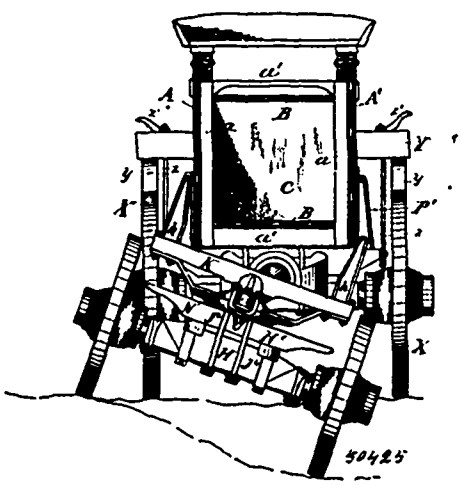
No. 50,425. Wagon. (*Wagon.*)

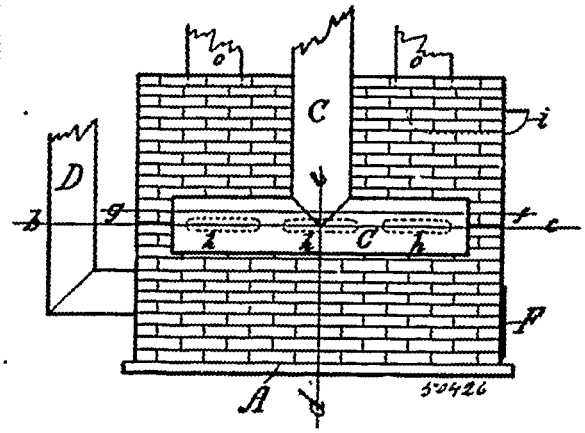


Frank Slough Ingoldsby, Denver, Colorado, U.S.A., 2nd November, 1895; 6 years.

Claim. 1st. In a wagon body, the combination of the sides, with the following parts secured at both ends thereof as described, viz., a rectangular frame placed between said sides near their ends, two transverse tie rods for holding said sides against said frame, a transverse beam a^2, extending between the sides at a point near their lower edges and nearer to the centre of the body than said rectangular frame, a transverse tie rod passing through both sides and through said beam a^2, lengthwise, and an inclined end piece C, which lies snugly between said sides and is fastened to said beam a^2, and to the upper transverse member a^1, of the rectangular frame, substantially as and for the purpose specified. 2nd. In a wagon body, the combination of the sides and a longitudinally placed centre pole, with the following parts secured to both ends of the sides as described, viz., a rectangular frame secured between the sides near their ends, two transverse tie rods for holding said sides against said frame, the divided transverse beam a^2, the parts of which lie between the centre pole and the opposite sides, a transverse tie rod which passes through the centre pole, the two part beam a^2, and both sides, and an inclined end piece C, which lies snugly between the sides and is fastened to the beam a^2, and to the upper transverse members of the rectangular frame, substantially as and for the purpose specified. 3rd. In a wagon body, the combination of the sides, the ends, and longitudinal centre pole, all having outwardly bevelled lower edges, with two doors hinged to the centre pole, and adapted to fit the spaces bounded by said pole, sides and ends, and having their edges bevelled outward from top to bottom, and mechanism adapted to draw said doors up against the sides and the sides inward against the doors, substantially as and for the purpose specified. 4th. In a wagon box, the combination of the sides, the ends, and the longitudinal centre pole, with doors hinged to said centre pole, and adapted to close the spaces bounded by said pole, sides and ends, with straps secured to the doors and extending beyond their outer edges, bevelled projections on the ends of said straps adapted to engage outside of the levers G, levers G pivoted to the sides and having bevelled projections on their lower ends adapted to engage beneath said straps, whereby said straps and levers engage to form a double clamping lock which draws the doors upward and the sides inward, substantially as and for the purpose specified. 5th. In a wagon body, the combination of the sides, the ends and the centre pole secured together, swinging doors adapted to close the spaces bounded by said sides, ends and pole, straps passing over and partly around said pole and having their ends below the pole and formed into hinge eyes, bolts or rivets connecting said two ends of each of said straps just above said hinge eyes, and hinge straps secured to the under side of the doors having eyes which are pivoted to the eyes first named, substantially as and for the purpose specified. 6th. In a wagon body, the combination of the sides, the ends and the centre pole secured together, with vertical straps secured to the sides and having their upper ends bent over onto the top edges thereof, straps d passing over and partly around the centre pole and being connected near their lower ends by a bolt or rivet, the ends of said straps being extended below said centre pole and formed into hinge eyes, the doors F, straps e secured to their under side and projecting beyond both edges thereof, the inner ends being formed into hinge eyes which are pivoted to the eyes in straps d, the outer ends of said straps e having bevelled projections e^2, levers G pivoted to the vertical straps on the sides and having on their lower ends bevelled projections g which interlock with the bevelled projections e^2, substantially as and for the purpose specified. 7th. In a wagon body, the combination of the sides, the ends and the centre pole, all having their lower edges bevelled outward, with doors hinged to the centre pole and having their edges bevelled outward from top to bottom, straps secured to the said doors and extending beyond their outer edges, and bevelled projections on said extended ends adapted to engage with the levers G, vertical straps secured to the sides having their upper ends bent over onto the upper edges of said sides, and having integral cylindrical projections near their lower ends, levers G pivoted on said cylindrical projections and having on their lower ends bevelled projections which are adapted to engage with the projecting ends of the straps on the doors, substantially as and for the purpose specified. 8th. In a wagon, the combination of a wagon box, and bolster, with a transverse brake beam movable in guide slots, brake shoes carried by said beam and adapted to press against the wheels, and a compound lever system for operating the brake beam, of which

a part is pivoted to the box and a part to the bolster, substantially as and for the purpose specified. 9th. In a wagon, the combination of a box having guides for the brake beam, which are placed above and a little behind the rear axle and are substantially radial with respect to the rear wheels, a brake beam movable in said guides, brake shoes secured to said beam, and springs for raising said beam, with the rear bolster, levers pivoted to the ends of said bolster, rods connecting said levers and the brake beam, levers pivoted to the box, links connecting said levers with the levers which are pivoted to the bolster, and mechanism for operating the levers on the box, substantially as and for the purpose specified. 10th. In a wagon, the combination of the wagon box having radial guides for the brake beam, a brake beam movable in said guides, the rear bolster, levers pivoted to said bolster, and rods connecting said lever with the brake beam, with straps secured to the sides of the box having their upper ends bent down upon the top edges of said sides, a rock shaft mounted in the lower ends of said straps, arms rigid with said rock shaft, links connecting said arms with the levers, and an operating arm rigid with said rock shaft, substantially as and for the purpose specified. 11th. In a wagon, the combination of the wagon body and bolster, with a transverse brake arm movable in slots in the sides of the body, brake shoes carried by said beam, springs for rasing the beam, levers pivoted to the ends of the bolster, rods connected at their lower ends with said levers, and having their upper ends passed through the brake beam, adjustable nuts on the ends of said rods, a rock shaft mounted beneath the body, having rigid arms, links connecting said arms with the said levers, and means for rocking said rock shaft, substantially as and for the purpose specified. 12th. In a wagon, the combination of a dish-shaped plate adapted to be secured to the front axle or sand bolster, having on its edge a horizontal circular flange, a circular rub plate adapted to be secured to the bolster, a cylindrical collar embracing the rub plate and the flange on the under plate, and having a flange which extends beneath said flange on the under plate, and diagonal lateral braces for connecting said collar with the bolster, substantially as and for the purpose specified. 13th. In a wagon, the combination of a dish-shaped plate B, adapted to be secured to the sand bolster or front axle, having on its under side two projections b^2, b^2, adapted to embrace said sand bolster or front axle, and having also a horizontal circular flange b, on its edge, with a cylindrical rub plate C, having on its upper side a projection c, in which is formed a hole c^1, to receive the reach, and having above said hole the lugs c^2, c^2, adapted to embrace the bolster, and a cylindrical collar D, which embraces said rub plate and flange, having itself a flange d, which extends beneath the flange b, on the plate B, horizontal arms d^3, d^3, formed on and projecting forward and rearward from said collar and lying against the under side of the reach, lateral arms d^1, d^1, formed on said collar, and diagonal braces d^2, d^2, secured to the last named arms, and adapted to be connected at their outer ends to the bolster, substantially as and for the purpose specified. 14th. In a wagon, the combination of the dish-shaped plate B, having on its under side two projections b^2, b^2, adapted to lie close against the opposite sides of the front axle or sand bolster to which said plate is bolted and having on its edge a horizontal circular flange b, and a cylindrical rub plate C resting upon said flange, having on its upper side a projection c in which is formed a hole c^1 through which the reach passes, and having above said hole two lugs c^2, c^2, adapted to lie close against opposite sides of the bolster, and having an annular horizontal flange c^3 surrounding the cylindrical part of said rub plate, with a cylindrical collar D embracing the rub plate and flange b, and having a flange d which lies beneath said flange b, and having also two horizontal arms d^3, d^3, which extend forward and backward and are adapted to lie against the reach, and having also two lateral arms d^1, d^1, two diagonal braces d^2, d^2 bolted to said lateral arms with their ends abutting the plate C, and adapted to be secured at their outer ends to the bolster, substantially as and for the purpose specified. 15th. In a wagon, the combination of a dish-shaped plate B adapted to be bolted to the sand bolster or front axle, having on its outer edge a horizontal circular flange b, a cylindrical rub plate adapted to rest upon the flange b, and having means for connecting the same with the bolster, with a collar D embracing said rub plate C and flange b, and having a flange d which lies beneath said flange b, and having also lateral arms d^1, d^1, and two diagonal braces d^2, d^2 bolted to the arms d^1, d^1 with their ends abutting the plate C, and adapted to be bolted at their outer ends to the bolster, substantially as and for the purpose specified. 16th. In a wagon, the combination of the bolster, reach and front axle, with a dish-shaped plate secured to the front axle having on its edge a circular flange, a cylindrical rub plate resting on said flange, having on its upper side a projection in which is formed a hole through which the reach passes, and having two lugs which lie close against opposite sides of the bolster, a circular collar embracing said rub plate and flange b, and having a flange d which extends beneath the flange b, and having also two lateral arms, two diagonal braces bolted at their inner ends to said arms and at their outer ends to the bolster, and a brace bolted at its front end to the under side of the front axle, and at its rear end to the reach, substantially as and for the purpose specified. 17th. In a wagon, the combination of the rear axle and bolster, and a sleeve having at its rear end an integral foot extending at right angles to the axis of the sleeve and in opposite directions, said foot being wide enough to span both axle and bolster, and bolts connecting said foot to both axle and bolster, with a cylindrical reach which passes through the sleeve and beyond the rear axle and bolster, a nut on the rear end of the reach, and shoulders on the reach shutting the front end of said sleeve, substantially as and for the purpose specified. 18th. In a wagon, the combination of the rear axle and bolster, a cylindrical sleeve which is secured to said parts, the cylindrical reach which passes through and is adapted to turn in said sleeve, and extends rearward beyond said axle and bolster, a shoulder on the reach abutting the front end of said sleeve, a compression hound which is secured to the rear axle and bolster and through which the rear end of the reach passes, and a nut on the rear end of the reach engaging with said hound, substantially as and for the purpose specified. 19th. In a wagon, the combination of the rear axle and bolster, with a compression hound having a centre plate and four arms which are secured to the bolster and axle near the ends thereof, with a cylindrical reach passing through a hole in the rear axle and bolster and through the centre plate of said compression hound, and a nut on the end of said reach, substantially as and for the purpose specified. 20th. In a wagon, the combination of the rear axle and bolster, with a compression hound having a centre plate and four arms which are secured to the said axle and bolster, a reach which passes through a hole in said axle and bolster and through the centre plate of said hound, a nut on the end of said reach, and a sleeve surrounding the reach and lying between the hound and the axle and bolster, substantially as and for the purpose specified. 21st. In a wagon, the combination of the rear axle and bolster, with a compression hound having a centre plate and four arms, tie bolts for securing said hound arms to the axle and bolster, and a tie plate secured to the axle having shoulders which resist the spreading of the said hound arms, substantially as and for the purpose specified. 22nd. In a wagon, the combination of the rear bolster and axle, the front bolster, a reach connecting said parts and having a cylindrical end upon which one of said parts is pivoted, the front axle, and a fifth wheel device which connects said front axle and front bolster and holds them in parallel planes, with a stiff wagon box, which rests upon the two bolsters, two standards secured to one of said parts between which said box fits loosely, substantially as and for the purpose specified. 23rd. In a wagon, the combination of the front bolster, the rear axle and bolster, the reach rigidly connected with the front bolster, and having a cylindrical end upon which the rear bolster and axle are pivoted, the front axle and a fifth wheel device which connects said front axle and bolster and holds them in parallel planes, with two outwardly inclined standards secured to the front bolster, and a wagon box which rests upon both bolsters and fits loosely between said standards, substantially as and for the purpose specified.

No. 50,426. Furnace. (*Fournaise.*)



John Jamieson, Truro, Nova Scotia, Canada, 2nd November, 1895; 6 years.

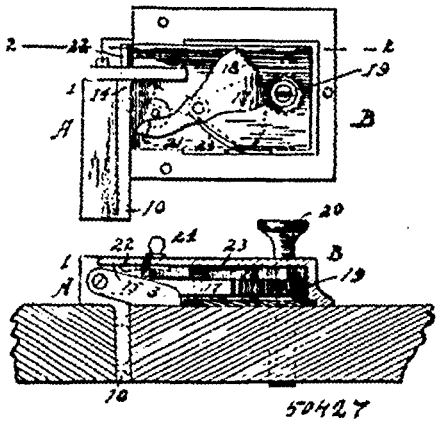
Claim.—1st. In a brick heating furnace, the radiator G, with the flanges n, substantially as and for the purpose hereinbefore described. 2nd. In a brick heating furnace, the combination of the radiator G, with the joint plates k, k, k, k, having sand boxes n, and the loose bricks a, a, a, a, substantially as and for the purpose hereinbefore set forth anddescribed. 3rd. In a brick heating furnace, the combination of the cold air pipe C, with the receiver C^1, and the flat distributing pipes h, h, h, substantially as and for the purpose hereinbefore described. 4th. In a brick heating furnace, the combination of the radiator G, the radiator joint plates k, k, k, k, and the loose bricks a, a, a, a, with the cold air pipe C, the receiver C^1, and the distributing pipes h, h, h, substantially as and for the purpose hereinbefore described.

No. 50,427. Alarm Lock for Doors and Windows.

(*Serrure à sonnerie pour portes et fenêtres.*)

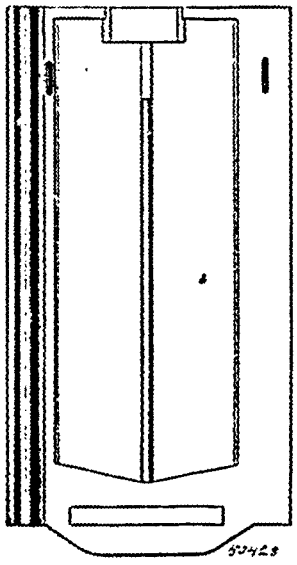
Joseph F. Graybill, York, Pennsylvania, U.S.A., 2nd November, 1895; 6 years.

Claim.—1st. In an alarm fastening for windows or doors, the combination with the hollow casing having a side opening 2, at the end



thereof, a transverse abutment or partition at the base of the opening, and a loose plate 9, separated from the abutment by a compartment 8, of a plunger within the casing and passing through said abutment and plate, an arm upon one end of the plunger constructed to rest against the end of the casing and to pass into the side opening when brought opposite thereto, a head upon the opposite end of the plunger and spring confined between said head and the transverse partition or abutment, substantially as described. 2nd. The combination with an alarm fastening for attachment to a door casing having a spring pressed plunger and trigger and a support for a cap, of a casing for attachment to the door, a pivoted lever within the casing having a support 21 for the trigger at one end and a segment gear at the opposite end, a pinion in mesh with the gear and means for turning the pinion to support the rest, substantially as described. 3rd. The support for attachment to a door consisting of a casing 16, a lever pivoted in the casing having a rest 21, at its forward end, and a segment gear at its rear end, a pinion in mesh with the gear, means for operating the pinion, a spring for holding said rest in its lowest position, and a sliding catch for locking it in said position, substantially as described.

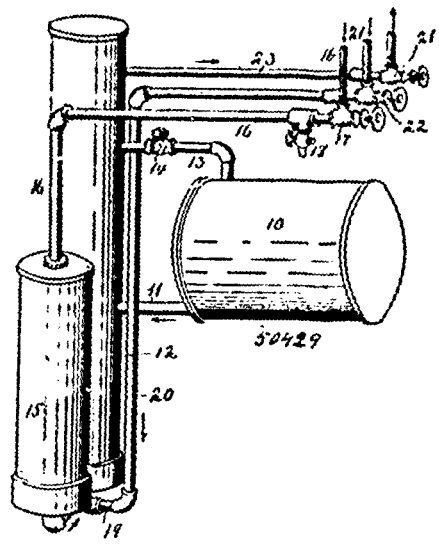
No. 50,428. Tiles. (*Tuiles.*)



Christian Ludwig Luders and Georg Carl Martin Luders, both of 29 Kleine Reichenstrasse, Hamburg, German Empire, 2nd November, 1895; 6 years.

Claim.—1st. The manufacture and use of cement tiles hollowed out or concave on the top side, constructed and arranged substantially as hereinbefore described. 2nd. The combination with cement tiles hollowed on the top side, of wires or wire netting inserted into said tiles, constructed and arranged substantially as hereinbefore described.

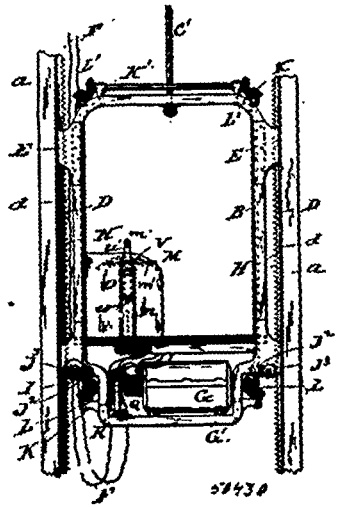
No. 50,429. Carburetor. (*Carburateur.*)



Eugene M. Wescott, Hampton, Iowa, U.S.A., 2nd November, 1895; 6 years.

Claim. 1st. An apparatus of the kind described, comprising a gasoline supply tank, a carburetor extending above and below the supply tank and connected therewith, a water tank connected with the carburetor at the lower end of both tank and carburetor, an air supply tank connected with the water tank at the top, an air supply pipe connected with the lower end of the carburetor, and a discharge pipe opening from the upper end of the carburetor, substantially as described. 2nd. An apparatus of the kind described, comprising a gasoline supply tank, a carburetor extending above and below the level of the supply tank, pipes connecting the upper and lower portions of the tank with the carburetor, means for delivering water under pressure to the lower portion of the carburetor, an air supply pipe delivering into the bottom of the carburetor, and a discharge pipe leading from the upper portion of the carburetor, substantially as described. 3rd. An apparatus of the kind described, comprising a gasoline tank, a carburetor extending above and below the level of the tank, a pipe connection between the carburetor and tank, a water tank connected with the lower end of the carburetor, an air supply pipe provided with an escape cock and connected with the upper end of the water tank, and an air supply pipe connected with the lower end of the carburetor, an air distributer at the end of the air supply pipe in the carburetor, and a discharge pipe leading from the upper part of the carburetor, substantially as described.

No. 50,430. Elevator. (*Elévateur.*)



John William Gentry, Oakland, Jersey Jacob, Fruitvale, and Octave Marchand, Golden Gate, all in California, U.S.A., 2nd November, 1895; 6 years.

Claim.—1st. The combination of a car or cage, a motor carried thereby and moving the same, a friction brake acting on the shaft of said motor, a controller connected with the motor to determine the direction of rotation of the motor shaft, a lifter carried by said controller and connected with the brake, and a guide or stop bearing on said lifter and having a central notch, substantially as and for the purposes set forth. 2nd. The combination of a car or cage, a motor carried thereby and moving the same, and a controlling device for said motor consisting of a pinion mounted on the side of the car, intermediate gear connecting said pinion with the motor, and a segmental rack pivoted on the side of the car and meshing with said pinion. 3rd. The combination of a car or cage, a prime mover carried thereby, upright shafts also carried by said car or cage, and geared at one end with said prime mover, vertical racks, worms on said shafts geared with said racks, and a supplementary transverse shaft geared with the opposite end of said upright shafts, substantially as set forth.

No. 50,431. Telephone System. (*Système de téléphone.*)

Fig. 2.

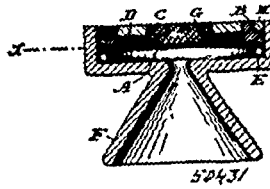
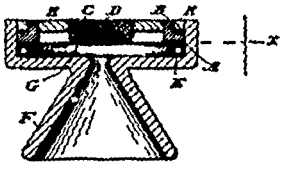


Fig. 4.

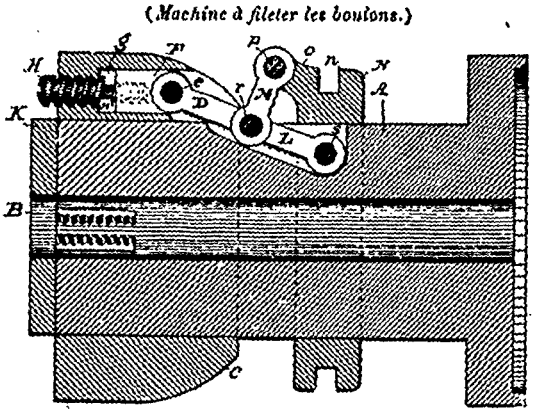


50431

Alfred Charles Brown, Lewisham, England, 2nd November, 1895; 6 years.

Claim.—1st. In a telephone receiver the arrangement and combination of a central or cylindrical casing or ring seating with ear piece and with two diaphragms both adapted to be simultaneously vibrated in opposite directions to or from each other, and polarized by magnets, substantially as above specified. 2nd. In a telephone receiver having two diaphragms clamped onto a cylindrical seating, the use for polarizing such diaphragms or cores, of a split steel tube such as S, encircling the coils as above described, or for the same purpose of bar magnets or of horse-shoe magnets, or of magnets arranged or adapted to operate substantially as above described and illustrated. 3rd. The combination in a telephone receiver, of a primary of an induction coil connected in circuit with the transmitter and local battery, with the coil or coils normally used for actuating the receiver, which is or are thereby caused to act also as the secondary of the induction coil, for the purpose of eliminating the resistances and impedances of the secondaries of the induction coils otherwise usually employed, and thereby increasing the amount of current energy available for actuating the receiver diaphragms at both ends of an ordinary telephone circuit, substantially as above set forth. 4th. A telephone receiver constructed to produce a loud buzzing sound by providing a contact screw located to make contact with its diaphragm or one of its diaphragms if it have more than one, said contact screw and diaphragm being joined in circuit with a battery and one of the coils of the receiver, as above described. 5th. The method, apparatus and electrical connections above described for calling attention at a subscriber's station from an exchange or central station by sending through the coils of the subscribers or out station telephone receivers the currents generated by an induction coil or the extra currents from an electro-magnet joined in circuit in either case with a current generator and rapid make and break, substantially as and for the purposes set forth. 6th. In a transmitter, an electrode in the form of the frustum of a cone in combination with an elastic packing forming a ring around said electrode, and a mass of hard carbon granules filling the triangular space between the cone, the packing ring and the diaphragm, and subjected by said ring to an elastic pressure exerting a constant tendency to cause the said granules to move up the incline of the cone towards and on to the diaphragm, and the said electrode carrying no granules on any other surfaces, substantially as set forth. 7th. In a telephone transmitter, a carbon electrode having one or more grooves or projections running in any longitudinal direction, rectilinear or curvilinear, over its surface, one of the walls of such grooves or projections being inclined to the face of the diaphragm (at an angle of approximately 45 degrees) and having parallel thereto and at a short distance therefrom a strip of cotton, wool or other springy packing following the direction of the length of such grooves or projections so as to form, together with the diaphragm and inclined face of the electrode, a triangular space having two rigid sides and one yielding side in which alone the hard carbon granules are confined, substantially as set forth. 8th. The herein described improvement in constructing telephone transmitters having a diaphragm resting upon an elastic seat, consisting in subjecting the diaphragm and said elastic seat together to the determinate measured pressure of a weight, spring or other device, and cementing, fixing or setting the diaphragm in position by a rigid clamping device without disturbing the said pressure. 9th. In a telephone transmitter, the combination, substantially as described, of a back ring or piece having a back electrode fastened to it, a diaphragm, an elastic seating for the edge of the same, and a frame or case in which said back piece is cemented to hold the said diaphragm in place between the frame and back piece and against the elastic seating with the measured pressure to which the said back piece is subjected at the time of cementing. 10th. In a telephone transmitter, the combination of a diaphragm, a back electrode conducting granules compressed between the diaphragm and back electrode, a frame or case, an elastic ring seating at the front of the diaphragm between the same and the case, and means for fastening the diaphragm and back electrode in the frame and at the same time holding the said diaphragm pressed from its rear against the said ring.

No. 50,432. Bolt Threading Machine.
(*Machine à fileter les boulons.*)



50432

Michel D. Luehrs, Cleveland, Ohio, U.S.A., 2nd November, 1895; 6 years.

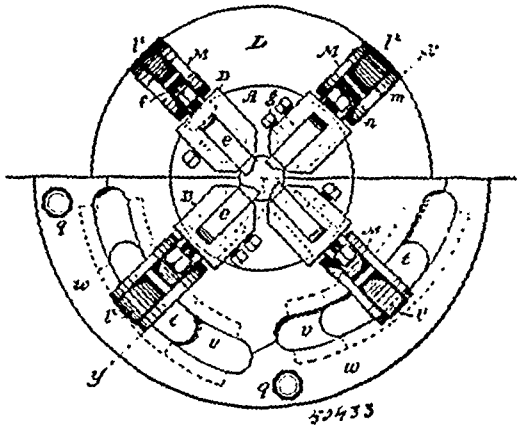
Claim.—1st. In a bolt-cutter head the combination with the barrel and the die-ring sliding thereon, of a toggle having an adjustable connection to the die-ring and a fixed pivotal connection to the barrel, a clutch-ring sliding on the barrel and a link pivoted at one end to the clutch-ring, and at the other to the centre joint of the toggle, substantially as described. 2nd. In a bolt-cutter head the combination with the barrel and the die-ring sliding thereon, of a toggle having one end pivoted directly to the barrel and the other end pivoted to a block sliding in a recess in the die-ring, an adjusting screw threaded into said block and having a bearing in the die-ring, a clutch-ring sliding on the barrel, and a link pivoted at one end to the clutch-ring and at the other to the centre joint of the toggle, substantially as described. 3rd. In a bolt-cutter head the combination with the barrel, the die-ring sliding thereon, and a toggle immovably pivoted to the barrel and movably pivoted to the die-ring, of a clutch-ring sliding on the barrel and connected by a link to the centre joint of the toggle and adapted to force the outer end of the connecting link forward of a line at right angles to the line joining the pivots of the toggle when fully extended, so as to lock the toggle in the extended position as described. 4th. In a bolt-cutter head the combination with the barrel and the die-ring sliding thereon, of the toggle having one end pivoted directly to the barrel and the other end pivoted to a block sliding in a recess in the die-ring, an adjusting screw threaded through the die-ring and into the sliding block by threads of different pitch, a clutch-ring sliding on the barrel, and a link pivoted at one end to the clutch-ring and at the other to the centre joint of the toggle, substantially as described.

No. 50,433. Bolt Cutter. (*Appareil à couper les boulons.*)

Michel D. Luehrs, Cleveland, Ohio, U.S.A., 2nd November, 1895; 6 years.

Claim.—1st. In a bolt-cutter head the combination with the barrel, the die-carrying arms pivoted at their rear ends therein and having radial movement on such pivots, and a clutch-ring sliding on the barrel outside of the die-carrying arms, of a toggle connecting the clutch-ring with each die-carrying arm at its forward end, substantially as described. 2nd. In a bolt-cutter head the combination with the barrel, the die-carrying arms pivoted at their rear ends therein and having radial movement on such pivots, and a clutch-ring sliding on the barrel outside of the die-carrying arms, of a toggle connecting the clutch-ring with the die-carrying arm in line radially with the die, substantially as described. 3rd. In a bolt-cutter head the combination of the barrel, die-carrying arms pivoted at their rear ends therein and having radial movement on their pivots, a clutch-ring sliding on the barrel outside of the die-carrying arms, and a toggle link pivoted at one end to the clutch-ring and at the other to the forward end of the die-carrying arm, substantially as described. 4th. In a bolt-cutter head the combination of a barrel, die-carrying arms pivoted at their rear ends therein and having

radial movement on their pivots, a clutch-ring sliding on the barrel outside the die-carrying arms, and a toggle link pivoted at one end



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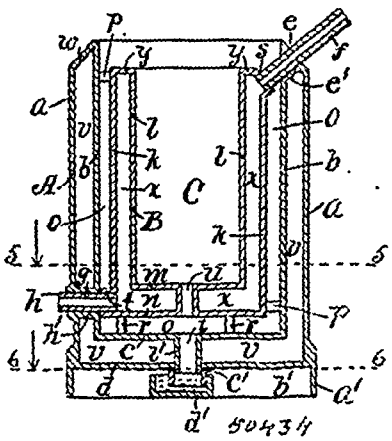
to the clutch-ring and at the other to the die-holder in line radially with the die, substantially as described. 5th. In a bolt-cutter head the combination of a barrel, die-carrying arms pivoted therein at their rear ends and having radial movement on their pivots, a clutch-ring sliding on the barrel outside of the die-carrying arms, and a toggle link pivoted at one end to the forward end of the die-carrying arm and at the other to a forward extending stud on the clutch-ring whereby the link is brought against the face of the clutch-ring when the dies are closed and the dies are locked in the closed position, substantially as described. 6th. In a bolt-cutter head, the combination of a barrel, die-carrying arms pivoted at their rear ends therein and having radial movement on their pivots, a clutch-ring sliding on the barrel outside of the die carrying arms, and a toggle connecting the forward end of the die-carrying arm with a forward extending stud adjustably secured to the clutch-ring, substantially as described. 7th. In a bolt-cutter head, the combination of a barrel, die-carrying arms pivoted therein, a clutch-ring sliding on the barrel and a toggle-link pivoted at one end to the die-carrying arms and at the other to a stud seated in an eccentric groove or slot on the clutch-ring, substantially as shown and described. 8th. The combination in a bolt-cutter head of the barrel, the die-carrying arms, the clutch-ring sliding on the barrel, the links pivoted at one end to a die-carrying arm and at the other to a stud sliding in the clutch-ring, and a clamp-ring to clamp the studs in place, substantially as described.

No. 50,434. Cooler for Water, etc.

(*Réfrigérant pour l'eau, etc.*)



50434

George F. Berron and Donald McPherson, both of Palmyra, New York, U.S.A., 2nd November, 1895; 5 years.

Claim.—1st. A water cooler for liquids, comprising a double walled case, having an opening near its top and another opening near its bottom, a hollow bushing connecting the walls at said openings, a double-walled cooler within the case of a less length and diameter than the case, the exterior wall of which is perforated to register with the perforations in the case, a cover for the case, an inlet and an outlet pipe extending respectively through the hollow bushing in the case, and projecting into the inner section, substantially as set forth. 2nd. A cooler for liquids, comprising two double-walled casings fitting one within the other, each of the walls of the outer casing being provided with an opening or perforation near the top and the bottom thereof, and an opening in each bottom, and the outer wall of the inner section being provided at the top and the bottom with an opening or perforation to register with the openings in the outer casing, and each of the bottoms of the inner casing being provided with an opening to register with the openings in the outer casing, a thimble in the openings of the bottoms of the inner casing, and a short pipe through the bottoms of the outer casing, a short thimble or sleeve for connecting the upper openings and lower openings respectively of the outer casing, an inlet and an outlet pipe through the thimbles, of the walls of the outer casing and into the openings of the outer wall of the inner casing, means for spacing the inner casing within the outer casing, a cover for the outer casing, and a trap under the outer end of the pipe through the bottom of the outer casing, substantially as set forth.

No. 50,435. Electric Door Lock.

(*Serrure électrique de porte.*)

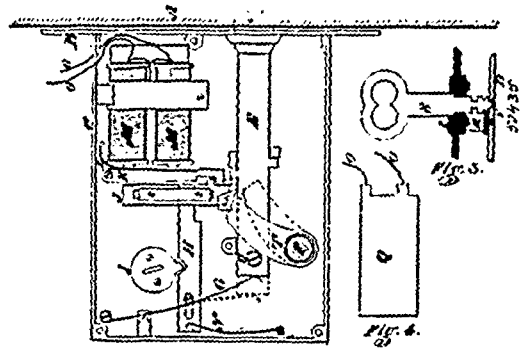


Fig. 1.

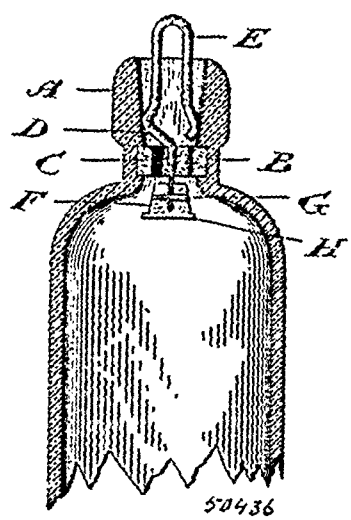
Fig. 3.

Fig. 4.

Isaac T. Marshall, Hamilton, and John A. Marshall, Belleville, both in Ontario, Canada, 2nd November, 1895; 5 years.

Claim. 1st. The combination of the magnet M, the catch bar K, the drop slot J, and the cam lever T, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of the key attachment H, the catch bar K, the drop slot J, and the cam lever T, substantially as and for the purpose hereinbefore set forth.

No. 50,436. Bottle Stopper. (*Bouchon de bouteille.*)



50436

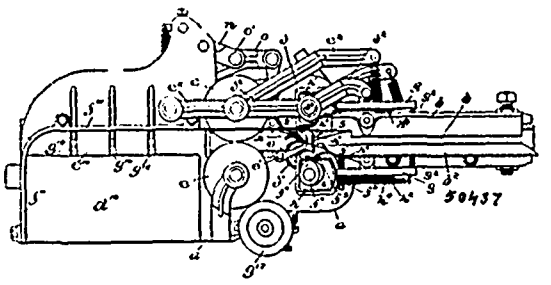
Alfred Coxon, Chicago, Illinois, U.S.A., George Coxon and John Henry Stone, both of Toronto, Ontario, Canada, 2nd November, 1895; 5 years.

Claim.—1st. An internal bottle stopper comprising a bent wire spring, to which is connected a tapered porcelain plug, in combination with a bottle neck having an internal annular recess formed therein, and a cork seat or ring fitting the recess and projecting slightly therefrom, the porcelain plug being arranged to enter the seat from below, substantially as and for the purpose specified. 2nd. An internal bottle stopper comprising a bent wire spring, to which is connected a tapered porcelain plug with a flanged base, in

combination with a bottle neck having an internal annular recess formed therein and a cork seat or ring fitting the recess and projecting slightly therefrom, the porcelain plug being arranged to enter the seat from below, substantially as and for the purpose specified. 3rd. An internal bottle stopper, comprising a bent wire spring, to which is connected a porcelain plug with a flanged base, in combination with a bottle neck having an internal annular recess formed therein and a cork seat or ring fitting the recess and projecting slightly therefrom, the porcelain plug being arranged to enter the seat from below, substantially as and for the purpose specified.

No. 50,437. Mail-Marking Machine.

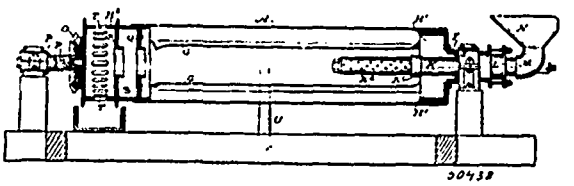
(*Machine à marquer les malles.*)



Charles Freeman Brown, Reading, assignee of Martin Van Buren Ethridge, Everett, and Henry Edward Waite, Newton, all in Massachusetts, U.S.A., 2nd November, 1895; 6 years.

Claim.—1st. In a mail-marking machine, the combination, of a hopper, a conveyer therein, a fixed abutment for letters issuing from the hopper under impulse of said conveyer, a timing switch vibrating transversely of the abutment and adapted to direct letters against the same and time their departure therefrom, and grippers adapted to close on the letter at the moment it is free of the abutment and to then advance the letter. 2nd. In a mail-marking machine, the combination of a hopper, a conveyer therein, means for timing a letter in its departure from the hopper, opposed grippers each movable in a substantially rectangular course, said grippers adapted to close on a letter and advance it, and means for imparting to the grippers motion of the character above named. 3rd. In a mail-marking machine, the combination of a hopper, a conveyer therein, a fixed abutment for letters issuing from the hopper under impulse of said conveyer, vibrating switch-arms yieldingly held in contact and movable together transversely of the abutment, and means applied to one of said arms for vibrating it. 4th. In a mail-marking machine, the combination of a hopper, a conveyer therein, means for timing a letter in its departure from the hopper, grippers having a compound gripping and feed motion, and feed-rollers between which the letter is taken by the grippers, one of said rollers being positively driven and having a segmental portion of its periphery cut away, substantially as and for the purpose described. 5th. In a mail-marking machine, the combination of a hopper, a conveyer therein, a fixed abutment for letters issuing from the hopper under impulse of said conveyer, a timing switch vibrating transversely of the abutment and adapted to direct letters against the same and time their departure therefrom, feed-rollers beyond the abutment, grippers arranged to close on the letter at the moment it is free of the abutment and advance it between the feed-rollers, and printing and impression cylinders beyond the feed-rollers. 6th. In a mail-marking machine, the combination of a rotary support located at one side of the letter-path, a segment carried by said support and movable toward and from the centre thereof, said segment being normally retracted, an opposed support for co-action with the segment in marking a mail piece, and letter-controlled means for projecting the segment for engagement with the passing mail-piece. 7th. In a mail-marking machine, the combination of a printing and an impression roll having letter-engaging segments, that on one roll being movable toward and from the centre of that roll and normally retracted, and letter-controlled means for projecting said segment for engagement with the passing mail-piece. 8th. In a mail-marking machine, the combination of a continuously rotating printing roller, a continuously rotating opposed roller, a segmental impression pad carried by the latter and normally retracted from the periphery thereof, and letter-controlled means for projecting said pad for co-action with the printing dies in marking a passing mail-piece. 9th. In a mail-marking machine, the combination of a printing and an impression roll having letter-engaging segments, that on one roll being movable toward and from the centre of that roll and normally retracted, a sleeve loose on the journal of said roll and carrying a cam to project the segment and having a stop-projection, an elastic connection between the journal and the sleeve, and a letter-controlled abutment for co-action with the stop projection to render the cam operative, substantially as described. 10th. In a mail-marking machine, the combination of a printing and an impression roll having letter-engaging segments, that on one roll being movable toward and from the centre of that roll and normally retracted, a sleeve loose on the journal of said roll and carrying a cam to project the segment and having a stop-projection, an elastic connection between the journal and the sleeve, a movable abutment for co-action with the stop-projection to render the cam operative and normally retracted from the path of said projection, a compound lever connected with said abutment, means for constantly vibrating one member of said lever, and a movable support which normally constitutes a fulcrum for said member and limits vibration thereof on its own pivot effecting vibration of the lever on its other pivot, said support adapted to be displaced by a passing mail-piece to permit full vibration of the aforesaid member of the compound lever and a consequent movement of the abutment into the path of the projection. 11th. In a mail-marking machine, a depressed enclosure for a stack of mail-pieces, a sliding back-rest on the bottom of said enclosure, an unbroken horizontal ledge extending along the receiving end of the enclosure and on which the marked mail-pieces land singly, and a stacking cam rotating in a vertical plane across the ledge and into the enclosure, said cam adapted to move a mail-piece off the ledge into the enclosure and to take it against the back rest or the previously stacked letters. 12th. In a mail-marking machine, a depressed enclosure for a stack of mail-pieces, a sliding back-rest on the bottom of said enclosure, a ledge extending along the receiving end of the enclosure and on which the marked mail-pieces land singly, and a stacking cam rotating in a vertical plane across the ledge and into the enclosure, said cam having two sections, one adapted to move a mail-piece off the ledge and to act against the stack and having an end for the said mail-piece to follow in its descent into the enclosure, and the other adapted to take said piece against the back-rest or the previously stacked pieces.

No. 50,438. Amalgamator. (*Amalgamateur.*)

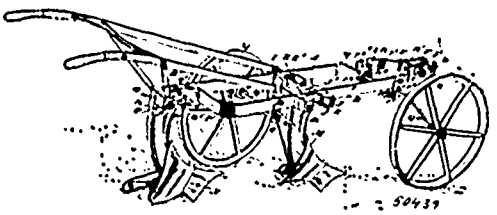


The Midas Gold Saving Machinery Co., assignee of Alexander C. Rumble, both of San Francisco, California, U.S.A., 2nd November, 1895; 6 years.

Claim.—1st. An amalgamator consisting of the inclined approximately horizontal cylinder formed in two segments, having an interior, silver-plated lining, said lining being folded at intervals to form radial ribs and flanges projecting between the two parts of the cylinder in single continuous segments, without joints. 2nd. An amalgamator, consisting of a cylinder formed of two segments, flanges along the edges of each segment, hinges by which the adjacent flanges upon one side are connected together, said hinges consisting of screw threaded eye bolts pivoted to one of the flanges, extending through holes in the opposite flange having nuts by which the flange is adjusted with relation to its opposing one and clamped to the bolts, a means for locking the flanges upon the opposite side when the two parts of the cylinder have been closed, and an interior lining consisting of segmental amalgamated plates extending from end to end and having radially projecting ribs formed by folding said plates, flanges projecting between the meeting edges of the two segments, and elastic gaskets whereby tight joints are formed along said edges. 3rd. An amalgamator consisting of a cylinder divided longitudinally to form segments having flanges upon the opposite and meeting edges, screw-bolts having one end pivoted in the flange of one of the segments, and the opposite end adjustably secured to the adjacent flange of the opposing segment upon one edge, locking clamps consisting of slotted bolts secured in one flange upon the opposite side of the cylinder, and passing through openings in the corresponding adjacent flange of the other segment when the parts of the cylinder have been closed, wedges adapted to be driven into said slots to draw the flanges together, said wedges having depressions and heads F^4, formed upon them whereby they may be removed. 4th. An amalgamator consisting of a cylinder formed of two segments longitudinally separable, with hinges and locking devices, interior segmental linings consisting of amalgamated plates folded longitudinally at intervals to form inwardly projecting radial jointless ribs, and gaskets whereby the longitudinal joints are hermetically sealed when the segments are closed together, cylindrical heads upon which the ends of the cylindrical segments close with interposed gaskets, journal-boxes at opposite ends, a shaft turning in one of the journal-boxes whereby one end of the cylinder is supported, a hollow trunnion turning in the other journal box having a tube extending therethrough connecting at the outer end with a feed hopper and having the inner end extending into the cylinder and perforated to form a distributer. 5th. An amalgamator consisting of a cylinder formed of segments longitudinally separable with flanges, hinges and locking devices whereby the two parts may be closed together, an interior lining consisting of segments fitting the two parts of the cylinder and folded to form inwardly projecting radial jointless ribs, said ribs having their opposite ends bent spirally, cylindrical heads with gaskets about which the segments of the cylinder are fitted and

secured, one of said heads having a feed tube and distributer extending through it axially into the interior of the cylinder, the opposite head formed with transverse diaphragms with an intermediate trap, and central discharge openings through which the pulp flows and final discharge openings formed around the outer chamber. 6th. An amalgamator consisting of a cylinder formed of separable segments with an interior lining of silvered segmental plates bolted to form inwardly projecting jointless ribs, said plates and ribs terminating a short distance from the discharge end to leave a space for the collection of free mercury and heavy particles unacted upon by the ribs.

No. 50,439. Gang Plough. (*Charrue-butloir.*)



The Cockshutt Plough Company, assignee of George Wedlake, both of Brantford, Ontario, Canada, 2nd November, 1895; 6 years.

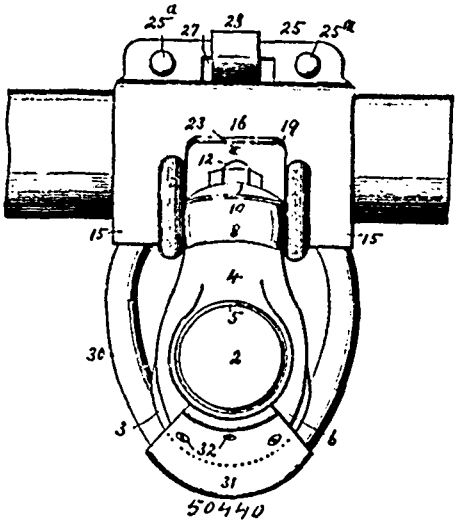
Claim.—1st. In a gang plough, the combination with the side bars, of widening blocks secured on the connecting bolts of the side bars and designed to be inserted in the frame between the side bars, so as to increase the operative width of the shares, as and for the purpose specified. 2nd. In a gang plough, the combination with the side bars and shares provided with vertical standards, bolts to secure the standards of the plough in position relative to the side bars and widening blocks provided with open ended slots designed to straddle the bolts and be placed between the standards of such plough and the opposite side bar to that to which the standards are adjacent, as and for the purpose specified. 3rd. The combination with the side bars having the bent front ends formed as specified, of the clevis jaws secured to the front ends of the side bars, the bolt C, sleeve E, and widening blocks F, the clevis jaw H, the bolt G, and widening blocks I, and securing nuts for both blocks, all designed and arranged as and for the purpose specified. 4th. The combination with the widening blocks designed to be held on the connecting bolts and be adjusted in the frame as specified to widen such frame, of the riding wheels having the square crank axles provided with cylindrical journal blocks and supports for the journal blocks attached to the side bars, as and for the purpose specified. 5th. In a machine in which widening means are provided for the side bars and plough, riding wheels having square crank axles provided with cylindrical journal blocks fitting in corresponding holes in supporting brackets, lugs at the end of the cylindrical journal blocks and notches in the holes in which the blocks are journalled, as and for the purpose specified. 6th. The combination with the side bars and widening blocks, of the riding wheels and axles and supporting bracket for such axles, and the lug r^4 held laterally rigid on the brackets R, holes in the axles and bolts extending through the holes and lugs to secure the axle from lateral movement, as and for the purpose specified.

No. 50,440. Neck-Yoke Centre.

(*Centre de volée de bout de timon.*)

Anna Pearson, assignee of Swain Pearson, both of Oklahoma, Territory of Oklahoma, U.S.A., 2nd November, 1895; 6 years.

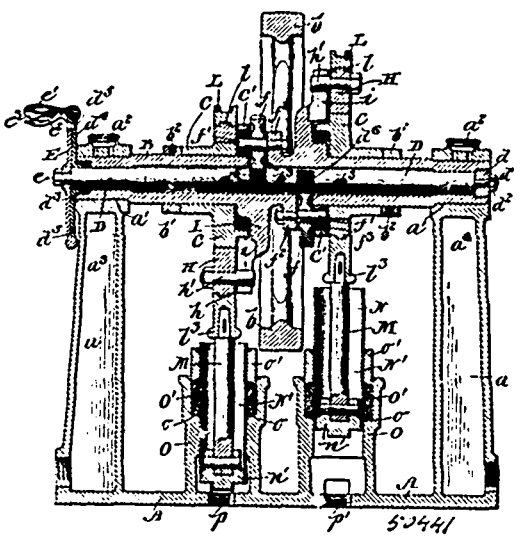
Claim.—1st. A neck yoke centre, comprising a tongue, a collar mounted upon the tongue, a neck-yoke bar, a sleeve mounted thereon, a swivel member connecting said sleeve and said collar so as to permit of motion both up-and-down and to each side. 2nd. A neck yoke centre, comprising a tongue, a collar mounted thereon, a neck-yoke bar, a sleeve mounted thereon, a swivel-member comprising trunnions pivotally connected to operate in a vertical plane to said sleeve, and a sleeve which is pivotally connected to operate laterally or in an approximately horizontal plane to said collar, substantially as set forth. 3rd. A neck-yoke centre, comprising a collar to embrace the tongue of a vehicle, a sleeve to embrace the neck-yoke bar, a swivel-member comprising trunnions pivotally connected to operate in a vertical plane to said sleeve, and a sleeve which is pivotally connected to operate laterally or in an approximately horizontal plane to said collar, a key carried by said sleeve which locks the trunnions of the swivel-member from any but pivotal motion, a bolt carried by said collar, and a nut engaging said bolt to secure the connection between the sleeve of the said swivel-section and the said collar, substantially as set forth. 4th. In combination, a flanged tongue, and a neck-yoke centre, and a collar mounted on the said tongue and bearing against the flange of the same, a sleeve mounted on the neck-yoke bar, a swivel member connecting said sleeve and said collar so as to permit of movement both up-and-down and to each side, an annulus carried by said collar surrounding the tongue and pivotally connected to the sleeve of the yoke-bar, substantially as set forth. 5th. In combination, a flanged tongue, a neck-yoke bar, and a neck-yoke centre comprising a collar mounted upon said tongue and bearing against the flange of the same, a sleeve mounted



upon the neck yoke bar, a swivel-member connecting said sleeve and said collar so as to permit of movement both up and down and to each side, an annulus surrounding the tongue and looped at its upper end by a strap to the neck-yoke sleeve, and provided at its lower end with an arm which is secured to the said collar and curves up in rear of the said tongue-sleeve, substantially as and for the purpose set forth.

No. 50,441. Mechanism for Operating Pumps.

(*Mécanisme de pompe.*)

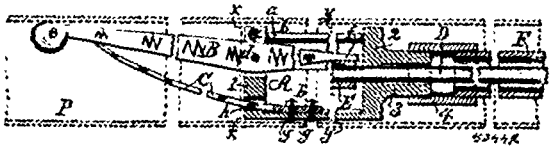


W. M. Leathley & Company, assignee of Meredith Leitch, both of Richmond, Virginia, U.S.A., 4th November, 1895; 6 years.

Claim.—1st. The combination of an operating shaft, one or more eccentrics mounted thereon, devices for increasing or decreasing the eccentricity of said eccentrics on said shaft, and means for operating said devices and locking them in their adjusted positions, substantially as described. 2nd. The combination of an operating shaft, an adjusting eccentric loosely mounted thereon, an operating eccentric mounted on said adjusting eccentric and adapted to have its eccentricity increased or decreased by said adjusing eccentric, means for operating said adjusting eccentric, and positively locking it in the desired position, and means connecting the operating eccentric with the shaft so that it revolves therewith, but can move laterally independent of the same, substantially as described. 3rd. In a feed water mechanism, the combination of an operating shaft, one or more adjustable eccentrics loosely mounted thereon, operating eccentrics mounted on said adjusting eccentrics and adapted to have their eccentricity increased or decreased by

said adjusting eccentrics, means for operating said adjusting eccentrics, and water feeding devices connected to said eccentrics and operated thereby, substantially as described. 4th. The combination of an operating shaft, adjusting eccentrics mounted on the same, operating eccentrics mounted on said adjusting eccentrics and connected to the shaft to revolve therewith, gearing for operating said adjusting eccentrics, and devices mounted on the shaft for locking said gearing in the desired position, substantially as described. 5th. The combination of a hollow operating shaft, adjusting eccentrics mounted on the same, operating eccentrics mounted on said adjusting eccentrics, a rod loosely mounted in said shaft, devices for operating said rod and gearing for imparting the motion of said rod to said adjusting eccentrics, substantially as described. 6th. The combination of a hollow operating shaft, adjusting eccentrics loosely mounted upon the same and provided with annular racks, gears mounted on the shaft and engaging said racks, means for operating said gears, operating eccentrics mounted on said adjusting eccentrics, and means for connecting said operating eccentrics with the shaft so as to revolve therewith, substantially as described. 7th. In a feed water pumping mechanism, the combination of an operating shaft having radial slotted arms, adjusting eccentrics loosely mounted thereon, means for operating said eccentrics and locking them in the adjusted position, operating eccentrics mounted on said adjusting eccentrics, and having pins engaging said slotted arms, straps about said eccentrics and feed water pumps connected to and operated by said straps. 8th. The combination with a hollow shaft, adjusting eccentrics mounted on same and provided with annular racks, gears mounted on the shaft and respectively engaging said racks, a rod in said shaft for operating said gears, devices for operating said rod, and means for locking said rod to said shaft at will, substantially as described. 9th. The combination of an operating shaft having radial slotted arms, adjusting eccentrics loosely mounted on said shaft, means for operating said eccentrics, and operating eccentrics mounted on said adjusting eccentrics, and provided with pins which engage said slotted arms, substantially as described. 10th. The combination of an operating shaft, an eccentric movably mounted thereon, a wedge sliding in a slot in said eccentric, a screw-threaded rod passing through said shaft, a nut on said rod engaging said wedge, and means for revolving said rod and locking it in any desired position, substantially as described. 11th. The combination in an operating shaft, an eccentric movably mounted thereon, a wedge mounted in a slot in said eccentric, a screw-threaded rod passing through said shaft, a nut on said rod engaging said wedge, means for revolving said rod and locking it in any desired position, and pumping devices connected to and operated by said eccentric, substantially as described. 12th. The combination of an operating shaft, a plurality of eccentrics movably mounted on the same, a plurality of oppositely inclined wedges mounted in slots in the eccentrics, means for moving said wedges through said eccentrics, whereby one eccentric is raised as the other is lowered, or vice versa, substantially as described. 13th. In a feed water pumping mechanism, the combination of an operating shaft, eccentrics movably mounted on the same, a plurality of oppositely inclined wedges mounted in slots in said eccentrics, means for moving said wedges through said eccentrics to increase or decrease their eccentricity, and feed water pumps connected to and operated by the respective eccentrics, substantially as described. 14th. In a feed water pumping mechanism, the combination of an operating shaft, eccentrics movably mounted on the same independent, oppositely inclined wedges mounted in slots in the respective eccentrics, and means for moving said wedges together or separately, and pumping devices connected to and operated by said eccentrics, substantially as described. 15th. In a feed water pumping mechanism, the combination of an operating shaft, eccentrics movably mounted on the same, guiding discs on each side of each eccentric, oppositely inclined wedges mounted in slots in said eccentrics, means for adjusting portions of said wedges in said eccentrics, means for moving said wedges and pumping devices connected to and operated by said eccentrics, substantially as described.

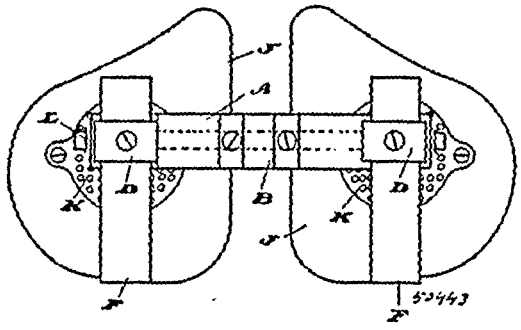
No. 50,442. Method of and Mechanism for Removing Scale from Boiler Tubes, etc. (*Méthode et mécanisme pour enlever les incrustations dans les tubes des chaudières à vapeur, etc*)



William Henry Tebeau and William Jesse Baker, both of Oswego, New York, U.S.A., 4th November, 1895; 6 years.

Claim.—1st. The combination of the body A, elongated arm B, pivoted to the body and forwardly provided with a hammer *c*, a spring C, leading from the body and impinging the hammer-carrying arm, a cam E, within the body, and having contact with the contiguous inner end of the hammer arm B, said cam being keyed to a rotating shaft D, extending rearwardly from the head wherein it is journalled, a tubing F, firmly connected to the rear portion of the body A, extending rearwardly, and enclosing for a distance the shaft D, rotating means applied to the aforesaid shaft beyond the termination of the tubing, and rotating means connected to the tubing intermediately its end and forward portion, substantially as and for the purposes hereinbefore described. 2nd. In combination, the cylindrical-like apertured body A, forwardly-extended arm B, pivoted thereto, hammer *c*, on forward end of said arm, elongated spring plate C, secured at one end to body A, and its other end bearing against the arm B, a rotating shaft D, journalled in the rear portion of the body A, and extending centrally and longitudinally rearward, a double-cam E, secured to protuberant end of shaft D, located in the chamber of the body A, sections of coupled tubing leading rearwardly from said body and loosely surrounding the shaft D a distance, and gearing connected with the shaft aforenamed beyond the rear end of the tubing, substantially as and for the purposes hereinbefore specified. 3rd. The body A, comprising the heads 1, 2, and connecting bars *a*, *a*, *a*¹, the elongated arm or lever B, passing through an *l* slot *c*, in the forward head of the body and pivotally held in operative position by a pin *d*, a hammer or protuberance *e*, on the forwardly projecting end of the arm, a flat curvilinear spring C, secured at its butt end to the body A, and its forward portion in abutial with the hammer-carrying arm, a double-cam E, within the body contiguous the inner end of the arm B, and keyed to a journalled shaft D, extending rearwardly, a sectional tubing F, leading from the body A, rearwardly, and enclosing the shaft D a distance, adjustable gearing connected with the shaft, and manipulating bars to the tubing, all combined, and operating, as described and for the purposes set forth.

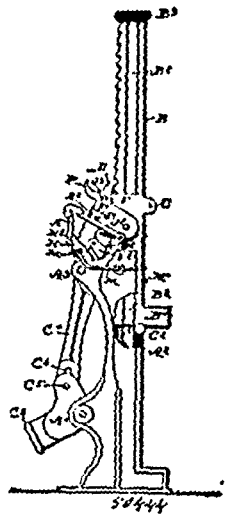
No. 50,443. Saddle. (*Selle.*)



Charles E. Dyer, Toronto, Ontario, Canada, 4th November, 1895; 6 years.

Claim.—1st. A saddle comprised of two seat sections, the saddle pillar, and means for pivotally connecting the seat sections to the saddle pillar and allowing them to rock during the motion of the legs, substantially as specified. 2nd. A saddle comprised of two seat sections, a bracket connected to the saddle pillar, two flat substantially U shaped springs connected to the bracket, located one on each side of the saddle pillar, and means for connecting the said seat section to the said springs, substantially as specified. 3rd. A saddle comprised of two seat sections, a bracket clamped to the saddle pillar, a clamp on each side of the saddle pillar secured to the bracket, a saddle spring for each of the seat sections, the lower end of each of the said springs adapted to be held by its respective clamp, a bracket clamped to the upper limb of each of the said springs, and means for pivotally securing the seat sections to the said brackets, substantially as specified. 4th. A saddle comprised of two seat sections, a bracket clamped to the saddle pillar, a clamp on each side of the saddle pillar secured to the bracket, a saddle spring for each of the seat sections, the lower end of each of the said springs adapted to be held by its respective clamp, a bracket clamped to the upper limb of each of the said springs, consisting of a U-shaped plate, the vertical sides of which project above the said spring, a lug projecting inwardly from each of the said sides, a set screw adapted to bind the spring against the lugs, a plate secured to the under side of the seat section, lugs depending from the said plate overlapping the vertical sides of the bracket, and a pivot pin passing through the said lugs and sides, substantially as specified. 5th. A saddle comprised of two seat sections, a bracket clamped to the saddle pillar, a clamp on each side of the saddle pillar secured to the bracket, a saddle spring for each of the seat sections, the lower end of each of the said springs adapted to be held by its respective clamp, a bracket clamped to the upper limb of each of the said springs, consisting of a U-shaped plate, the vertical sides of which project above the said spring, a lug projecting inwardly from each of the said sides, a set screw adapted to bind the spring against the lugs, a plate secured to the under side of the seat section, lugs depending from the said plate overlapping the vertical sides of the bracket, a pivot pin passing through the said lugs and sides, and a spring connected to the under side of each seat section, and to its respective U-shaped spring, substantially as specified.

No. 50,444. Lifting Jack. (*Cric.*)

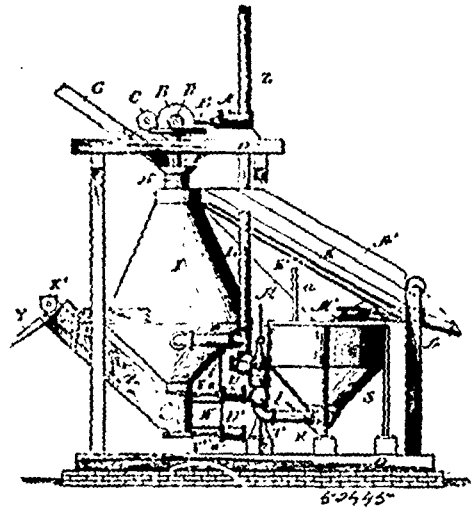


Nick Weiler, Des Moines, Iowa, U. S. A., 4th November, 1895; 6 years.

Claim.—1st. A compound lever lifting jack, comprising a base having a frame mounted thereon, a part arranged to slide vertically in said frame having a rack formed thereon, a lever fulcrumed to a suitable support, two pawls pivotally connected with the top of said lever on opposite sides of its fulcrum said pawls being adapted to engage said rack, and a second lever fulcrumed to a suitable support and adapted to engage the aforesaid lever, for the purposes stated. 2nd. The combination in a lever lifting jack having a suitable standard, a vertically slidable rack and two pawls adapted to alternately engage and elevate said rack, of a cam pivoted to the side of the standard, a carrier pivoted to the cam and capable of a slight oscillatory movement relative thereto and having two notches in its outer end, a projection from each pawl adapted to be engaged by said notches, and means for oscillating the cam in unison with the pawls so as to cause said pins to be engaged by the notches in the carrier when disengaged from the rack, for the purposes stated. 3rd. A reversible lever lifting jack, comprising a suitable frame, a rack slidingly mounted therein, a lever fulcrumed to the frame, two pawls pivoted to the lever on opposite sides of its fulcrum and designed to normally engage the rack, and mechanism connected with the frame, designed to be thrown into position to be alternately engaged by the pawls and to positively force them outwardly from the rack, for the purposes stated. 4th. A reversible lever lifting jack, comprising a suitable frame, a rack slidingly mounted therein, a lever fulcrumed to the frame, two pawls pivoted to the lever on opposite sides of its fulcrum and designed to normally engage the rack, one of said pawls being capable of retaining a position out of contact with the rack, and mechanism connected with the frame, designed to be thrown into position to be alternately engaged by the pawls and to positively force them outwardly from the rack for the purposes stated. 5th. The combination in a lever lifting jack, comprising a suitable standard, a vertically slidable rack therein, a lever fulcrumed to the standard, two pawls pivoted to opposite sides of the fulcrum of said lever and adapted to alternately engage and elevate the rack and a bell-crank lever pivoted to the standard to engage the aforesaid lever, of a cam pivoted to the side of the standard, a carrier pivoted in the cam and capable of a slight oscillatory movement relative thereto, and having two notches in its outer end, a projection from each pawl adapted to be engaged by said notches, and a rod pivoted to the said cam below its pivotal point and detachably pivoted to the same lever as the said pawls, at the same end thereof as the upper pawl, to operate as and for the purposes stated. 6th. The combination in a lever lifting jack, comprising a suitable standard, a vertically slidable rack therein, a lever fulcrumed to the standard, two pawls pivoted to opposite sides of the fulcrum of said lever and adapted to alternately engage and elevate the rack, a pin on the upper outer end of said lever and a bell crank lever pivoted to the standard to engage the aforesaid lever, of a cam pivoted to the sides of the standard, a carrier pivoted in the cam and capable of a slight oscillatory movement relative thereto and having two notches in its outer end, a projection from each pawl adapted to be engaged by said notches, and a rod pivoted to the said cam below its pivotal point and adapted to be detachably connected with the pin on the lever to which the pawls are pivoted, and a hook pivoted to the said rod adapted to be pivotally attached to said pin, and a pin projecting laterally from said carrier to hold the same inoperative, substantially as and for the purposes stated. 7th. The combination in a lever lifting jack comprising a suitable standard, a vertically slidable rack therein, a lever fulcrumed to the standard, pawls pivoted to opposite sides of the fulcrum of said lever, a pin projecting laterally therefrom at the end to which the upper pawl is pivoted and adapted to alternately engage and elevate the rack and a bell crank lever pivoted to the standard to engage the aforesaid lever, of a cam pivoted to the sides of the standard, a carrier pivoted in the cam and capable of a slight oscillatory movement relative thereto and having two notches in its outer end, a projection from each pawl adapted to be engaged by said notches, and a rod pivoted to the said cam below its pivotal point and adapted to be detachably connected with the pin or the lever to which the pawls are pivoted, and a hook pivoted to the said rod adapted to be pivotally attached to said pin and a pin projecting laterally from said carrier to hold the same inoperative and an automatic reversing attachment comprising a lever pivoted to the side of the stand and having a crosshead at one end, and its other end bent at right angles for the purposes stated, and a stop adjustably connected with the outer face of the standard.

No. 50,445. Coal and Mineral Washer.

(*Machine à laver le charbon et les minéraux.*)

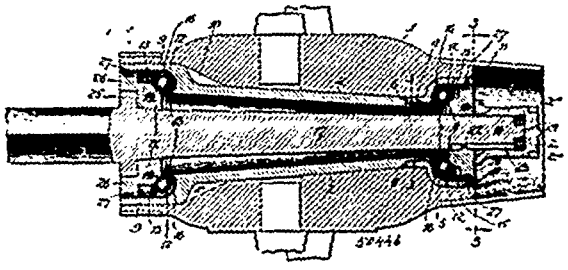


Erskine Ramsay, Pratt, Alabama, U.S.A., 4th November, 1895; 6 years.

Claim.—1st. The combination with the outer conical casing having its small end at the top and provided with the coal discharge near the top, of a supply shell, the revolving shaft therein carrying a feeding device for the material to be washed, the water chamber in the bottom of said conical casing provided with inlets for a water supply and outlets for discharging the water into the washer upwardly, with means for agitating the material within the washer, substantially as described. 2nd. In a coal or mineral washer, an upper casing having a discharge near the top, a bottom casing joined to said casing, provided with an outlet at the lower portion thereof, a water chamber located between the two casings and communicating at its upper side with the upper casing and its lower side with a water supply, a central feed shell, with a revolving shaft therein provided with a worm feed, and a series of stirrer arms secured to said shaft and journalled upon the feed shell above the water chamber, substantially as described. 3rd. In a coal and mineral washer, the combination with the upper conical casing constituting the washer proper, the lower conical casing forming a waste chamber, the said chambers united at their bases, of a conical water chamber between the two communicating with the upper casing through its conical surface, and at its base with a water supply, said chamber forming with the sides of the casings an annular discharge opening into the waste chamber, with means for feeding the coal or mineral into the washer, substantially as described. 4th. In a coal and mineral washer, the washer chamber having its bottom end larger than its top end, provided with a discharge for the washed material at the said smaller end, in combination with a water supply pipe or pipes opening upwardly through the bottom end, means for agitating the material within the chamber, and means for feeding the said material to the chamber, substantially as described. 5th. In a coal and mineral washer, an upper washing chamber or casing, having the discharge near the top, a lower waste chamber, an intermediate water chamber forming an annular discharge between the two, a conveyer or elevator for conveying the material from the lower waste chamber to a desired point above the discharge for coal, mechanism for feeding the coal downwardly into the upper chamber

with agitators or stirrers operating in said chamber, whereby the coal may be washed by water forced upwardly through the water chamber into the washer while the heavier material gradually descends to the waste chamber, and to the conveyer, substantially as described. 6th. In a coal and mineral washer, the combination with the chamber or casing I, the casing W, intermediate water chamber I^{11}, and provided with a water supply, the feed shell H, the revolving shaft F, having the worm feed *h*, the stirrers in the washer chamber and the sludge stirrer in the water chamber, with the elevator X^3, substantially as described. 7th. In a coal and mineral washer, the combination with the washer chamber, the pumps having their discharge pipes connected with the supply pipes of the washer, of the stand pipe attached to and communicating with the said supply pipes, substantially as and for the purposes set forth. 8th. In a fine mineral washer or settler, the combination with the tank having the discharge pipe extending upwardly within the same, of the flat deflecting plate supported above the pipe over which the water and sludge are compelled to flow outwardly, and then inwardly below the plate toward the discharge pipe, whereby some of the impurities are thrown off by their momentum as the current is deflected around the edges of the plate and the rest deposited as the current flows inward to the discharge pipe, and means for automatically maintaining the water level in the tank, normally above the deflecting plate, substantially as described. 9th. The combination, with the casing forming the supply tank *s*, of the discharge pipe *r*, projecting upwardly within said tank and forming an annular settling space for impurities, the flat deflecting plate above said discharge pipe, over which plate the water and sludge are compelled to pass outwardly to the edge and then inwardly toward the discharge pipe, whereby some of the impurities are thrown off by their momentum as they round the edges of the plate and the rest are deposited as the current flows inward to the discharge pipe, and a valved outlet at the bottom of the tank for removing the impurities, substantially as described. 10th. In a coal and mineral washer, the combination, with the washer chamber provided with suitable supply and discharge chutes, and pumping mechanism for supplying water to said chamber, of a tank located under the discharge chute of said washer into which the water and fine material from said washer are centrally discharged, a fresh water supply pipe provided with a float valve at the water level in said tank, a discharge pipe projecting centrally within said tank and connected to the pumping mechanism, substantially as described. 11th. The combination, in a fine mineral washer or settler, of the tank, the central discharge pipe extending upwardly therein, the deflecting plate supported above said discharge pipe over which plate the water and sludge are compelled to pass outwardly to the edge thereof and flow inwardly below the same to the discharge pipe, whereby the heavier ingredients are thrown off by momentum as they round the edges of the plate, a fresh water pipe opening into the tank above the plate and provided with an automatically operated valve to maintain the water level normally above the plate, and a valved outlet at the bottom of the tank, substantially as and for the purpose set forth.

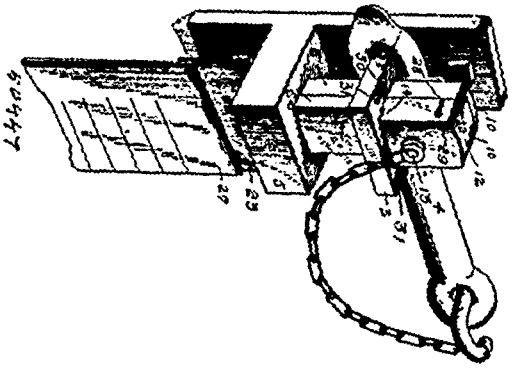
No. 50,446. Journal Bearing. (*Coussinet de tourillon.*)



Andrew Connor Farnsworth, Chicago, and Charles E. Roberts, Oak Park, both in Illinois, U.S.A., 4th November, 1895; 6 years.

Claim.—1st. The combination of a hub 1, having the bore chambered at each end and provided with notches in one end, the axle box 2 having its smaller end threaded, a fixed shell 9 on the outer end of said box, a removable shell 5 threaded on the smaller end of said box, fins or feathers 10 fitting in said notches, the axle 17, anti-friction balls 8, 14, and cones 19, 21 arranged in said shells, the end of the dressed flange 7 projecting into said shell 5, the ring 15, and the rigid shoulder 6, substantially as set forth. 2nd. The combination with the hub 1, having anti-friction devices 8, 14, 21, arranged therein, of an axle 17, having a threaded end 18, and terminating in a reduced rigid nib 24, a bearing cone 19, and a cap nut 20 arranged against both said nib and cone, substantially as set forth. 3rd. The combination with a hub 1, an axle box 2, having a shell 9, an axle 17 and a cone 21 thereon, of balls 14 in said shell resting on said cone, a steel race 12 for said balls fitting removably in said shell, and the removable ring 15 crowded into said shell, substantially as set forth. 4th. The combination with a hub 1, a shell 9 secured to said hub, and the axle 17, of a race 12 for the balls 14 secured in said shell, and a cushion 16 confined between said race and shell, substantially as set forth. 5th. The combination with a hub 1, an axle 17, and a bearing cone 21, of a shell 9 secured within said hub, a plurality of races 12^3 arranged within said shell, balls 14 arranged between said races and cone, a ring 21 interposed between and being held in place by said races, and said ring projecting over the balls, and means 15, 15 for holding said balls in place on their other side, substantially as set forth.

No. 50,447. Seal Lock. (*Serrure à cachet.*)

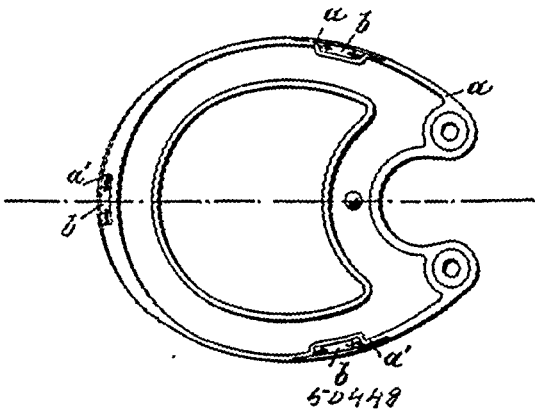


John Arthur Upshur, Richmond, Virginia, U.S.A., 4th November, 1895; 6 years.

Claim.—1st. A seal-lock, comprising a bolt lying in front of the hasp, its lower end in a chamber closed save by a narrow slot, and a metallic tag having a slotted tongue inserted in said aperture and engaging a rib in the interior of said bolt, substantially as described. 2nd. In a seal-lock, the combination with the parts confining the hasp, of a bolt adapted to admit a flexible metallic strip forming part of the sealing tag, the interior of said bolt being provided with a channel for the entrance of the strip, and with an interior lug beyond which said channel is curved to bend the strip and bring said lug into a slot formed in said strip, substantially as described. 3rd. In a seal-lock, the combination with the parts confining the hasp, of a bolt adapted to admit a slotted flexible metallic strip forming part of the sealing tag, the interior of said bolt being provided with a channel for the entrance of said strip, and with a lug lying in said channel, the latter being curved beyond said lug to bend the strip and engage the lug with the slot, and said channel being provided between its entrance and the point of engagement of the lug with pockets adapted to receive and retain tongues forming part of the edges of the metal strip and normally bent at an angle therewith, substantially as described. 4th. In a seal-lock, the combination with the parts confining the hasp, of a two-part bolt provided with an interior channel, a lug formed on one of said parts and lying in said channel, the latter being curved beyond said lug, and pockets formed at the sides of said channel near the entrance of the latter, and a sealing tag having a slotted, flexible metallic strip adapted to enter and traverse said channel, its end being bent by the curvature of the channel to engage the lug therein with the slot in said strip, the edges of said strip being provided with tongues to engage the pockets at the sides of the channel, said tongues being normally bent at an angle with the strip opening toward the entrance to the channel, substantially as described. 5th. In a seal-lock, the combination with the parts confining the hasp, of a bolt provided with an interior channel, the lug lying in said channel, and pockets formed at the sides of said channel between its entrance and the lug, and a sealing-tag having a slotted metallic strip provided with tongues at its edges which are bent at an angle to the body of the strip, the apex of the angle being next to the slotted end of the strip, to enable the latter to engage the lug and the tongues to snap into the pockets, substantially as described. 6th. In a seal-lock, the combination with the parts confined in the hasp, of a bolt having an interior channel, a lug lying in said channel and provided with a square end, and an edge or face forming an angle with the entering portion of the channel, and with pockets formed in said channel between its entrance and the square end of the lug, and a sealing-tag having a metallic stem provided near its end with a slot, and having tongues at its sides between the slotted end and the sealing-tag, said tongue being normally bent at an acute angle to the body of the strip, the apex being turned toward the slotted end, the ends of said tongues being adapted to enter and remain in said pockets after the lug has entered the slot in said strip, substantially as described. 7th. In a seal-lock, the combination with the parts confining the hasp, of a bolt formed in two parts pivotally connected, one of said parts having a lug provided with a square end, and an edge or face which is inclined at an acute angle with the square end of the lug, and the other part of said bolt having a rib provided with a face substantially parallel with the inclined face of the lug and curved to form a concave surface beyond the end of the lug, and a sealing-tag having a slotted, flexible, metallic strip provided with tongues at its edges between the tag and the slotted end, said tongue being normally bent at an angle to the straight body of the strip, to engage pockets formed at the sides of an entrance for the strip

formed between the pivotally connected ends of the parts of the bolt, substantially as described. 8th. In a seal-lock, a metallic sealing-tag having a record-slip attached thereto by folding the metal of the tag upon itself with the slip interposed, and punching said metal and slip to draw both into annular form and upsetting or riveting the drawn annular projections with portions of the slip between, substantially as described. 9th. In a seal-lock, the combination, with a bolt formed in two pivotally connected parts, one provided with an annular lug and the other with a tongue, the surface of which is substantially parallel, when the parts are brought together with the inclined edge of the lug, and curved beyond the end of the latter into concave form, and a metallic tag having a strip of flexible metal slitted near its end and provided with tongues at its edges which are bent at an angle with the strip to engage pockets formed in an entrance between the parts of the bolt, said tag having a record slip inserted in a slot in the tag and between two thicknesses of metal produced by bending the metal on itself in the line of the slot, said metal and slip being punched and drawn into annular form at one or more places, and the ends of the annular projections of metal and paper upset or rivated down together, substantially as described.

No. 50,448. Horse-shoe. (*Fer à cheval.*)

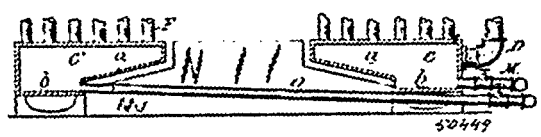


Christian Eschberg, Berlin, Prussia, Germany, 4th November, 1895; 6 years.

Claim. A device for securing horse-shoes, composed of hooks c to be driven into the hoof or otherwise secured thereto, having forked ends passing through projections a^1, of the shoe and of keys or wedges *b* to be inserted from below so as to separate the forked ends apart and thus to secure a solid connection, which can be easily unfastened.

No. 50,449. Steam Heater.

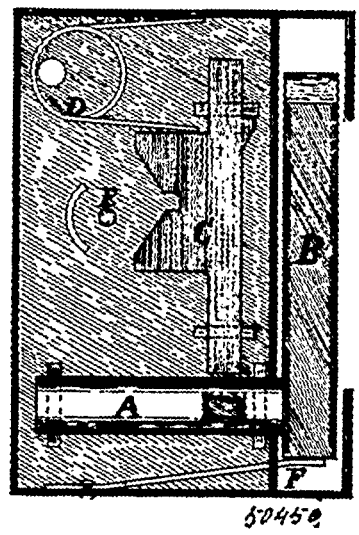
(*Appareil de chauffage à vapeur.*)



William H. Curtis, Detroit, Michigan, U.S.A., 4th November, 1895; 6 years.

Claim. 1st. A steam heater comprising two hollow base sections, a steam supply, drain pipes for the bases, and a series of nested radiating pipes connecting the tops of the base sections, having horizontal sections to take up the expansion and contraction. 2nd. A steam heater comprising two hollow base sections, a steam supply entering one section, drain pipes and a series of nested radiating pipes connecting the top of the base sections, the radiating pipes being of substantially uniform length. 3rd. A steam heater comprising two separated hollow base sections, steam supply and drain pipes, a nested series of aligned radiating pipes connecting the tops of the base sections, outer connecting pipes being substantially inverted U-shaped, the inner pipes comprising a number of loops or return bends, to produce a substantially uniform length of all the pipes. 4th. In a steam heater, the combination of the casing, a series of divisional heaters therein, each comprising separated base sections, a series of nested aligned radiating pipes connecting the tops of the bases, the base sections having the inclined bottom *a*, the trough *b*, and the steam supply and drain pipes, substantially as described. 5th. In a steam heater, the combination of the casing, a series of divisions, each comprising the separated hollow base sections, the nested radiator pipes connecting the base sections, and the diaphragms I between the base sections, substantially as described.

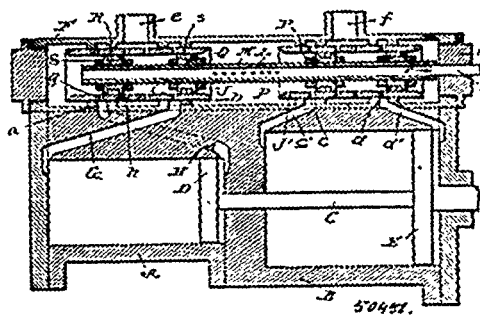
No. 50,450. Bicycle Lock. (*Serrure de bicycle.*)



George Elliott Morrison, Sarnia, Ontario, Canada, 4th November, 1895; 6 years.

Claim.—1st. The combination of the bolt C, with the roller A, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of the bar B, with the roller A, substantially as and for the purpose hereinbefore set forth.

No. 50,451. Valve. (*Soupape.*)



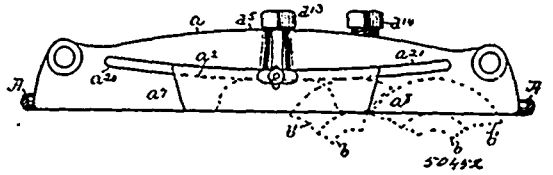
John Banner, Tiburon, California, U.S.A., 4th November, 1895; 6 years.

Claim. 1st. The combination of the high and low pressure cylinders of a compound engine, pistons arranged in said cylinders and connected together, a valve casing having the ports *a*, *d*, adjacent to its opposite ends, the ports *b*, *c* at points between the ports *a*, *d* and its middle, the induction port *e* arranged in a plane between the planes of the ports *a*, *b* and the exhaust port *f*, arranged in a plane between the planes of the ports *c*, *d*, the passages connecting the ports *c*, *d*, and the opposite ends of the low pressure cylinder, the passage H connecting the port *a*, and the end of the high pressure cylinder farthest from said port, the passage G connecting the port *b* and the opposite end of the high pressure cylinder and crossing the passage H, and the valve arranged in the casing and comprising the hollow tubular body provided with openings at its ends and at an intermediate point of its length, pistons R, N mounted on said body adjacent to the ends thereof, and the pistons P, Q mounted on the tubular body at points between the pistons N, R and the intermediate openings in said tubular body, substantially as and for the purpose set forth. 2nd. The combination of the high and low pressure cylinders of a compound engine, pistons arranged in said cylinders and connected together, a valve casing having the ports *a*, *d* adjacent to its opposite ends, the ports *b*, *c* at points between the ports *a*, *d* and its middle, the induction port *e* arranged in a plane between the planes of the ports *a*, *b*, and the exhaust port *f*, arranged in a plane between the planes of the ports *c*, *d*, the passages connecting the ports *c*, *d* and the opposite ends of the low pressure cylinder, the passage H connecting the port *a* and the end of the high pressure cylinder farthest from said port, the passage G connecting the port *b*, and the opposite end of the high pressure cylinder and crossing the passage H, and the valve arranged in the casing and comprising the hollow tubular body provided with open-

ings at its ends and at an intermediate point of its length and exteriorly threaded, the pistons N, P, Q and R having threaded apertures receiving the tubular body and engaging the threads thereof, and nuts mounted on the threaded body on opposite sides of the pistons, substantially as and for the purpose set forth. 3rd. The combination of the high and low pressure cylinders of a compound engine, pistons arranged in said cylinders and connected together, a valve casing having the ports *a*, *d*, adjacent to its opposite ends, the ports *b*, *c* at points between the ports *a*, *d* and its middle, the induction port *e* arranged in a plane between the planes of the ports *a*, *b* and the exhaust port *f*, arranged in a plane between the planes of the ports *c*, *d*, the passages connecting the ports *c*, *d*, and the opposite ends of the low pressure cylinder, the passage H connecting the port *a* and the end of the high pressure cylinder farthest from said port, the passage G connecting the port *b*, and the opposite end of the high pressure cylinder and crossing the passage H, bushings arranged in the casing and having ports communicating with the casing ports *a*, *b*, *c*, *d*, *e* and *f*, and the valve arranged in the casing and comprising the hollow tubular body provided with openings at its ends and at an intermediate point of its length, pistons R, N mounted on said body adjacent to the ends thereof, and the pistons P, Q mounted on the tubular body at points between the pistons N, R and the intermediate openings in said tubular body, substantially as and for the purpose set forth.

No. 50,452. Electric Conductor Support.

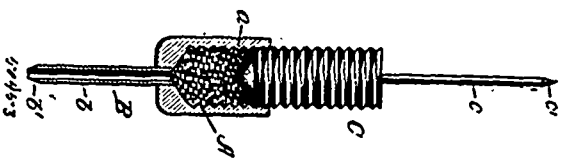
(*Support de conducteur électrique.*)



John Marinius Anderson, Boston, Massachusetts, U.S.A., 4th November, 1895; 6 years.

Claim.—1st. In a support for electric conductors, the combination with side walls forming a groove, channel or way for the reception of the electric conductor and provided on their inner sides with screw-threads co-operating to form a threaded socket for the reception of a threaded clamping bolt between the said side walls, of the said threaded clamping bolt inserted into its socket to secure the electric conductor in the said groove, substantially as described. 2nd. In a support for electric conductors, the combination with side walls forming a groove, channel or way for the reception of the electric conductor and provided on their inner sides with screw-threads co-operating to form a threaded socket for the reception of a screw-threaded clamping bolt, of the said clamping bolt to secure the electric conductor in the said groove, and a clamping bar fitted into said groove and adapted to be engaged within the groove by the said clamping bolt to engage the clamping bar with the electric conductor, substantially as described. 3rd. In a support for electric conductors, the combination with side walls forming a groove, channel or way for the reception of the electric conductor, of a locking-dog or cam supported in said groove between the said side walls, and a clamping bolt extended into a threaded socket in the side walls to operate, substantially as described. 4th. In a support for electric conductors, the combination with side walls forming a groove, channel or way for the reception of the electric conductor, the bottom of the said groove or way being downwardly inclined at one end, of a locking-dog or cam secured to the said side walls in said groove or way substantially above the lower end of the downwardly inclined bottom of the said groove, substantially as described. 5th. In a support for electric conductors, the combination with side walls forming a continuous groove, channel or way for the reception of the electric conductor, the bottom of the said groove or way being downwardly inclined at its opposite ends and provided with thickened portions extending from the outer end of the downwardly inclined portion of the said bottom toward the central portion of the groove or way, lateral flanges extended from the said sides below the top thereof, and means to secure the electric conductor in said groove or way, substantially as described. 6th. In a support for electric conductors, the combination with side walls forming a continuous groove, channel or way for the reception of the electric conductor, the bottom of the said groove or way being downwardly inclined at its opposite ends and provided with thickened portions extended from the outer ends of the downwardly inclined portions of the groove or way toward the central portion of the groove or way to form separated guiding surfaces in substantially the same straight line or plane, and means to secure the electric conductor in said groove or way, substantially as described. 7th. In a support for electric conductors, the combination with side walls forming a groove, channel or way for the reception of the electric conductor, the bottom of the said groove or way being downwardly inclined at its opposite ends and provided with thickened portions extended from the outer ends of the downwardly inclined portions of the groove or way toward the central portion of the groove or way to form separated guiding surfaces in substantially the same straight line or plane, laterally extended flanges of less length than the said side walls and provided with upwardly curved ends, and means to secure the electric conductor in the said groove or channel, substantially as described. 8th. In a support for electric conductors, the combination with side walls forming a groove, channel or way for the reception of the electric conductor, the bottom of the said groove or way being downwardly inclined at its opposite ends and provided with thickened portions extended from the outer ends of the downwardly inclined portions of the groove or way toward the central portion of the groove or way to form separated guided surfaces in substantially the same straight line or plane, branch side walls forming a groove or way for a branch conductor and having its bottom downwardly inclined, side flanges laterally extended from the said side walls substantially on a level with the central portion of the groove or way for the main conductor, and of less length than the side walls of the main groove or way and provided with upwardly curved ends, and means to secure the said conductors in their respective grooves or ways, substantially as described. 9th. In a support for electric conductors, the combination with side walls a, a^1, forming a groove or way for the reception of the main conductor, and side walls b^5, b^6, forming a groove or way for the reception of a branch conductor, both of said grooves or ways being inclined downwardly as described and having thickened bottom portions to form guiding surfaces lying in substantially the same straight line or plane, and laterally extended flanges integral with the said side walls and provided with upwardly curved ends, substantially as described. 10th. In a support for electric conductors, the combination with side walls forming a groove, channel or way for the reception of the electric conductor and made thicker or of a greater height at or near the centre of the support to strengthen the said side walls, downwardly inclined bottom portions of the said groove terminating in an open bottom between the ends of the said side walls, thickened bottom portions of said groove extended from the open bottom toward the centre of the support, and means to secure the electric conductor in said groove or channel, substantially as described. 11th. In a support for electric conductors, the combination with side walls forming a groove, channel or way for the reception of the electric conductor, the bottom of the said groove or way being downwardly inclined at its opposite ends and provided with thickened portions extended from the outer ends of the downwardly inclined portions of the groove or way toward the central portion of the groove or way to form separated guiding surfaces in substantially the same straight line or plane, branch side walls forming a groove or way for a branch conductor and having its bottom downwardly inclined, one of the branch walls being attached to one of the side walls of the main groove or channel, side flanges laterally extended from the said side walls below the top thereof substantially on a level with the central portion of the groove or way for the main conductor, and of less length than the side walls of the main groove or way, and means to secure the said conductors in their respective grooves or way, substantially as described.

No. 50,453. Cement Injector for Repairing Pneumatic Tires. (*Injecteur de ciment pour réparer les bandages pneumatiques.*)



Ernest W. Young, Chicago, Illinois, U.S.A., 4th November, 1895; 6 years.

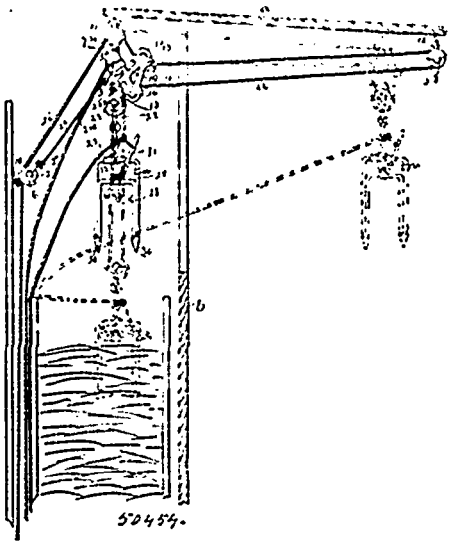
Claim.—1st. A cement injector for service in repairing pneumatic tires, comprising a receptacle adapted to contain the cement and provided with a discharge nozzle, a needle adapted for temporary insertion within the nozzle to an extent to cause its sharpened end to project from the end of the nozzle so as to provide the latter with a point, and means for ejecting the cement from the receptacle through the nozzle when the needle is withdrawn therefrom. 2nd. A cement injector comprising an internally threaded cup having a discharge nozzle, and a screw plunger adapted for service within the cup and having a sharpened stem or needle, substantially as and for the purpose set forth. 3rd. A cement injector comprising a cup having a discharge nozzle, and a reversible plunger having a sharpened stem or needle, substantially as and for the purpose set forth.

No. 50,454. Hay Elevator and Carrier. (*Monte-foin.*)

Thomas Belair, Montreal, Quebec, Canada, 4th November, 1895; 6 years.

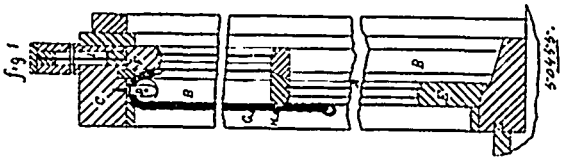
Claim.—1st. A hay elevator and carrier comprising a hay-fork and a travelling carrier frame therefor supported and operated by pulleys and ropes, for the purpose set forth. 2nd. A hay elevator and carrier comprising a hay-fork and a travelling carrier frame therefor, supported and operated by a pair of pulleys suspended over the hay to be elevated and carried, a pulley suspended over the place to which the hay is to be carried, a length of rope connected to such carrier frame and passed around such latter pulley and over one of such

former pulleys and a second length of rope also connected to the carrier frame and adapted to be passed over the other of such former



pulleys. 3rd. A hay elevator and carrier comprising a travelling carrier frame supported and operated by pulleys and ropes, and a hay-fork adapted to be lowered from and raised to such carrier frame, for the purpose set forth. 4th A hay elevator and carrier comprising a hay-fork a frame for supporting same, a travelling carrier for such frame, a pair of pulleys suspended one above the other over the hay to be elevated and carried, a pulley suspended over the place to which the hay is to be carried, a length of rope connected to such carrier frame and passed under a pulley mounted in the frame for supporting such hay-fork, over a pulley mounted in the carrier for such frame around the pulley suspended over the place to which the hay is to be carried, under another pulley mounted in said carrier, and over the uppermost of the pair of pulleys first mentioned, and a second length of rope connected to the carrier frame and adapted to be passed over the lowermost of such pair of pulleys. 5th. A hay elevator and carrier comprising a hay-fork adapted to be lowered from and raised to a travelling carrier frame therefor supported and operated by pulleys and ropes with means for holding the carrying frame while the hay-fork is being lowered, for the purpose set forth. 6th. A hay elevator and carrier, comprising a hay-fork and a travelling carrier frame therefor supported and operated by a pair of pulleys suspended over the hay to be elevated and carried, a pulley suspended over the place to which the hay is to be carried, a length of rope connected to such carrier frame and passed around such latter pulley and over one of such former pulleys and a second length of rope connected to the end of a hook on the carrier frame adapted to take over the other of such former pulleys. 7th. A hay elevator and carrier, comprising a hay-fork, a frame for supporting same, a travelling carrier for such frame, a pair of pulleys suspended one above the other over the hay to be elevated and carried, a pulley suspended over the place to which the hay is to be carried, a length of rope connected to such carrier frame and passed under a pulley mounted in the frame for supporting such hay-fork, over a pulley mounted in the carrier for such frame around the pulley suspended over the place to which the hay is to be carried, under another pulley mounted in said carrier, and over the uppermost of the pair of pulleys first mentioned and a second length of rope connected to the end of a hook on the carrier frame adapted to take over the lowermost of such pair of pulleys. 8th. An elevating hay-fork having movable prongs and an operating lever adapted to move and lock the prongs in their open and closed position. 9th. An elevating hay-fork, the prongs of which have movable ends to open and close the fork, and an operating lever adapted to move and lock the ends in their open and closed position. 10th. An elevating hay-fork formed of two staple-like portions, one adapted to fit within the other, the adjacent legs of each forming a prong and each prong carrying an adjustable point, a lever fulcrumed to one of such staple-like portions and having a cam groove in one end thereof to receive a pin projection carried by the other staple like portion, for the purpose set forth. 11th. An elevating hay-fork formed of two staple like portions, one adapted to fit within the other, the adjacent legs of each forming a prong and each prong carrying a movable point adjustable to a position either at right angles to such prong or in line therewith, and means for adjusting such point to either of said positions and locking it when adjusted, for the purpose set forth.

No. 50,455. Sash Adjuster and Fly Screen Attachment. (*Ajusteur de croisée et attache de store de fenêtre.*)



William Driscoll, Brockville, Ontario 4th November 1895; 6 years.

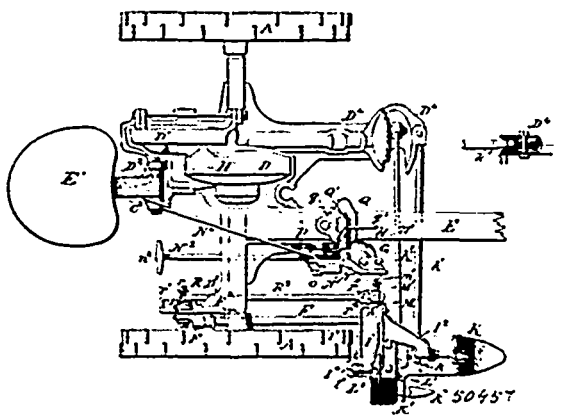
Claim.—1st. The combination of the pulley D, fastened to head C, with one end of the chain running through] and] fastened to the top sash F, the other end of chain having a ring in the lower end and fastened to the bottom sash E by means of the chain-holder H, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of a fly screen I, secured or fastened to the top sash F, running through an opening in the head C, made for that purpose, substantially as and for the purpose hereinbefore set forth. 3rd. The combination of the sash E and F, the chain ring and pulley D, chain holder H, fly screen I, and head C, all combined for the purpose of adjusting and operating window sashes and movable fly screen without weights, substantially as and for the purpose hereinbefore set forth.

No. 50,456. Rod Coupling. (*Bielle d'accouplement.*)

Ellery M. Hoagland, Salinas, California, U.S.A., 4t November, 1895; 6 years.

Claim.—1st. A rod coupling consisting of a section having a shank reduced in thickness, and provided with a notch in one of its edges, a second section having a hollowed or recessed body portion open at both sides with a directing wall b^2 closing a portion of the opening at one side, and a stop wall closing a portion of the opening at the opposite side, and disposed in a plane above that of the directing wall, said stop wall adapted to engage the notched portion of the first named section. 2nd. A rod coupling consisting of a section having a shank reduced in thickness with a notch formed in one edge, a second section recessed in the direction of its length with the recess opening through the top and two opposite sides of the section, a directing wall at the lower portion of one side of the second section, and a stop wall at the opposite side of the section above the plane of the directing wall, having a bevelled or inclined inner surface adapted to engage the notch in the edge of the first named section with or without the sliding sleeve overlapping the two sections.

No. 50,457. Harvester. (*Moissonneuse.*)



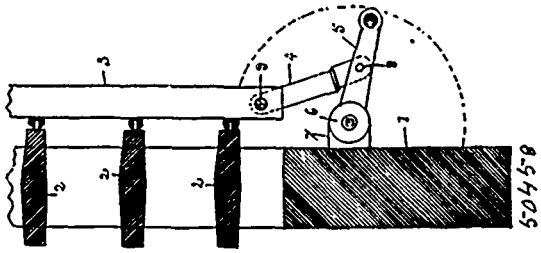
Thomas Henry Noxon, Ingersoll, Ontario, Canada, 4th November, 1895; 6 years.

Claim. 1st. In a harvester, in combination, a gear frame having the crank shaft mounted thereon, a coupling frame pivoted upon and vibrating about a line at right angles to the line of draft and provided at its vibrating end with a pivot the vertical plane of which is transverse to the line of draft, a cutting apparatus pivoted thereon, and means for rocking the cutting apparatus about the transverse pivot of the coupling-frame for raising and lowering the

finger-guards, substantially as described. 2nd. In a harvester, in combination, a gear frame having the crank shaft mounted thereon, a coupling-frame pivoted upon and vibrating about a line at right angles to the line of draft and provided at its vibrating end with a pivot the vertical plane of which is transverse to the line of draft, a cutting apparatus carrier hinged to said transverse pivot of the coupling-frame, a cutting apparatus, a pivotal connection between the cutting apparatus and said carrier and having its axis transverse to the cutting apparatus, and means for rocking the cutting apparatus about the transverse pivot of the coupling-frame for raising and lowering the finger-guards, substantially as described. 3rd. In a harvester, in combination, a gear frame having the crank shaft mounted thereon, a coupling-frame pivoted upon and vibrating about a line at right angles to the line of draft and provided at its front end with a pivot the vertical plane of which is transverse to the line of draft, a cutting apparatus carrier hinged to said transverse pivot of the coupling-frame, a cutting apparatus, a pivotal connection disposed between the cutting apparatus and said carrier and having its axis transverse to the cutting apparatus, and means for raising the vibrating end of the coupling-frame and the cutting apparatus, substantially as described. 4th. In a harvester, in combination, a gear frame having the crank shaft mounted thereon, a coupling-frame pivoted upon and vibrating about a line at right angles to the line of draft and provided at its front end with a pivot the vertical plane of which is transverse to the line of draft, a cutting apparatus carrier hinged to said transverse pivot of the coupling-frame, a cutting apparatus, a pivotal connection disposed between the cutting apparatus and said carrier and having its axis transverse to the cutting apparatus, and means for raising the vibrating end of the coupling-frame and the cutting apparatus, and means for maintaining a uniform distance between the crank shaft and the transverse axis of the pivotal connection which hinges the cutting apparatus to its carrier, substantially as described. 5th. In a harvester, in combination, a gear frame having the crank shaft mounted thereon, a coupling-frame pivoted upon and vibrating about a line at right angles to the line of draft, and provided at its vibrating end with a pivot the vertical plane of which is transverse to the line of draft, a cutting apparatus carrier hinged to said transverse pivot of the coupling-frame, a cutting apparatus, a pivotal connection between the cutting apparatus and the coupling-frame and having its axis transverse to the cutting apparatus, and means for rocking the cutting apparatus about the transverse pivot of the coupling-frame for raising and lowering the finger guards, substantially as described. 6th. In a harvester, the combination, a gear frame having the crank shaft mounted thereon, a coupling-frame pivoted upon and vibrating about a line at right angles to the line of draft, and provided at its front end with a pivot the vertical plane of which is transverse to the line of draft, a cutting apparatus carrier hinged to said transverse pivot of the coupling-frame, a cutting apparatus pivoted to the said carrier on a line at right angles to the said cutting apparatus, and means for raising the outer end of the cutting apparatus for passing obstructions, and means for rocking the cutting apparatus about the transverse pivot of the coupling-frame, whereby the guard fingers may be raised and lowered and maintained at right angles to the line of draft, substantially as described. 7th. In a harvester, in combination, a gear frame having the crank shaft mounted thereon, a coupling-frame pivoted upon and vibrating about a line at right angles to the line of draft, and provided at its front end with a pivot the vertical plane of which is transverse to the line of draft, a cutting apparatus carrier hinged to said transverse pivot of the coupling frame, and sliding endwise thereon, a cutting apparatus hinged to the said carrier, a lifting lever for raising the coupling-frame and cutting apparatus, and a centering device for the cutters, whereby when the cutting apparatus is raised a uniformity in the travel of the cutters relatively to the guard fingers is maintained, substantially as described. 8th. In a harvester, in combination, a gear frame having the crank shaft mounted thereon, a coupling-frame pivoted upon and vibrating about a line at right angles to the line of draft and provided at its front end with a pivot the vertical plane of which is transvers to the line of draft, a cutting apparatus carrier hinged to said transverse pivot of the coupling-frame and sliding endwise thereon, a cutting apparatus hinged to the said carrier, a lifting lever for raising the coupling-frame and cutting apparatus, and a bar connected at one end to the cutting apparatus on a line coincident with the transverse pivot thereof, and supported at the other end at a point coincident or thereabouts with the axis of the crank shaft, substantially as described. 9th. In a harvester, in combination, a gear frame having the crank shaft mounted thereon, a coupling-frame pivoted upon and vibrating about a line at right angles to the line of draft and provided at its front end with a pivot the vertical plane of which is transverse to the line of draft, a cutting apparatus carrier hinged to said transverse pivot of the coupling-frame, a rocking lever mounted upon the main frame, and a link connecting the lever with said carrier for rocking the carrier and the cutting apparatus about the transverse rocking pivot of the coupling-frame for raising and lowering the finger guards, substantially as described. 10th. In a harvester, in combination, a cutting apparatus, a cutting apparatus carrier, a rocking pivot disposed transversely of the line of draft and the cutting apparatus carrier and mounted upon the frame of the machine, a lever mounted on the frame of the machine, a link connecting the said lever and the carrier loosely with each other whereby the cutting apparatus may rock upon the transverse rocking pivot without moving its lever, substantially as described. 11th. In a harvester, in combination, a cutting apparatus, a cutting apparatus carrier, a rocking pivot disposed transversely of the line of draft and the cutting apparatus carrier upon a frame of the machine, a lever mounted on the frame of the machine, a link connecting the said lever and the carrier loosely with each other, and means for connecting the said lever and the carrier positively with each other, whereby the cutting apparatus may rock upon the transverse rocking pivot without moving its lever, or may be locked to the rocking lever and positively adjusted to raise or depress the guard fingers, substantially as described. 12th. In a harvester, in combination, a cutting apparatus carrier, a pivot disposed transversely of the line of draft and supporting the cutting apparatus carrier upon the frame of the machine, a link having a slot or loop at one end and connecting the carrier with a lever mounted on the machine, and a locking device adapted to be inserted in the slot or loop of the link, whereby the cutting apparatus may rock freely upon the transverse rocking pivot, or may be locked to the lever and positively adjusted with the guard fingers raised or lowered, substantially as described. 13th. In a harvester, in combination, a main frame, a cutting apparatus carrier pivotally connected to the main frame, a cutting apparatus pivoted to said carrier, and a sliding bolt mounted upon the carrier and adapted to engage with the cutting apparatus in a folding position about its hinge, substantially as described. 14th. The combination, with the bridge and the cutting apparatus pivoted thereto, of the arm and the sleeve projecting upward from the bridge and the locking bolt mounted in the sleeve and adapted to engage with the cutting apparatus, substantially as described. 15th. In a harvester, in combination, a gear frame having the crank shaft mounted thereon, a coupling-frame pivoted to the gear frame, a cutting apparatus hinged to the coupling-frame and provided at its inner end with an upward projecting arm, a lifting lever mounted on the main frame, connecting devices between the lifting lever and the cutting apparatus and comprising a link arranged to pull inward upon the upper end of the cutting apparatus arm, the relation of parts being substantially as described, whereby the weight of the cutting apparatus resists the pull of the link and insures the lifting bodily of the cutting apparatus and the coupling-frame when the lifting lever is operated, substantially as described. 16th. In a harvester, in combination, a main frame, a coupling-frame pivoted thereto, a cutting apparatus pivotally connected to the coupling-frame, a seat support pivoted to the main frame, and adjustable connective mechanism between the seat and the finger bar, whereby when the leverage of the seat is increased the seat is moved rearward and the effective weight of the driver for counterbalancing the cutting apparatus thereby increased, substantially as described. 17th. In a harvester, in combination, a main frame, a coupling-frame pivoted thereto, a cutting apparatus pivotally connected to the coupling-frame, a seat mounted upon a seat support and disposed in rear of the main axle, adjustable connective mechanism between the seat and the finger bar, whereby when the leverage of the seat is increased to lift upon the cutting apparatus, the seat is moved rearward and the effective weight of the driver for counterbalancing both the cutting apparatus and the main frame thereby increased, substantially as described. 18th. In a harvester, in combination, a main frame, a coupling-frame pivoted thereto, a cutting apparatus pivotally connected to the coupling frame, a lifting lever for raising the cutting apparatus, a pivoted seat support, a link connected at its front end to the lifting lever, and at its rear end to the pivoted seat support, and a series of holes in the seat support to receive the rear end of the link, the lower holes of the series being arranged within and in front of an arc of a circle described from the front end of the link and intersecting its rear end, substantially as described. 19th. The combination with the lifting lever of the foot lever engaging at its front end with the lifting lever, substantially as described. 20th. The combination with the foot lever of a returning spring or counterbalance to return said foot lever to its normal position, substantially as described. 21st. In a harvester, in combination, the lifting lever and the locking bolt on the tongue for suspending the cutting apparatus, substantially as described. 22nd. In a harvester, in combination, a main frame, a coupling-frame pivoted thereto, a cutting apparatus pivotally connected to the coupling-frame, a tilting arm rigidly connected to the cutting apparatus, and connecting mechanism between the lifting lever and the tilting arm, the relation of parts being such that the initial lift of the lever raises the cutter bar bodily, substantially as described. 23rd. In a harvester, in combination, a main frame, a coupling-frame pivoted thereto, a cutting apparatus pivotally connected to the coupling-frame, a tilting arm rigidly connected to the cutting apparatus, a stop on the main frame to limit the upward movement of the coupling-frame, whereby the continued pull of the lever upon the cutting apparatus lifts its bodily from the ground and subsequently tilts the cutting apparatus about its transverse pivot, substantially as described. 24th. In a harvester, in combination, a main frame, a coupling-frame pivoted thereto, a cutting apparatus pivotally connected to the coupling-frame, a tilting arm rigidly connected to the cutting apparatus, a lifting lever on the main frame, and connecting devices attached to the said lever and loosely to the tilting arm, whereby after the cutting apparatus has been tilted by the lever, the lever may be locked and the cutting apparatus folded for transportation, substantially as described.

25th. In a harvester, in combination, a main frame, a coupling-frame pivoted thereto, a cutting apparatus pivotally connected to the coupling-frame, a tilting arm rigidly connected to the cutting apparatus, a lifting lever on the main frame, and connecting devices attached to the said lever and loosely to the tilting arm, and means for supporting the cutting apparatus from the lifting lever and independently of the tilting arm, substantially as described.

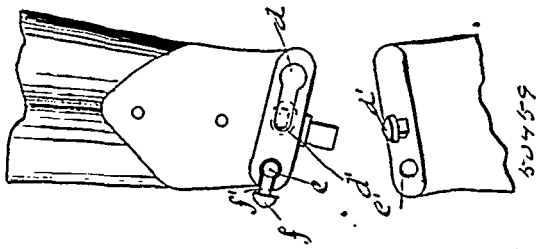
No. 50,458. Blind Slat Holder and Fastener.
(*Assemblage des lames de persiennes.*)



Alfred Harley, Albany, New York, U.S.A., 4th November, 1895; 6 years.

Claim.—1st. A blind stop having a movable arm 5, pivoted to a base 7, said arm 5 being arranged to have an uninterrupted movement throughout its sweep, and a resilient device 10, 11, 12, 13, arranged within the chamber 6, to exert an unvarying automatically controlled resistance to movement of said arm 5, and a connecting rod 4, pivoted to the arm 5, and movably attached to the movable portion 3, of the blind, said connecting rod 4, having an offset therein arranged to allow the connecting rod to pass the base, as and for the purposes described. 2nd. A blind stop having a movable arm 5, pivoted to a base 7, the pivoted end being corrugated forming a plate spring and arranged to exert constant unvarying automatically controlled frictional resistance to movement of the said arm, and having a connecting rod 4, pivoted to the arm and movably attached to the movable portion 3, of said blind, substantially as described.

No. 50,459. Horse Collar. (*Collier de cheval.*)



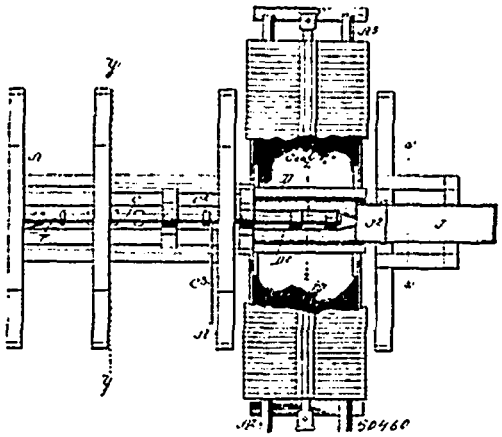
Jean Joseph Hector Lafond and Napoleon Lebreuf, both of St Polycarpe, Quebec, Canada, 4th November, 1895; 6 years.

Claim.—1st. A horse collar divided and separable at the throat or breast portion, and the sides terminating at their lower ends in hollow metal end pieces forming the breast section of the collar with a depression in the inner face thereof and means for connecting the halves together, for the purpose set forth. 2nd. A horse collar having its breast or throat portion formed with a depression on the inner face thereof for the purpose set forth. 3rd. A horse collar having adjustable hame hooks on its sides near the breast portion thereof, for the purpose set forth. 4th. A horse collar divided and separable at the throat or breast portion and the sides having metal end pieces forming the breast portion and having suitable interlocking parts, such as slot *d*, and projection d^1, with locking device such as bolt *c*. 5th. A horse collar having hame hooks on its sides near the breast portion thereof, and loop or eye forming parts formed in one with said hooks, for the purpose set forth.

No. 50,460. Car Loading Machine.
(*Machine à charger les chars.*)

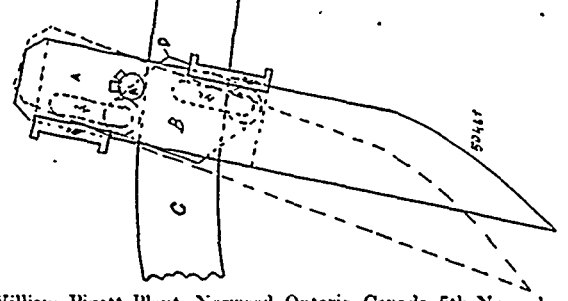
Thomas Beck, Des Moines, Iowa, U.S.A., 5th November, 1895; 6 years.

Claim.—1st. An improved automatic car-loading machine, comprising a suitable frame adapted to be moved at right angles to a railroad track, a curved pan fixed to said frame and adapted to enter a car on said track and receive coal from a chute, a rock shaft mounted in suitable bearings in said frame, a shovel having its top fixed to said shaft, and its lower edge in proximity to the said pan so that when reciprocated the contents of the pan will be thrown straight outwardly from both sides thereof, an arm fixed to said rock shaft and projected downwardly therefrom, and a pitman pivotally attached to said arm, for the purposes stated. 2nd. An improved car-loading machine, comprising a suitable frame adapted to be moved at right angles to a railroad track, a pan fixed to the forward end of said frame adapted to enter a car and receive coal or



the like from a chute, a rock shaft mounted in suitable bearings in said frame, a wing or shovel fixed to the outer end thereof and extended downwardly into proximity to the said pan, an arm fixed to said shaft and extended downwardly therefrom, and a pitman pivotally attached to said arm, a suitable chute located at the opposite side of the track, a chute section connected with the lower end of said chute and adapted to be extended into a car, mechanism adapted to be actuated by said sliding frame when it is placed in a car to extend the chute section, a steam cylinder beneath the sliding frame fixed to a stationary support, a piston therein, a piston rod extended forwardly therefrom and connected with the said sliding frame, and means for admitting steam into either end of said cylinder, substantially as and for the purposes stated. 3rd. In combination with a suitable distributing device arranged to slide at right angles to a railway track and in and out of a car thereon, of a chute having its lower section hinged and adapted to be swung into a car to discharge into a distributing device in the car, a lever pivoted to a suitable support below the said hinged section, a link and a projection from the aforesaid distributing device adapted to engage the lower end of said lever when the distributing device is run into a car, for the purposes stated. 4th. An improved distributing device comprising a suitable frame having flanged rollers mounted thereon, to be capable of moving longitudinally of the frame, a suitable carriage having tracks fixed to its lower surface adapted to enter said flanged rollers and projecting beyond the forward ends, out guides at the sides of said carriage arranged to allow a longitudinal motion of the carriage, and restricting its motion in all other directions, a rock shaft mounted in the top of said carriage, a crank projecting downwardly therefrom, a pitman pivoted to the lower end of said out pan, a steel cylinder located in the said frame and of a length corresponding to the length which it is desired to extend the distributing device into a car, a piston inserted therein and connected with the outer end of the said pan, and two supply pipes leading into the opposite ends of said cylinder and connected with a suitable source of steam supply, an inclined chute leading toward the said pan from the opposite side of the track, a hinged section at its lower end, a lever pivoted in a suitable support below said hinged section, a link connecting the top of said lever and the bottom of the hinged section, a rod extended through a suitable opening below the said hinged section, and pivotally connected with the lower end of the said lever, and a projection extending forwardly from the aforesaid pan adapted to engage said rod when the pan is placed in position in a car, all arranged and combined substantially in the manner set forth and for the purposes stated.

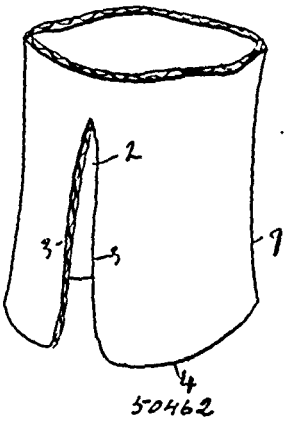
No. 50,461. Colter Clip. (*Collet de coutre.*)



William Pigott Plant, Norwood, Ontario, Canada, 5th November, 1895; 6 years.

Claim.—A colter clip, consisting of a front clip-plate C, having two longitudinal slots C^3, and provided with grooved cheeks C^1, to resist the thrust of the colter, and a post C^2, to retain the colter to the clip, a back clip, plate D, having collars D^1, and bolts E, inserted in said slots and passing through said collars and provided with nuts E^1, for adjustment vertically and inclinedly, as set forth.

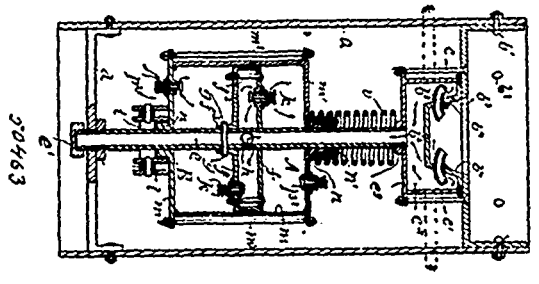
No. 50,462. Overshoe. (*Claques.*)



James Henry McKechnie, Granby, Quebec, Canada, 5th November, 1895; 6 years.

Claim.—1st. A cardigan overshoe having a rubber foot portion and textile leg portion, the latter longitudinally slotted and extending through the opening of the foot portion directly to a point of attachment between the insole and outsole without lateral distension into the toe portion thereof for the purpose set forth. 2nd. A cardigan overshoe comprising rubber foot portion and textile leg portion, the latter having its lower end substantially square and with a vertical slit or opening in the front thereof, the square end having its edges held between the insole and outsole and the edges of the slit or opening connected with the edge of the tongue of the foot portion. 3rd. A cardigan overshoe comprising a textile leg portion having its lower end provided with an opening in the front thereof, separate toe and heel linings and suitable insole and rubber foot portion, all suitably attached together. 4th. A cardigan overshoe, composed of a textile leg portion having its lower end provided with an opening in the front thereof, separate toe and heel linings, the heel lining attached to the leg portion, the rear edges of the toe lining attached to the forward edges of the heel lining, and the lower edges of both linings held between suitable insole and rubber foot portion. 5th. A cardigan overshoe composed of a textile leg portion having its lower end provided with an opening in the front thereof separate toe and heel linings, the heel lining attached to the leg portion, the rear edges of the toe lining attached to the forward edges of the heel lining and the lower edges of both linings and leg portion held between suitable insole and rubber foot portion. 6th. In the manufacture of footwear of the class described, first distending the lower portion of the stocking leg to receive cement, covering up the adjacent parts thereof, cementing the exposed section of same, attaching the usual lining of the foot portion over such cemented section, lasting the lower end edge of the stocking leg and with it the lower edges of the lining to the insole of the foot portion, and finally applying the rubber foot portion, for the purpose set forth.

No. 50,463. Forge. (*Forge.*)



William Ross, Montreal, Quebec, Canada, 5th November, 1895; 6 years.

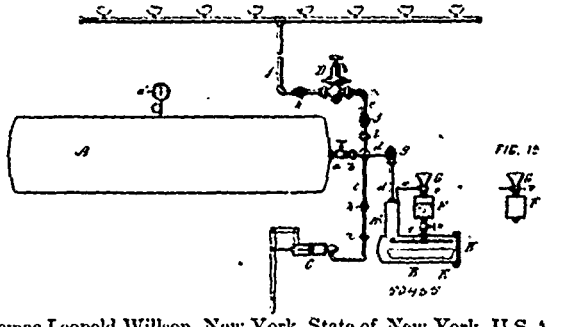
Claim.—1st. In a forge, the combination of a frame or support, a fuel receptacle or fire pot, an air conductor in communication with said receptacle or fire pot, a stationary hollow piston carried by said conductor communicating therewith and provided with valve controlled inlets, a movable cylinder encircling and enclosing such piston, provided with valve controlled inlets and adapted to receive and force air into said piston, and means for actuating such cylinder, for the purpose set forth. 2nd. In a forge, the combination of a frame or support, a fuel receptacle or fire pot, an air conductor extending vertically beneath said receptacle or fire pot and communicating with same, a stationary hollow piston carried by said air conductor with its inner space in communication with the inner space of such conductor and provided with valve controlled inlets and a movable cylinder encircling and enclosing such piston, provided with valve controlled inlets and adapted to receive and force air into said piston with means for actuating such cylinder, for the purpose set forth. 3rd. In a forge, blower mechanism comprising a tubular air conductor, a movable cylinder, a stationary piston or diaphragm carried by the conductor, encircled and enclosed by the cylinder and serving to divide the cylinder into two chambers acting alternately to receive and compress air, valve controlled inlets to each chamber of the cylinder, and valve controlled inlets from each chamber of the cylinder to the air conductor, for the purpose set forth. 4th. In a forge, a fuel receptacle or fire pot having tuyeres extending through its sides, for the purpose set forth. 5th. In a forge, a fuel receptacle or fire pot having tuyeres extending through its sides, the tuyeres being curved and placed with their convex side undermost, for the purpose set forth. 6th. In a forge, a fuel receptacle or fire pot having tuyeres extending through its sides, the tuyeres being curved and placed with their convex side undermost, their inner ends open and their outer ends closed and inlets in the uppermost side of same near the closed ends, for the purpose set forth. 7th. The tuyere of curved form and with open and closed ends and an inlet in the concave side thereof near the closed end, for the purpose set forth. 8th. In a forge, the combination with a fuel receptacle or fire pot, of a hot air chamber encircling same, an air inlet to the chamber and inlets from the chamber to the fire pot, for the purpose set forth. 9th. In a forge, the combination of a frame or support, a fuel receptacle or fire pot, an air conductor in communication with said receptacle or fire pot, a stationary hollow piston of enclosing cylindrical form, carried by said conductor communicating therewith and provided with a valve controlled inlet in each end thereof, a movable cylinder encircling and enclosing such piston, provided with valve controlled inlets and adapted to receive and force air into said piston, and means for actuating such cylinder, for the purpose set forth. 10th. In a forge, the combination of a frame or support, a fuel receptacle or fire pot, an air conductor extending vertically beneath said receptacle or fire pot and communicating with same, a stationary hollow piston of enclosing cylindrical form carried by said air conductor with its inner space in communication with the inner space of such conductor and provided with a valve controlled inlet in each end thereof and a movable cylinder encircling and enclosing such piston, provided with valve controlled inlets and adapted to receive and force air into said piston with means for actuating such cylinder, for the purpose set forth. 11th. In a forge, blower mechanism comprising a tubular air conductor, a movable cylinder, a stationary piston or diaphragm of enclosing cylindrical form, carried by the conductor, encircled and enclosed by the cylinder and serving to divide the cylinder into two chambers acting alternately to receive and compress air, valve controlled inlets to each chamber of the cylinder, and valve controlled inlets from each chamber of the cylinder to the air conductor, for the purpose set forth. 12th. In a forge, a fuel receptacle or fire pot, having tuyeres extending transversely through its sides and projecting beyond same, for the purpose set forth. 13th. In a forge, the combination with a fuel receptacle or fire pot, of a hot air chamber encircling same, an air inlet to the chamber and inlets from the chamber to the fire pot in the form of tuyeres extending transversely through the sides of the fire pot, for the purpose set forth.

No. 50,464. Blue Liquid Composition. (*Bleu liquide.*)

Jacques F. Devos et Wenceslas Paquette, Montréal, Québec, Canada, 5 novembre 1895; 6 ans.

Résumé.—Le composé d'acide oxalique, d'acide acétique, acide carbolique-ammoniaque, bleu d'outre-mer et aniline violet dans les proportions et pour la fin décrite.

No. 50,465. Process and Apparatus for Generating Gas. (*Procédé et appareil à générer le gaz.*)



Thomas Leopold Willson, New York, State of New York, U.S.A., 5th November, 1895; 6 years.

Claim.—1st. The process of generating an illuminating gas which consists in bringing together in a closed chamber water and a metallic carbide decomposable thereby, whereby gas is generated under pressure. 2nd. The process of generating an illuminating gas in an apparatus having a generating chamber and a receiver, which consists in bringing together in said chamber water and a metallic carbide decomposable thereby, whereby acetylene gas is generated under pressure, and passes over into said receiver where it is stored under pressure until required for use. 3rd. The process of generating and utilizing acetylene, which consists in bringing together in a closed chamber water and a metallic carbide decomposable thereby, whereby acetylene gas is generated under pressure, accumulating the compressed acetylene in a receiver, closing and disconnecting the latter, and transporting it to the place where the gas is required for use. 4th. The process of generating an illuminating gas which consists in placing a metallic carbide decomposable by water in a closed chamber, and subsequently introducing water thereinto in contact with said carbide to react thereon and generate gas, whereby the gas is generated under pressure. 5th. The process of generating an illuminating gas which consists in placing a metallic carbide decomposable by water in a closed chamber, subsequently introducing water thereinto in contact with said carbide, whereby acetylene gas is generated under pressure, and increasing the pressure upon said water as the pressure increases, whereby the introduction of water is continued notwithstanding the accumulating gaseous pressure in said chamber. 6th. As a new article of manufacture, acetylene compressed in a receiver wherein it can be stored and transported as required, substantially in the manner described. 7th. The improved illuminating gas consisting of a mixture of acetylene and air, substantially as described. 8th. The improved process of producing an illuminating gas, consisting in bringing together water and calcium carbide, collecting the resulting acetylene gas, and mixing it with air, substantially as described. 9th. The improved process of producing illuminating gas, which consists in bringing together water and calcium carbide in a closed chamber, conducting the gas thence into a receiver and accumulating it therein under pressure derived from its own generation, and mixing it with air before burning it, substantially as described. 10th. The process of generating an illuminating gas in an apparatus having a receiver and a generating chamber communicating therewith, which consists in introducing air to said receiver, placing a metallic carbide in said generating chamber, closing the latter, and subsequently introducing water thereinto, to react with said carbide and generate gas under pressure, which gas passes over into said receiver and commingles with the air therein. 11th. An acetylene gas apparatus consisting of a receiver, a gas generating chamber, a valved pipe leading from said chamber to the receiver, and an opening in the upper part of the gas generator through which to introduce water into contact with carbide in said chamber. 12th. The combination of a gas receiver, a gas generating chamber, a water chamber above the latter, a valved communicating passage from said water chamber to said gas producing chamber, a hopper over said water chamber, and a cock for closing communication between the hopper and water chamber. 13th. The combination of a gas generating chamber B, water chamber F, a valved passage communicating between them and a gas pressure pipe re communicating from the gas producing chamber to the upper part of the water chamber. 14th. In a gas generating apparatus, the combination of a gas generating chamber open at one end, with a cap for closing said end, the one part formed with spirally inclined ribs and the other part with overhanging flanges having spirally inclined faces engaging said ribs, and adapted by a partial turn of the cap to draw it into tight contact with the end of the chamber. 15th. The combination of a closed chamber for containing material generating gas by contact with water, a spraying device for spraying said material with water, and means for collecting the resulting gas, substantially as described.

No. 50,466. Illuminating Gas. (*Gaz d'éclairage.*)

Thomas Leopold Willson, New York, State of New York, U.S.A., 5th November, 1895; 6 years.

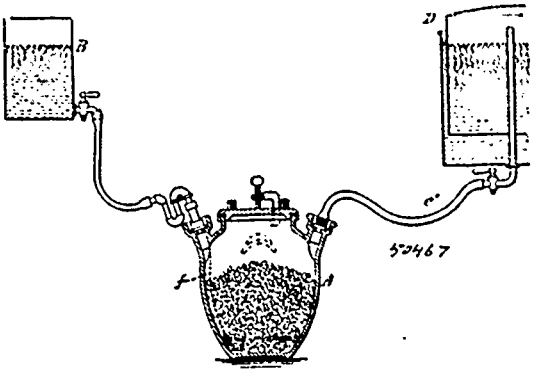
Claim.—1st. The process of increasing the luminosity of a combustible gas which consists in adding acetylene thereto, substantially as and to the effect specified. 2nd. An improved illuminating gas consisting of the mixture of a combustible gas of low illuminating power with acetylene in proportions, substantially as specified.

No. 50,467. Dehydration of Illuminating Gas, etc.

(*Dehydration de gaz d'éclairage, etc.*)

Thomas Leopold Willson, New York, State of New York, U.S.A., 5th November, 1895; 6 years.

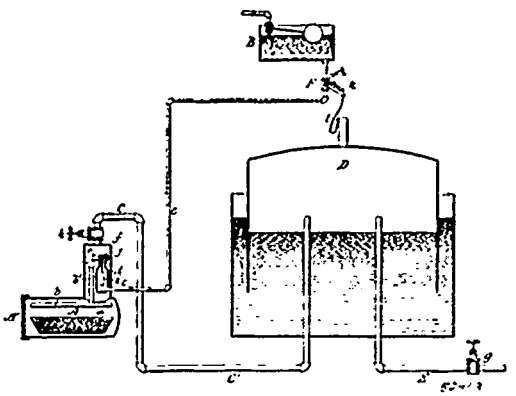
Claim.—1st. The process of dehydration consisting in passing the substance to be dehydrated into contact with a metallic carbide decomposable by water, whereby its moisture is removed and acetylene gas is generated. 2nd. The process of dehydration of a gas, consisting in passing it into contact with a metallic carbide decomposable by water, whereby its moisture is removed and acetylene gas is generated and commingled with the said gas. 3rd. The process of generating acetylene gas by the decomposition of a metallic carbide with water, and then drying the generated gas by contact with said carbide. 4th. The process of generating acetylene gas by the decomposition of a metallic carbide with water, which consists in introducing the water to one part of a mass of said carbide and



causing the generated gas to flow thence through the mass of carbide, whereby the moist gas comes into contact with fresh carbide and its moisture is thereby removed and the volume of the gas is increased. 5th. The process of generating acetylene gas by the decomposition of a metallic carbide with water, which consists in introducing the water to the bottom of a chamber containing the carbide and drawing off the gas from the upper part of said chamber, whereby the generated gas is caused to circulate through the mass of carbide and is dried by contact therewith.

No. 50,468. Apparatus for Generating Gas.

(*Appareil pour générer le gaz.*)

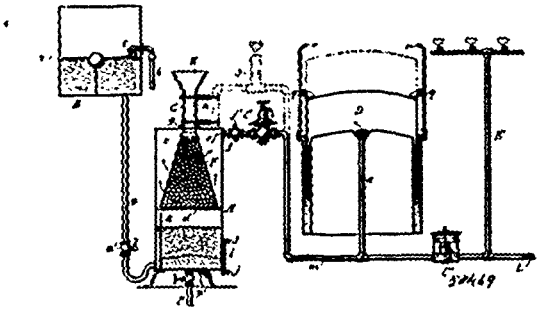


Thomas Leopold Willson, New York, State of New York, U.S.A., 5th November, 1895; 6 years.

Claim.—1st. In a gas generating apparatus, the combination with a reaction chamber for containing the carbide or other chemical, constructed to be opened for introducing the chemical, and having a gas outlet and a water inlet, of means for controlling the flow of water through said inlet operated by variations in the pressure of the generated gas, whereby to shut off the flow when the pressure exceeds the normal and re-establish it when the pressure falls below the normal. 2nd. In a gas generating apparatus, the combination with a reaction chamber for containing the carbide or other chemical, constructed to be opened for introducing the chemical, and having a gas outlet and a water inlet, of an automatic governor for controlling the flow of water through said inlet, constructed to be operated by variations in the pressure of the generated gas. 3rd. In a gas generating apparatus, the combination with a reaction chamber for containing the carbide or other chemical, constructed to be opened for introducing the chemical, and having a gas outlet and a water inlet, of an automatic governor for controlling the flow of water through said inlet, comprising a valve in the water passage, and means for opening and closing it responsive to variations in the pressure of the generated gas. 4th. In a gas generating apparatus, the combination with a reaction chamber for containing the carbide or other chemical, constructed to be opened for introducing the chemical, and having a gas outlet and a water inlet, of an automatic governor for controlling the flow of water through said inlet, comprising a valve in the water passage, and a valve-controlling device exposed to the pressure of the generated gas and adapted to be moved by variations in pressure to operate the valve. 5th. In a gas generating apparatus, the combination with a reaction chamber for containing the carbide or other chemical, constructed to be opened for introducing the chemical, and having a gas outlet and a water inlet, a reservoir for the generated gas connected with said outlet, a source of water, and a pipe leading thence to said water inlet, a valve in said pipe, and a governor for operating said valve

comprising a movable member receiving the pressure of the gas in said reservoir, and mechanical connections between said member and the valve adapted to close the valve upon an increase beyond the normal pressure, and vice versa. 6th. In a gas generating apparatus, the combination with a reaction chamber for containing the carbide or other chemical, constructed to be opened for introducing the chemical, and having a gas outlet and water inlet, of a gas holder for the generated gas, a source of water, a pipe leading therefrom to said water inlet, a valve in said pipe, and a mechanical connection between said valve and the movable member of said gas holder, adapted to close said valve by the excessive rise of the gas holder and to open it by the excessive fall thereof. 7th. In a gas generating apparatus, the combination with a reaction chamber for containing the carbide or other chemical, constructed to be opened for introducing the chemical, and having a gas outlet and a water inlet, a gas reservoir in connection with said gas outlet for storing the generated gas, an automatic governor for controlling the flow of water through said inlet, constructed to be operated by variations in the pressure of the generated gas in said reaction chamber, and a secondary automatic governor constructed to be operated by variations in the quantity of gas contained in said reservoir.

No. 50,469. Apparatus for Generating Acetylene Gas. (*Appareil à générer le gaz.*)

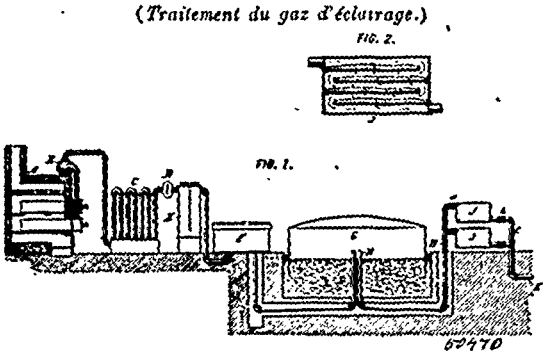


Thomas Leopold Willson, New York, State of New York, U.S.A., 5th November, 1895; 6 years.

Claim.—1st. The combination to form a gas-generating apparatus of a gas generator consisting of a chamber having a receptacle for carbide, a gas outlet from the upper part of the generator, a water inlet to the lower part thereof, and a source of water connected with said inlet under pressure sufficient to raise it above the level of the carbide, the whole adapted for automatic operation controlled by the relative pressures of the water and the generated gas, so that the water after reaching the carbide is forced out of contact therewith whenever the gas is generated enough faster than it is consumed to raise its pressure above that of the water. 2nd. The combination to form a gas-generating apparatus of a gas generator A, consisting of a chamber having a receptacle for carbide, a gas outlet from the upper part of the generator, an elevated water tank B, and a pipe *a*, leading from said tank and communicating with the lower part of the generator, the whole adapted for automatic operation, substantially in the manner described. 3rd. The combination to form a gas-generating apparatus of a gas generator A, consisting of a chamber having a receptacle for carbide, means for charging the generator consisting of slides or valves *g*, *h*, and intervening chamber G, a gas outlet from the upper part of the generator, an elevated water tank B, and a pipe *a*, leading from said tank and communicating with the lower part of the generator, the whole adapted for automatic operation, substantially in the manner described. 4th. The combination to form a gas-generating apparatus of a gas generator A, consisting of a chamber having a receptacle for carbide, constructed with flaring walls and a grating or foraminous bottom, a gas outlet from the upper part of the generator, an elevated water tank B, and a pipe *a*, leading from said tank and communicating with the lower part of the generator, the whole adapted for automatic operation, substantially in the manner described. 5th. The combination to form a gas-generating apparatus of a gas generator A, consisting of a chamber divided transversely by a grating or foraminous partition *d*, an inlet for water in the lower part of said chamber, a source of water under pressure connected to said inlet, and a gas outlet from the upper part of said chamber, adapted for automatic operation, substantially as described. 6th. The combination to form a gas-generating apparatus of a gas generator A, consisting of a chamber, a carbide magazine F in said chamber constructed with perforated flaring walls and a foraminous or grated bottom, an inlet for water in the lower part of said chamber, a source of water under pressure connected to said inlet, and a gas outlet from the upper part of said chamber adapted for automatic operation, substantially as described. 7th. The combination of a gas generator, a water inlet to the lower part thereof, a source of water under pressure connected to said inlet, a gas outlet from the upper part of said generator, and a pressure-reducing valve applied between said outlet and the points of consumption of gas. 8th. The combination of a gas generator, a water inlet to the lower part thereof, a source of water under pressure connected to said inlet, a gas outlet from the upper part of said generator, a gas-holder, a pressure-reducing valve applied between said outlet and the gas-holder, and a second pressure reducing valve applied between said holder and the points of consumption of gas. 9th. The combination of a gas generator, a water inlet to the lower part thereof, a source of water under pressure connected to said inlet, a gas outlet from the upper part of said generator, a gas holder, a pressure reducing valve applied between said outlet and gas-holder, stops to limit the ascent of the gas holder when it is full and thereby accumulate a pressure sufficient to operate said pressure reducing valve and check the flow of gas from the generator to the gas holder, and a second pressure-reducing valve applied between said holder and the points of consumption of gas.

No. 50,470. Treatment of Illuminating Gas.

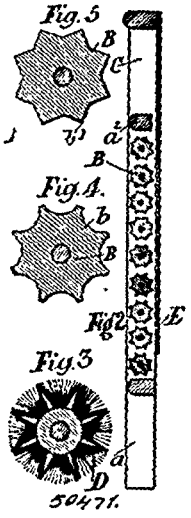
(*Traitement du gaz d'éclairage.*)



Thomas Leopold Willson, New York, State of New York, U.S.A., 5th November, 1895; 6 years.

Claim.—1st. The improved treatment of illuminating gas which consists in passing it, after it has been purified, and before it enters the mains, into contact with a metallic carbide decomposable by water to generate a hydrocarbon gas, whereby the gas is dehydrated and enriched. 2nd. The improved treatment of illuminating gas which consists in passing it on its way from the gas-holder into the main into contact with a metallic carbide decomposable by water to generate a hydrocarbon gas, whereby the gas is dehydrated and enriched. 3rd. The combination, with gas-generating and purifying apparatus and a gas-holder, of a carbide dehydrator substantially as described introduced to be traversed by the gas between the gas-holder and the main.

No. 50,471. Washing Board. (*Planche à laver.*)

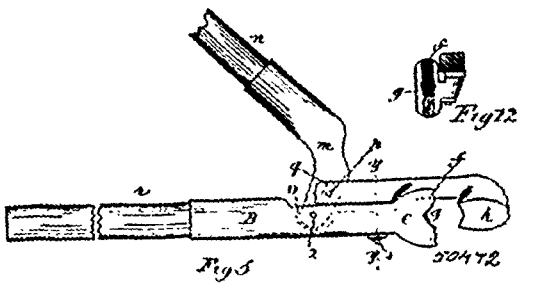


George Croydon Marks, London, England, 5th November, 1895; 6 years.

Claim.—1st. In a washing board, the arrangement and use of a number of fluted or grooved rollers between the side frames, substantially as and for the purposes hereinbefore described, and as illustrated in the accompanying drawing. 2nd. The improved construction and arrangement of a washing board having fluted revolving brushes also placed between the same frame, with a covering or back board beneath, substantially as and for the purposes hereinbefore described, and as illustrated in the accompanying drawing. 3rd. The combination and arrangement of a number of revolving fluted or grooved rollers between the frame and having a corrugated or grooved flat board or plate placed above the surface of the rollers as F in figure 7 of the accompanying drawing.

No. 50,472. Device for Locking Crossed Wires.

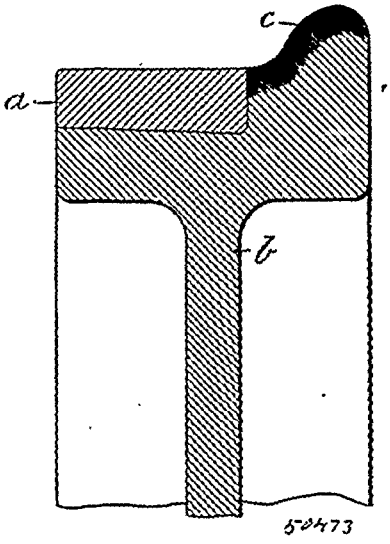
(*Appareil à lier les fils croisés*)



Matthew Kelly, Glanford, Ontario, Canada, 5th November, 1895; 6 years.

Claim.—1st. A stationary head having a socket and handle at one end, and at the other a vertical groove in its face, and a central recess, a movable jaw attached to the other end having a vertical groove on its face, and a projection in the centre between them, the movable jaw constructed with a tongue to slide in a groove in the stationary jaw piece and held together by a bolt passing through both, the stationary jaw having a slot communicating with the groove to enable the movable jaws to slide back and forth on each side of the bolt a movable handle socket pivoted to the stationary jaw piece and also to the movable jaw piece, to open and close the jaws, all constructed substantially as and for the purpose specified. 2nd. A stationary head *c*, having a vertical groove *f*, and a central recess *g*, to receive crossed wires, a socket B, at the opposite end with a handle *r*, for holding the device, a slot *r*, with hollow friction roller *w*, for the bolt *s* to pass through, a movable jaw *h* made to slide with a tongue 4, in a groove 3, of the stationary part B, and held together by the bolt *s*, and nut *u*, a handle socket *m*, pivoted to the stationary jaw portion B, in a recess *o*, and also to the movable jaw piece *h*, by a pin *p*, through an oval hole *q*, in the socket *m*, a vertical groove *k*, in the face of the movable jaw head *h*, and a projection *l*, in the centre dividing the said groove *k*, to press the longitudinal wire into the recess of the stationary head *c*, to bend it slightly at the junction of the vertical and horizontal wires, all substantially as described. 3rd. The combination of the stationary jaw *c*, provided with groove *f*, and recess *g*, with socket B, handle *r*, movable jaw head *h*, made to slide in the stationary jaw by a tongue 4 and groove 3, and held by coupling pin *s*, and nut *u*, a hollow friction roller *w*, in the slot *r*, through which the bolt passes, for locking the clasp on vertical and horizontal wires and bending the latter where they cross, substantially as described.

No. 50,473. Car Wheels. (*Roue de chars*)

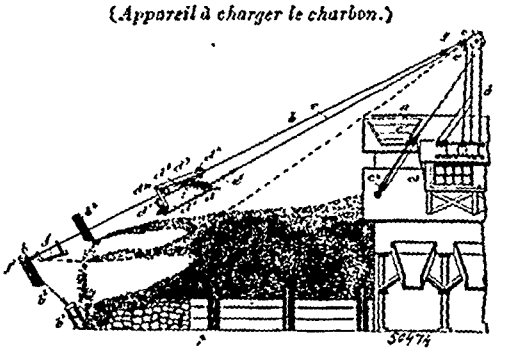


William Johnston Taylor, Bound Brook, New Jersey, U.S.A., 5th November, 1895; 6 years.

Claim.—1st. A car-wheel having a tread of one metal and a body of another metal and a chilled flange, the metallic composition of which is the same as that of the body of the wheel, substantially as described. 2nd. A car-wheel having a steel tread welded to a cast iron body and a chilled flange, the metallic composition of which is the same as said body, substantially as described. 3rd. A car-wheel having a steel tread provided with a tapered body joined to the body of the wheel and a chilled flange, and the body and flange of the same metal, substantially as described. 4th. A car-wheel having a metal body provided with a chilled flange, and a tread of a different metal composition from that of the body and the flange of the same metal composition as the body and the tread established with the body and flange of the wheel, substantially as described. 5th. The method of making a car-wheel, which consists in providing a metal ring, hoop or tire, heating the same to required temperature to establish with another metal in a molten state to form the body of the wheel and introducing the same into a mould before the moment of pouring, and chilling the flange of the same metal as said body, substantially as and for the purposes described. 6th. The method of making a car-wheel, which consists in providing a steel ring, hoop or tire, heating the same to required temperature to weld to iron in a highly molten state and introducing it into a mould just before the moment of pouring of the iron and chilling partially the iron flange at the same time, substantially as and for the purposes described.

No. 50,474. Apparatus for Loading Coal.

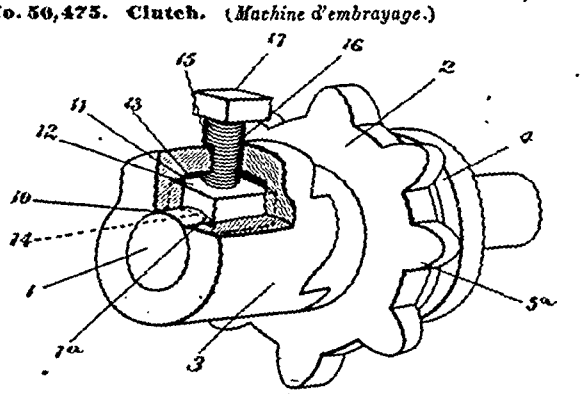
(*Appareil à charger le charbon.*)



Frank Henry Symons, Boston, Massachusetts, U.S.A., 5th November, 1895; 6 years.

Claim.—1st. In a conveying apparatus, an inclined runway, a coal tub running thereon, means for slackening the runway while the tub is filling, and for thereafter tightening it, substantially as described. 2nd. In a conveying apparatus, an inclined runway, a coal tub thereon, means for drawing it up the runway, and for permitting it to descend, and means for slackening the runway for a short time while the tub is being drawn up, that it may scoop up the coal, and for thereafter tightening it, substantially as described. 3rd. In a conveying apparatus, an inclined runway, a coal tub thereon, means for drawing it up the runway, and for permitting it to descend, a winding drum for one end of the runway whereby it may be slackened while the tub is filling, and for thereafter tightening it, and a suitable point of attachment for the lower end of the runway, substantially as described. 4th. In a conveying apparatus, a runway, a conveying tub, consisting of a scoop having rollers which follow along said runway, a pivoted door at the rear end having at each side a projection d^4, bell crank levers d^5, pivoted to each side of the scoop, and having latches which engage said projections d^4, the forwardly projecting yoke or frame d^7, connected with said bell crank levers, spring d^{10}, normally holding the bell crank levers in engagement with the projections d^4, a stop at the upper end of the runway against which the yoke d^7 strikes to operate the bell crank levers, and thereby release the door, and a stop at the lower end of the runway against which the door strikes to close it.

No. 50,475. Clutch. (*Machine d'embrayage.*)



Frank K. Bell, St. George, Ontario, Canada, 5th November, 1895; 6 years.

Claim.—1st. A clutch for the transmission of power consisting of a clutch member, means for temporarily holding the clutch member fast on the shaft, means for setting the clutch member to resist any predetermined strain, and a clutch member loosely mounted on the shaft, substantially as specified. 2nd. A clutch for the transmission of power, consisting of a clutch member mounted on the shaft, a recess in the bore of the hub of the clutch member, a block contained within the recess adapted to fit against the shaft, a set-screw passing through the hub of the clutch member adapted to press the block against the shaft with any predetermined pressure in combination with a clutch member loosely mounted on the shaft, substantially as specified.

No. 50,476. Wheel Hub. (*Moyeu de roue.*)

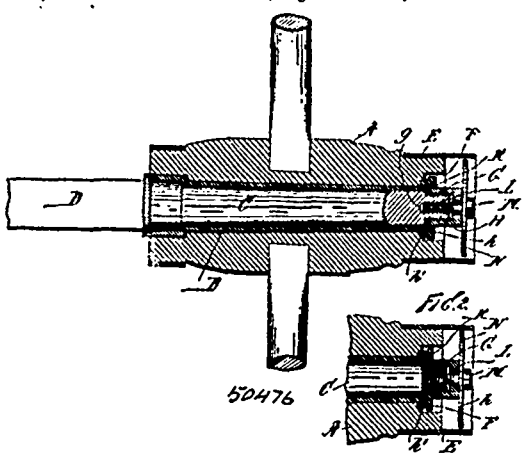


Fig. 2.

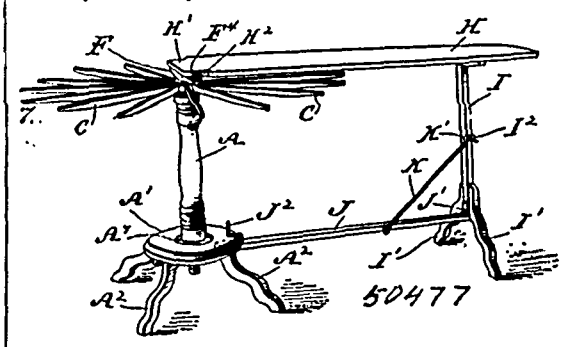
John Henry Hartman, Germantown, New York, U.S.A., 5th November, 1895; 6 years.

Claim.—1st. The means for securing the hub of a wheel to a spindle, comprising a screw-threaded cap mounted on a screw-threaded extension of said spindle, said extension being also provided with a central bore having a screw-thread formed therein which is the reverse of that formed on the outer surface thereof, and a screw-threaded bolt passing through said cap into said central screw-threaded bore, substantially as shown and described. 2nd. The means for securing the hub of a wheel to a spindle, comprising a screw-threaded cap mounted on a screw-threaded extension of said spindle, said extension being also provided with a central bore having a screw-thread formed therein which is the reverse of that formed on the outer surface thereof, and a screw-threaded bolt passing through said cap into said central screw-threaded bore, and a plate or disc mounted on said bolt, substantially as shown and described. 3rd. The means for securing the hub of a wheel to a spindle, herein shown and described, which consists of a screw-threaded cap as G, adapted to be connected with a screw-threaded section of the spindle, said cap being provided at its inner end with an annular rim on the inner side of which is formed an annular, inwardly directed flange, and the extension of said spindle being provided with a central bore, having a screw-thread formed therein the reverse of that on the outer surface thereof, and a screw-threaded bolt, which passes through the head of said cap and into said bore, substantially as shown and described. 4th. The combination with the hub of a wheel, within which is placed a tubular casing as B and a outer end of which is provided with a band as E, and a circular chamber as F, formed therein, of a cap as H adapted to be mounted on a screw-threaded extension of a spindle as C, and a screw-threaded bolt as L, which is adapted to enter a central bore formed in the end of the extension of the spindle, the screw-thread of said bolt being the reverse of that formed on the said cap, and a disc or plate as N mounted on said bolt, substantially as shown and described.

No. 50,477. Ironing-board and Clothes Dryer Combined. (*Planche à repasser et séchoir à linge combinés.*)

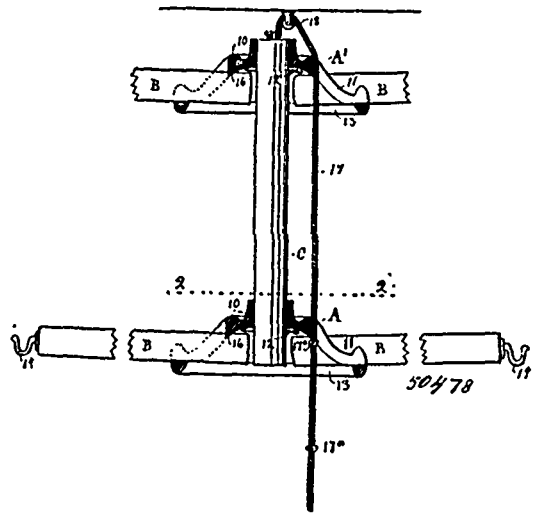
John Hughes, Cooksburg, New York, U.S.A., 5th November, 1895; 6 years.

Claim.—1st. A combined ironing-board and clothes dryer, consisting of a standard having a base with legs thereon and a recess therein, a revolving head, bars resting therein, a bracket separably fitted to the standard and provided with notched lugs, an ironing-board having a pin fitted in the notches in the lugs of the bracket, a foot bar having a clamp and pins adapted to engage with the base, a bracket provided with legs and having a hinged construction with the foot bar, and a brace pivoted to the foot bar and having a hook connected with the bracket, substantially as shown and described. 2nd. A combined ironing-board and clothes dryer, comprising the combination of a base having a recess in the upper surface thereof, a standard detachably secured to said base within the recess, a head revolubly mounted upon said standard, bars pivoted therein, a bracket



separably fitted to the said standard, and provided with notched lugs, an ironing-board having a pin fitted in the said lugs, a foot bar having means thereon for engaging the base, and a bracket hinged to the opposite end of the foot bar to fold upon the same and adapted to receive the ironing-board thereon, substantially as shown and described.

No. 50,478. Clothes Dryer. (*Séchoir à linge.*)

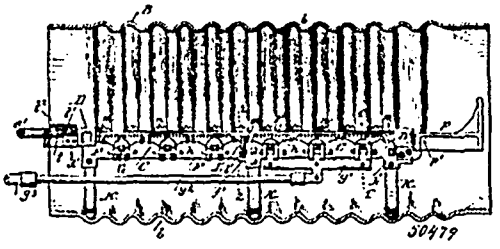


John A. Caldwell, Vancouver, British Columbia, Canada, 5th November, 1895; 6 years.

Claim.—1st. In a clothes dryer or like device, body sections A and A¹, as shown, comprising a hub 10, made concave on the under side, receiving arms 11, in pairs radiating from the said hub, and extending in a downwardly and outwardly direction, a continuous outer ring or rim 13, connecting the receiving arms at their outer and under ends, and being in turn supported by the said arms, supporting arms B, B, which are entered in the openings formed by each pair of receiving arms of the body, engage with the hub at their inner ends, and are supported on the outer rim of body, as and for the purpose set forth. 2nd. In a clothes drier or equivalent device, the combination with body sections comprising hubs, receiving arms, continuous rims, connecting receiving arms at their outer ends, the said rims being provided with projections 14, in pairs on their upper face, between the receiving arms to keep the auxiliary arms B¹, B¹, in place when required, supporting arms resting on the outer rim, and passed through between receiving arms, to an engagement with outer and under edge 16, of hub, and to abut against the supporting rod C, when the supporting arms are in place in a horizontal position, the sharp outer edge of hub prevents the withdrawal of said arms, all substantially as shown and described. 3rd. In a clothes drier or like device, the combination with body sections comprising hubs, receiving arms, radiating from said hubs in pairs, supporting arms passed between receiving arms to an engagement with hubs, a rod, upon which one body section is mounted on the under end the other body section is mounted on the extreme top of rod, acting thus as a counterbalance to unequal loading, a rope or cord attached to the extreme upper end of rod, and adapted to be passed over an overhead pulley, the said rope or cord being passed down through both bodies, in the angle formed by the junction of

receiving arms and hub, and being provided with a series of enlargements for supporting the device, in the several positions required, all substantially as and for the purpose set forth.

No. 50,479. Water Bar and Grate. (*Barreau de grille à eau et gril e.*)



James Reagan, Philadelphia, Pennsylvania. U.S.A., 5th November, 1895; 6 years.

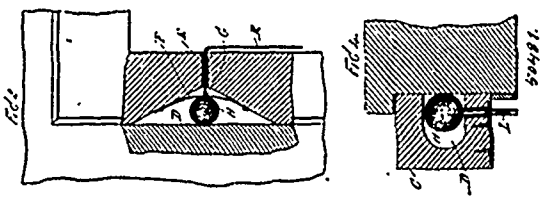
Claim.—1st. A boiler having a longitudinal flue, a self-contained grate structure therein, consisting of front and rear bearing bars suitably connected and supported, water bars connecting the latter, shaking grates intermediate said water bars, connections from said water circulating grate to the upper and lower portions of the boiler, and a feed device whereby an effective circulation is caused in the bottom of the boiler, substantially as described. 2nd. A boiler having separate parallel furnaces of substantially circular form in cross section, a self-contained grate structure in said furnaces comprising front and rear bearing bars suitably connected and supported, water bars therebetween, shaking grate sections and feet or equivalent devices for supporting said grate structure within the boiler, substantially as described. 3rd. A boiler having separate parallel furnaces of circular form in cross-section, and a self-contained water bar and shaking grate having hoop-shaped feet or supports, substantially as described. 4th. A boiler having separate parallel furnaces with laterally corrugated walls, and a grate in said furnaces supported upon semi-circular shaped feet or supports fitting said corrugations, substantially as described. 5th. A boiler having a circular fire box with laterally corrugated walls, a grate in said fire box, and semi-circular feet or supports for said grate, fitting the depressions of said corrugations, substantially as described. 6th. A boiler having parallel separate furnaces, a water grate in said furnaces having its side water bars extending beyond and above the side bars of the grate, and loosely supported plates between said side bars and the wall of the furnaces, said plates being inclined upwardly and outwardly from the grates, substantially as described. 7th. A boiler having parallel separate furnaces of a circular form in cross section, water bar circulating and shaking grates in said furnaces, pipe connection with cut-off valves and check valves between the inlet ends of said grate and the bottom of the boiler and between said pipe connection and the feed devices for the boiler, pipe connection with cut-offs between the outlet end of said grates and the top of the boiler, and branches with cut-offs and checks leading to the atmosphere for said last named pipe connections, substantially as described. 8th. A boiler having separate adjacent furnaces, a grate structure therein comprising front and rear bearing bars, suitably connected and supported, water bars therebetween, shaking grates between, said water bars, connections from the water grate to the top and bottom of the boiler, and a single feed water device for the boiler, substantially as described. 9th. A boiler having adjacent separate furnaces, a grate structure in each, comprising front and rear bearing bars suitably connected and supported, water bars, shakers therebetween, and delivery connections from each water grate into the boiler juxtaposed to each other, and means for supporting the latter within the boiler, substantially as described. 10th. A water bar grate composed of sectional and bearing bars, and side bearing bars located below the water bars of the grate, the above parts being suitably connected and supported, substantially as described. 11th. A water bar grate composed of sectional and bearing bars, side bearing bars located below the water bars, and loosely supported plates *n* for the sides of the grate, substantially as described. 12th. A water bar grate composed of side bearing bars, having at one end integral water bar bearing supports and sectional end bearing bars, substantially as described. 13th. A water bar grate composed of side bearing bars having at one end integral water bar bearing supports, sectional end bearing bars and the outer side bearing bars extending laterally beyond the side bearing bars, substantially as described. 14th. A water bar grate composed of sectional end bearing bars, side bearing bars located below the water bars, and U-shaped feet or supports secured to said side bearing bars, substantially as described. 15th. A water bar grate having side bearing bars intervening between and below the outer water bars and integral supports on one end of said side bearing bars for one end of said water bars, substantially as described. 16th. A water bar grate having side bearing bars with outer corrugated or serrated surfaces and located below the plane of the water bars, substantially as described. 17th. A water bar grate having topmost water bars, suitable connections therefor, shakers or choppers, the upper surface of which are in a plane below that of the top of the water bars, side bearing bars below the bottom of said water bars, in combination with hoop-shaped feet or supports for sustaining said grate in position, substantially as described. 18th. A self contained water bar and shaking grate, the extreme outer sides of which are water bars, shakers or choppers between the latter, actuating mechanism therefor, in combination with hoop-shaped feet or supports adapted to sustain said grate within a furnace, substantially as described. 19th. In a water bar grate having side bearing bars, vertical recesses on the inner sides of said bearing bars, a bridge bar the ends of which fit in said recesses, and a transverse bolt bar securing said bridge bar in position and supporting its under side, substantially as described. 20th A self-contained water bar and shaking grate having outer side water bars, shakers or choppers between the water bars, side bearing bars below said outer water bars, and feet or supports secured to said side bearing bars, substantially as described.

No. 50,480. Process for Graining and Ornamental Painting. (*Procédé pour creneler le bois ou ornamenter les peintures.*)

William Alfred Wiley and David B. Brown, Orangeville, Ontario, Canada, 6th November, 1895; 6 years.

Claim. 1st. The process of graining wood or ornamenting painted surfaces, which consists in washing the surface with a liquid composed of vinegar, turpentine and acetic acid, and rolling or moving upon said surface a roll composed of whiting, oil and varnish, in a soft state, as set forth. 2nd. A graining wash composed of vinegar, turpentine and acetic acid, in about the proportions stated.

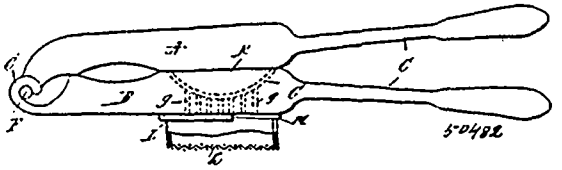
No. 50,481. Sash Lock, etc. (*Arrête-croisée.*)



George Herbert Yost, New York, State of New York, U.S.A., 6th November, 1895; 6 years.

Claim.—1st. The combination with a sash of a window of a support or lock, comprising a chamber which is formed in the outer side of the sash in which is placed a ball as H, the upper and lower walls of said chamber being inclined, so as to form inclined planes over which said ball moves, and by means of which said ball is adapted to secure the sash in position, substantially as shown and described. 2nd. In a window sash support, the combination of a window sash provided with a chamber formed in the outer surface of one of the side frames thereof, the upper and lower walls of said chamber being inclined, a ball placed in said chamber and adapted to operate in connection with the walls thereof, and the frame of a window, and means connected with said ball for preventing the action thereof while the window sash is raised or lowered, substantially as shown and described. 3rd. The combination with the sash of a window, having a chamber formed in one side thereof, the upper and lower walls of which are inclined, a spring located in said chamber, a ball as H, placed between said spring and the frame of the window, and a cord or similar device connected with said ball and extending through the opening in the sash, substantially as shown and described.

No. 50,482. Lemon Squeezer. (*Pressoir à citron.*)

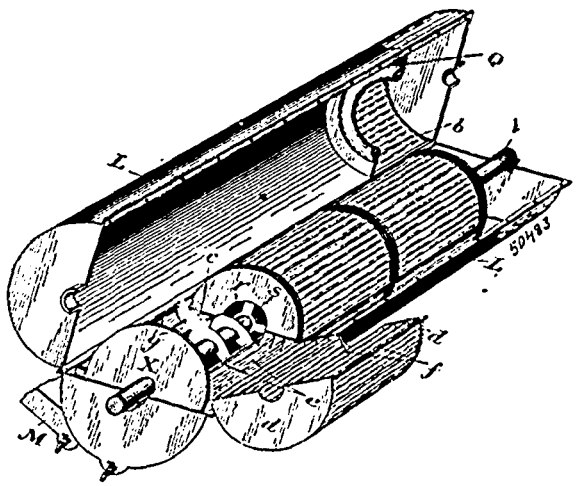


Joseph Edward Cahill, New York, State of New York, U.S.A., 6th November, 1895; 6 years.

Claim.- 1st. A lemon squeezer composed of hinged blocks or heads each of which is provided with a handle, and one of which is provided with a cup-shaped receptacle, and the other with a projection which corresponds in form therewith, said receptacle being provided with ports or passages which extend through the block or head in which it is formed, and said block or head being provided on its under side with a removable receptacle having a screen at the bottom thereof, substantially as shown and described. 2nd. A lemon squeezer comprising two blocks or heads similar in form, which are pivotally connected by means of a separable hinge, each of said blocks or heads being provided with a handle, and one being provided with a cup-shaped receptacle, and the other with a projec-

tion which is similar in form, the receptacle being also provided with ports or openings which extend through the block or head in which it is formed, and a removable receptacle connected with said block or head into said ports or passages open, said receptacle being provided with a screen, substantially as shown and described. 3rd. A lemon squeezer comprising two similar blocks or heads which are pivotally connected to one end by means of a separable hinge, comprising two circular or curved jaws formed on one of said block or heads, and pins or pinions formed on the other, one of said blocks or heads being provided with a cup shaped receptacle and the other with a projection which is similar in form thereto, said receptacle being provided with ports or passages which extend through the block in which it is formed, substantially as shown and described.

No. 50,483. Gold Amalgamating Machine.
(*Machine à amalgamer l'or*)



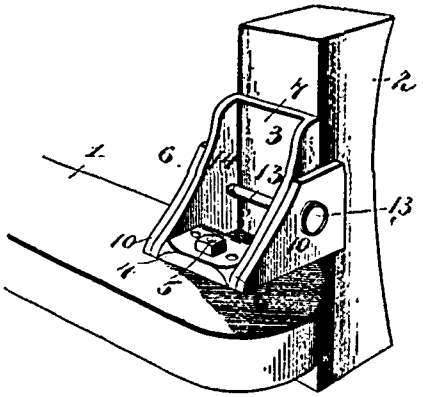
John Reitter Brown, Harrison Hot Springs, and George Alan Kirk, Victoria, both in British Columbia, Canada, 6th November, 1895; 6 years.

Claim.—1st. In a machine of the class specified, a sluice box having a series of bars arranged therein over which the tailings pass and a bottom or trough located below the bars and provided with a discharge over the hopper of an amalgamator, substantially as and for the purpose specified. 2nd. In a machine of the class specified, a sluice box having a series of bars arranged at the bottom and sides thereof to form a screen and a bottom or trough located below the bars and provided with one or more discharge openings over the hopper of an amalgamator, substantially as and for the purpose specified. 3rd. In a machine of the class specified, a sluice box having a series of bars arranged at the bottom and sides thereof to form a screen and a bottom or trough located below the bars and provided with one or more discharge openings over the hopper of an amalgamator, in combination with reducing strips located between the bars and held in position by wings, substantially as and for the purpose specified. 4th. In a machine of the class specified, an amalgamator comprising an outer cylinder with a feed opening therein and an inner cylinder carried by a shaft and comprising a longitudinal spiral coil of metal, the outer coil of which ends close to the inside of the outer cylinder while the inner coil is tapered to discharge the tailings at one end, substantially as and for the purpose specified. 5th. In a machine of the class specified, an amalgamator comprising an outer cylinder with a feed opening therein, in combination with an inner cylinder carried by a shaft comprising a longitudinal spiral of corrugated metal, the outer coil of which ends close to the inside of the outer cylinder while the inner coil is tapered to discharge the tailings at one end, and a series of curved corrugated plates supported in the space between the coils of the spiral, substantially as and for the purpose specified. 6th. In a machine of the class specified, an amalgamator comprising an outer cylinder with a feed opening therein, in combination with an inner cylinder carried by a shaft comprising a longitudinal spiral of corrugated metal, the outer coil of which ends close to the inside of the outer cylinder while the inner coil is tapered to discharge the tailings at one end, and a series of curved corrugated plates supported by coil springs in the space between the coils of the spiral, substantially as and for the purpose specified. 7th. In a machine of the class specified, an amalgamator comprising an outer cylinder with a feed opening therein, in combination with an inner cylinder carried by a shaft and comprising a longitudinal spiral of corrugated metal, the outer coil of which ends close to the inside of the outer cylinder while the inner coil is tapered to discharge the tailings at one end, a cylinder with corrugated sides forming an agitating chamber into which the tailings are discharged from the aforesaid coil, a revolvable beater located in the said chamber, and a discharge spout connected to the chamber at or near its bottom and opening at or above its top, substantially as and for the purpose specified. 8th. In a machine of the class specified, the combination in an amalgamator of an outer cylinder with a feed opening therein, an inner cylinder carried by a shaft and formed of a longitudinal spiral coil of metal, the outer coil of which ends close to the inside of the outer cylinder while the inner coil is tapered to discharge the tailings at one end, and a spiral conveyer fitting the inner coil and revolving therewith, substantially as and for the purpose specified. 9th. In a machine of the class specified, the combination in an inner amalgamating cylinder of a longitudinal spiral coil of metal held between discs carried by a shaft, the coil and discs being formed in two detachable parts and means for connecting the divided parts to form a complete coil, substantially as and for the purpose specified. 10th. In a machine of the class specified, an inner amalgamating cylinder comprising two discs X connected to the shaft V, a series of curved plates *c* connected to the discs X to form one-half of a longitudinal spiral, two semi-circular discs *d* fitting against the inner sides of the upper halves of the discs X, a series of curved plates *f* connected to the semi-circular discs *d* to complete the said spiral coil, and a spiral conveyor within the inner coil of the spiral and revolving therewith to discharge the tailings through an opening formed in one of the discs X, and semi-circular discs *d*, substantially as and for the purpose specified. 11th. In a machine of the class specified, an inner amalgamating cylinder comprising two discs X, connected to the shaft V, a series of curved plates *c* connected to the discs X to form one-half of a longitudinal spiral, two semi-circular discs *d* fitting against the inner sides of the upper halves of the discs X, a series of curved plates connected to the semi-circular discs *d* to complete the said spiral, the inner coil of the spiral being tapered to discharge the tailings through an opening formed in one of the discs X, and semi-circular disc *d*, substantially as and for the purpose specified. 12th. In a machine of the class specified, an inner amalgamating cylinder comprising two discs X connected to the shaft V, a series of curved plates *c* connected to the discs X to form one-half of a longitudinal spiral, two semi-circular discs *d* fitting against the inner sides of the upper halves of the discs X, a series of curved plates connected to the semi-circular discs *d* to complete the said spiral, and a spiral conveyer within the inner coil of the spiral and revolving therewith to discharge the tailings through an opening formed in one of the discs X, and semi-circular disc *d*, the inner coil being tapered to facilitate the discharge, substantially as and for the purpose specified. 13th. In a machine of the class specified, an inner amalgamating cylinder section comprising the discs X, X, the extensions *h*, the curved plates *c*, the plates *g*, the semi-circular discs *d*, and the curved plates *f*, the inner coil of the spiral formed by the plates *c* and *f*, being tapered to discharge the tailings through a central opening in one of the discs X, and semi-circular disc *d*, substantially as and for the purpose specified. 14th. In a machine of the class specified, an inner amalgamating cylinder section comprising the disks X, X, the extensions *h*, the curved plates *c*, the plates *g*, the semi-circular discs *d*, the curved plates *f*, and the spring clips *i*, substantially as and for the purpose specified. 15th. In a machine of the class specified, an inner amalgamating cylinder section comprising the discs X, X, the extensions *h*, the curved plates *c*, the plates *g*, the semi-circular discs *d*, the curved plates *f*, the spring clips *i*, hinge *j*, and flanged connection *k*, substantially as and for the purpose specified. 16th. In a machine of the class specified, an inner amalgamating cylinder section comprising the discs X, X, the extensions *h*, the curved plates *c*, the plates *g*, the semi-circular discs *d*, the curved plates *f*, the spring clips *i*, hinge *j*, flanged connections *k*, corrugated vibrating plates *o*, and springs *p*, substantially as and for the purpose specified. 17th. In a machine of the class specified, an inner amalgamating cylinder section, comprising the discs X, X, the extension *h*, the curved corrugated plates *c*, the plates *g*, the semi-circular discs *d*, the curved corrugated plates *f*, the spring clips *i*, hinge *j*, flanged connection *k*, corrugated vibrating plates *o*, springs *p*, and current diverters *q*, substantially as and for the purpose specified. 18th. In a machine of the class specified, a tailings discharge *u*, connected at or near the bottom of the chamber S, and having its upper part *w*, adjustable so as to discharge the tailings at an higher or lower point, substantially as and for the purpose specified. 19th. In a machine of the class specified, the combination of the outer cylinder L, the partition Q, the agitating chamber S, the inner cylinder *n*, carried by the shaft V, the end disc X, and the spring packing ring *h*, on the partition Q, substantially as and for the purpose specified. 20th. In a machine of the class specified, the combination of the outer cylinder L, the partition Q, the agitating chamber S, the inner cylinder *n*, carried by the shaft V, the end disc X, and the circular flange *a*, extending through an opening in the partition Q, substantially as and for the purpose specified. 21st. In a machine of the class specified, the combination of the outer cylinder L, and the agitating chamber S divided longitudinally, the partition Q, the inner cylinder *n*, the hinge O, and flanges P, substantially as and for the purpose specified. 22nd. In a machine of the class specified, a pair of crushing rollers with intermeshing teeth in combination with a grooved attrition roller and a grooved attrition roller bed, substantially as and for the purpose specified. 23rd. In a machine of the class specified, a pair of crushing rollers with intermeshing teeth in combination with a

spirally grooved attrition roller and a longitudinally grooved attrition roller bed, substantially as and for the purpose specified. 24th. In a machine of the class specified, the combination of a hopper, grinding or crushing mechanism, a cylinder with a mercury pocket therein, and a chute or passage way also provided with a mercury pocket, and conveying the tailings from the grinding mechanism to a feed opening in the said cylinder, substantially as and for the purpose specified. 25th. In a machine of the class described, a lower tailings discharge closed by a gate, in combination with means for normally holding the said gate closed, and means for automatically opening it at pre-determined intervals, substantially as and for the purpose specified. 26th. In a machine of the class described, a lower tailings discharge closed by an outer hinged gate, and an inner gate connected to the said outer gate adapted to close the discharge when the outer gate is open, in combination with means for normally holding the said gate closed, and means for automatically opening it at pre-determined intervals, substantially as and for the purpose specified. 27th. In a machine of the class described, a lower discharge with a curved bottom, in combination with an outer gate closing the said discharge, an inner gate rigidly connected to the outer gate and swinging over the curved bottom which is so shaped that the inner gate closes the discharge when the outer gate is open, a spring adapted to hold the outer gate closed, and means for automatically opening it at pre-determined intervals, substantially as and for the purpose specified. 28th. In a machine of the class described, the combination of the discharge u, discharge gate v, cord a^1, pulley b^1 loose on the shaft V, pinion c^1, and segmental gear d^1 driven by a train of gearing c^1 from the shaft V, substantially as and for the purpose specified. 29th. In a machine of the class described, the combination of the discharge u, discharge gate v, spring f^1, cord a^1, pulley b^1 loose on the shaft V, pinion c^1, and segmental gear d^1 driven by a train of gearing c^1 from the shaft V, substantially as and for the purpose specified. 30th. In a machine of the class described, the combination of the discharge u, the adjustable upper part w, the lower discharge gate v, normally held closed by a spring f^1, substantially as and for the purpose specified. 31st. In a machine of the class described, the combination of the discharge u, the adjustable upper part w, the lower discharge gate v, normally held closed by a spring f^1, inner gate y, and means for automatically opening the outer gate at pre-determined intervals, substantially as and for the purpose specified.

No. 50,484. Brake Shoe Clamp.

(*Machine pour sabots de frein.*)



Edward H. Kinnaman, Benjamin F. Flowers, and Charles E. Kracaw, all of Bellvue, Colorado, U.S.A., 6th November, 1895; 6 years.

Claim.—1st. In a clamp for brake blocks, the combination of a main section adapted to be rigidly secured to the brake beam and having a perpendicular and studded front face against which the brake block is adapted to lie, and two plates provided with inwardly-projecting studs and respectively adapted to lie on each side of the main section, and means for clamping the said plates against the main section, whereby the studs of the former are forced into the brake block, substantially as described. 2nd. In a brake block clamp, the combination of a main section provided with a perpendicular and studded front face and with two rearwardly-extending brackets or projection adapted to respectively lie on the upper and lower sides of the brake beam and to be secured thereto by a bolt passing through one of the brackets, and two plates each provided with inwardly-projecting studs adapted to engage with the brake-block, the said plates being respectively secured to each side of the main section and adjacent to the upper bracket thereof, substantially as described.

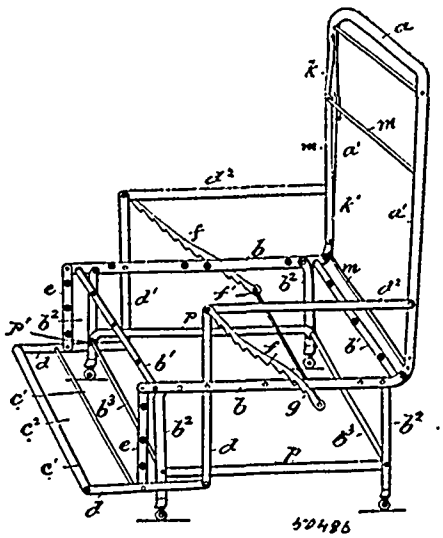
No. 50,485. Manufacture of Rubber and Leather Articles. (*Fabrication d'articles de caoutchouc et de cuir*)

Charles Leander Huggins and Joseph John Westgate, both of Montreal, Quebec, Canada, 6th November, 1895; 6 years.

Claim. 1st. Combination rubber and leather articles having the rubber and leather parts previously united and then the whole subjected to a vulcanizing process, for the purpose set forth. 2nd. In the manufacture of combination rubber and leather articles, removing the oil or grease from the leather, uniting the rubber and leather parts and subjecting the completed article to a vulcanizing process, substantially as and for the purpose set forth. 3rd. In the manufacture of combination rubber and leather articles, removing the oil or grease from the leather by the application of naphtha, uniting the rubber and leather parts and subjecting the completed article to a vulcanizing process, substantially as and for the purpose set forth. 4th. A rubber soled boot or shoe having the rubber sole secured to the leather upper and the completed article subjected to a vulcanizing process, for the purpose set forth.

No. 50,486. Folding Bed and Chair Combined.

(*Lit et fauteuil pliant.*)



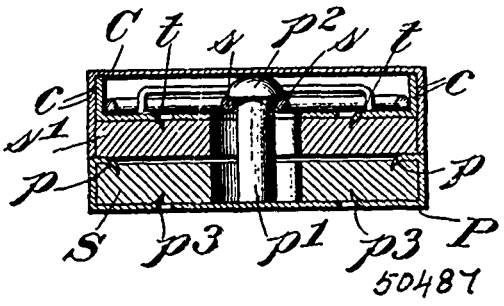
Jacob Samuel Shapira and David Harry Shapira, both of Montreal, Quebec, Canada, 6th November, 1895; 6 years.

Claim.—1st. In a combined folding bed and chair, the combination of a pivoted head, or back section, intermediate section, and pivoted foot section, with a lever and link connection for operating and in part supporting said head and foot sections, and means for retaining the parts in position, for the purpose set forth. 2nd. In a combined folding bed and chair, the combination of a pivoted head or back section, intermediate section, and pivoted foot section, with a lever and link connection for operating and in part supporting said head and foot sections, and a graduated adjustment and retaining device for said lever and link connection, for the purpose set forth. 3rd. In a combined folding bed and chair, the combination of an intermediate section, having suitable supporting legs, a head section pivoted to said intermediate section and provided with a suitable pivoted support, a foot section, a lever and link connection for operating and in part supporting said head and foot sections, and a graduated adjustment and retaining device for said lever and link connection, for the purpose set forth. 4th. In a chair, the combination with the arm frame, of an extensible table or ledge forming section, for the purpose set forth. 5th. In a chair, the combination with the arm frame, of an extensible lazy tong section adapted to form a table or ledge, for the purpose set forth. 6th. In a combined folding bed and chair, the combination with the head or back section thereof, and means for supporting same, of a collapsible frame or guard piece, for the purpose set forth. 7th. In a combined folding bed and chair, the combination with the intermediate section thereof, and the pivoted supporting legs therefor having transverse connecting rods between them of removable stretcher bars extending between such connecting rods and notched to engage same, for the purpose set forth. 8th. In a chair, a movable foot support and means for operating and supporting same, for the purpose set forth. 9th. In a chair, an automatically movable foot support and means for operating and supporting same, for the purpose set forth. 10th. In a combined folding bed and chair, the combination of an intermediate section, head and foot sections

pivoted thereto, a movable foot support, and a lever and link connection for operating and in part supporting said head and foot support, with a graduated adjustment and retaining device for said lever and link connection, for the purpose set forth. 11th. In a combined folding bed and chair, the combination of an intermediate section, having side bars and suitable supporting legs, a head section pivoted to said intermediate section and provided with a suitable pivoted support, a foot section, a lever and link connection pivotally connected with the head section, the intermediate section and the foot section, for operating and in part supporting said head and foot sections, and curved ratchet toothed adjusting bars pivotally connected with said lever and link connection and projections from the side bars of the intermediate section with which the teeth of such adjusting bars engage, for the purpose set forth.

No. 50,487. Key-operated Strap Lock.

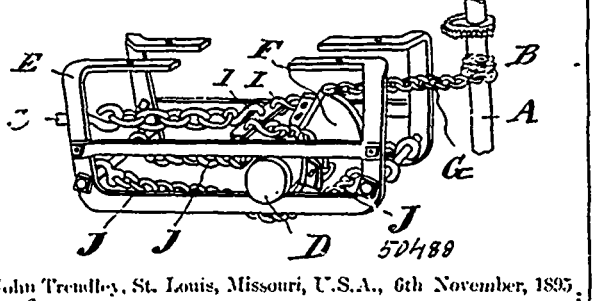
(*Serrure pour courroies de coffre.*)



Hardin Beverly Littlepage and Leonidas William Grant, both of Washington, Columbia, U.S.A., 6th November, 1895; 6 years.

Claim.—1st. The combination, with a strap, of a key-operated lock composed of two parts, each provided with a lock element, one or both parts adapted to be shifted along the strap, for the purposes set forth. 2nd. The combination, with a strap provided with the usual retaining and adjusting buckle, of a key-operated lock composed of two parts, each provided with a lock element, one or both of said parts adapted to be shifted along the strap, for the purpose set forth. 3rd. The combination, with a strap, of a lock composed of two parts provided with a lock element, said elements adapted to interlock, both said parts adapted to be shifted along the strap, for the purpose set forth. 4th. The combination, with a strap, of a two-part lock, each part provided with a lock element, one or both said parts adapted to be shifted along said strap, the faces of the two parts of the lock in contact with the strap provided with projections or teeth, for the purpose set forth.

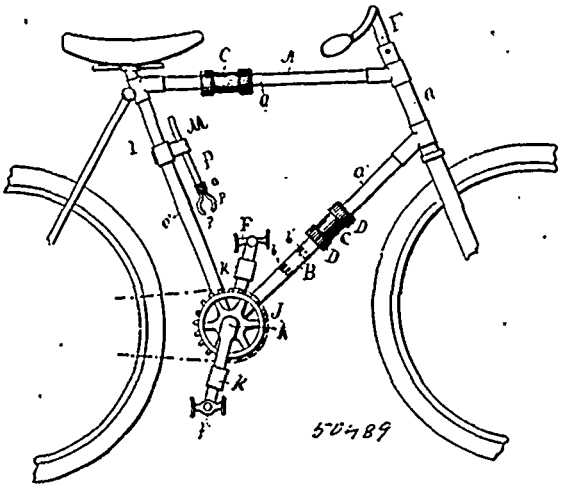
No. 50,488. Brake. (*Frein.*)



John Trendley, St. Louis, Missouri, U.S.A., 6th November, 1895; 6 years.

Claim.—1st. The combination, with a brake staff and a brake rod, of a rotatable piece having gudgeons, and eccentric wheel segments oppositely disposed, guiding supports for said gudgeons, and chain connections to said brake staff and brake rod respectively, and oppositely wound upon said wheel segments, substantially as described. 2nd. The combination, with a brake staff and brake rod, of a rotatable piece having side gudgeons, and oppositely disposed eccentric wheel segments, a set of chains oppositely wound on said gudgeons and winding on and off therefrom as the piece is rotated, and chain connections to said piece from the brake staff and from the brake rod and oppositely wound on the eccentrics thereon, substantially as described. 3rd. A compound brake comprising a rotatable piece having eccentric wheel segments oppositely disposed about a central axis, one of said segments being opposite to and midway between two (2) other segments, and operative connections adapted to be wound on and off said segments, substantially as described. 4th. A compound brake comprising a wheel segment F, located opposite the wheel segments H, H, and provided with gudgeons D, D, and chain connections to said segments in opposite directions to wind off of one segment while winding on to another, and a set of gudgeon chains oppositely wound on the gudgeons to guide the travel of the rotatable piece, substantially as described. 5th. A brake mechanism comprising a plurality of rotatable blocks, each block reversed with respect to the preceding, and consisting of eccentric wheel segments oppositely located with regard to the axis of rotation, and flexible connections to dissimilar portions of the wheel segments, substantially as shown and described. 6th. A brake mechanism, comprising a rotatable block having gudgeons, and a set of chains adapted to be wound on and off said gudgeons as the block rotates in either direction, and a guiding frame to support said gudgeons in their travel forward and back.

No. 50,489. Folding Bicycle. (*Bicycle pliant.*)



George Gordon Prentice, New York, State of New York, U.S.A., 6th November, 1895; 6 years.

Claim.—1st. In a bicycle, the combination with the fore and rear wheels, of a frame uniting said wheels, hinged joints in said frame, sleeves loosely mounted on said frame to fit over said joints to hold said frame rigid, said sleeves being slit at the ends, and nuts contracting the ends of said sleeves to engage with said frame, substantially as described. 2nd. In a bicycle, the combination with the sleeve of the front fork thereof, of a handle bar, an upright connected to said bar keyed in said sleeve, and a groove in said upright for said key, allowing said upright a vertical and a limited rotary movement in said sleeve, substantially as described. 3rd. The combination in a bicycle with a pedal, of a pedal bar formed of two parts, one of which is connected with the pedal and capable of a circular movement in a plane at right angles to the line of said bar, and a sleeve loosely mounted on said bar to hold said bar rigid, substantially as described. 4th. The combination in a bicycle with a pedal, of a pedal bar formed of two parts, one of which is connected with the pedal and capable of a circular movement in a plane at right angles to the line of said bar, of a sleeve loosely mounted on said bar, and a pin adapted to pass through said sleeve and lower part of said pedal bar, to hold said bar rigid, substantially as described. 5th. A folding bicycle clamp, consisting of a bar having a clamp at one end, a hinge adapted to be attached to the frame of a bicycle, and a collar surrounding said bar and connecting it with said hinge, substantially as described. 6th. The combination in a folding bicycle, with the fore and rear wheels thereof, of a frame formed of two parts, hinged together, said parts being connected with said fore and rear wheels respectively, a hinge on the part of said frame connected with the rear wheel, and a bar secured to said hinge having a clamp adapted to engage with the part of said frame connected with the fore wheel, substantially as described. 7th. The combination in a folding bicycle, with the fore and rear wheels thereof, of a frame formed of two parts, hinged together, said parts being connected with said fore and rear wheels respectively, a hinge on the part of said frame connected with the rear wheel, of a split collar connected to said hinge, and a bar adjustably secured to said collar having a clamp adapted to engage with the part of said frame connected with the fore wheel, substantially as described.

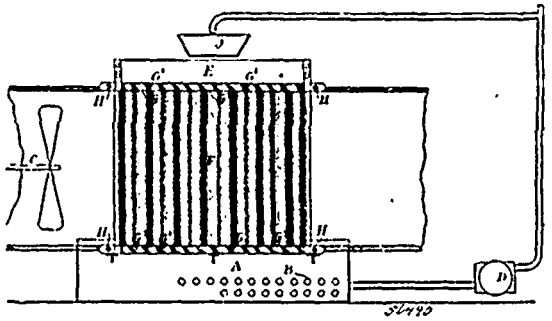
No. 50,490. Apparatus for Cooling Air.

(*Appareil rafraîchissoir pour l'air.*)

Alfred Seale Haslam, Derby, England, 6th November, 1895; 6 years.

Claim.—1st. The combination of a number of fixed vertical plates, means for carrying the air or gas between the plates, and means for supplying cold brine or other uncongealable liquid to the top of the plates, and causing it to constantly flow down them. 2nd. The combination of a number of fixed vertically corrugated plates, means for carrying the air or gas between the plates, and means for supplying cold brine or other uncongealable liquid to the top of the

plates, and causing it to constantly flow down them. 3rd. The combination of a number of fixed vertical plates, means for carry-



ing the air or gas between the plates, means for supplying cold brine or other uncongealable liquid to the top of the plates and causing it to constantly flow down them, and a receiver for the cold liquid into which the bottoms of the plates dip. 4th. The combination of a number of fixed vertically corrugated plates, means for carrying the air or gas between the plates, means for supplying cold brine or other uncongealable liquid to the top of the plates and causing it to constantly flow down them, and a receiver for the cold liquid into which the bottoms of the plates dip. 5th. The combination of a number of fixed vertical plates, distance pieces between the tops of the plates forming the perforated bottom of a trough, means for supplying cold brine or other uncongealable liquid to the trough, and means for carrying the air or gas between the plates. 6th. The combination of a number of fixed vertically corrugated plates, distance pieces between the tops of the plates forming the perforated bottom of a trough, means for supplying cold brine or other uncongealable liquid to the trough, and means for carrying the air or gas between the plates. 7th. The combination of a number of fixed vertical plates, distance pieces between the tops of the plates forming the perforated bottom of a trough, means for supplying cold brine or other uncongealable liquid to the trough, means for carrying the air or gas between the plates, and a receiver for the cold liquid into which the bottoms of the plates dip. 8th. The combination of a number of fixed vertically corrugated plates, distance piece between the tops of the plates forming the perforated bottom of a trough, means for supplying cold brine or other uncongealable liquid to the trough, means for carrying the air or gas between the plates, and a receiver for the cold liquid into which the bottoms of the plates dip.

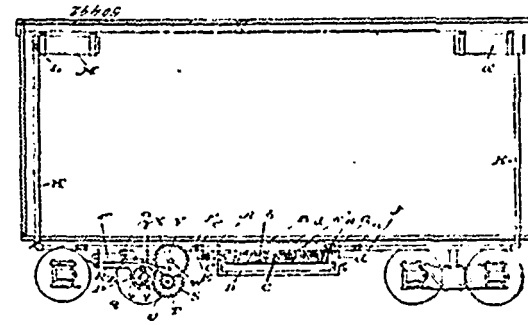
No. 50,491. Derailing Switch and Safety Frog.

(*Aiguille et rail de surêté pour remettre les chars sur la voie.*)

Christian W. Rahlar, Eveleth, Minnesota, U.S.A., 6th November, 1895; 6 years.

Claim.—1st. The combination with switch-operating mechanism having an operating rod, of a movable rail, a yielding spring-metal bell-crank lever provided at its centre with a spring coil of which the arms are extensions, one of such arms being connected to the operating rod, and connections between the other arm and the free end of said switch-rail, substantially as specified. 2nd. The combination with the inner and outer main and siding track-rails, switch-rails and operating mechanism for the switch rails, of a fixed frog point, a fixed frog-rail arranged in alignment with the inner siding track-rail and having a deflected arm arranged parallel with the inner main track rail, a pivotal frog rail adapted to have its main portion aligned with the inner main track rail and having a deflected arm to lie parallel with the inner siding track rail and terminating in an angularly disposed guide, for engagement by the flanges of the wheel a yielding spring metal bell crank lever having one arm connected with the movable frog rail, and connections between said bell-crank lever and the switch operating mechanism, substantially as specified. 3rd. The combination with inner and outer main and siding track-rails, switch rails, a switch bar connecting said switch-rail-operating mechanism for the switch-bar, a bell-crank lever, and a link connecting one arm of the bell-crank lever to said switch-bar, of a fixed frog-point, a fixed frog-rail having its body portion in alignment with the inner siding track rail, a movable frog rail having its body portion arranged in alignment with the inner main track-rail, a yielding spring metal bell-crank lever having one arm connected by interposed means with the free end of the movable frog-rail, a derailing or cut-out switch-point adapted to be aligned with a siding track-rail, stops to limit the deflection of said derailing switch-point, a bell-crank lever having one arm connected by interposed means with said switch-point, and operating rods between the bell-crank lever which is connected to the switch-bar and the bell-crank lever which is connected to the movable frog-rail, and between the latter and the bell-crank lever which is connected to the switch-point, said operating rods comprising relatively adjustable sections to adapt the rods for longitudinal extension and contraction, substantially as specified.

No. 50,492. Apparatus for Ventilating and Cooling Cars. (*Appareil pour ventiler et rafraîchir les chars.*)



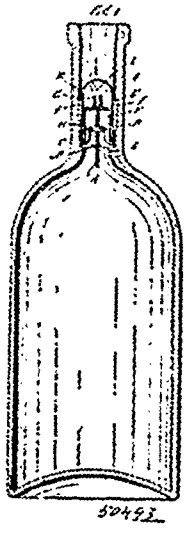
Sam Hughes, Lindsay, Ontario, Canada, 6th November, 1895; 6 years.

Claim.—1st. A car cooling and ventilating apparatus consisting of a cooling chamber, an air pump, a connection between the cooling chamber and the air pump, an air reservoir within the cooling chamber, a connection between the air pump and the air reservoir, and an outlet from the air reservoir into the car, substantially as specified. 2nd. A car cooling and ventilating apparatus, consisting of a cooling chamber, an air pump, a connection between the cooling chamber and the air pump, an air reservoir within the cooling chamber, a connection between the air pump and the air reservoir, an outlet from the air reservoir into the car, a pinion mounted on the car axle, a gear wheel meshing with the pinion, a pinion rigidly secured to the side face of the gear wheel, a gear wheel meshing with the said pinion, having a crank connected to its side face, and a pitman connected to the crank and to the piston of the air pump, whereby the air pump is operated during the travel of the car, substantially as specified. 3rd. A car cooling and ventilating apparatus consisting of a cooling chamber, an air pump, a connection between the cooling chamber and the air pump, an air reservoir within the cooling chamber, a connection between the air pump and the air reservoir, an outlet from the air reservoir into the car, and a means for regulating the discharge from the outlets into the car, substantially as specified. 4th. A car cooling and ventilating apparatus, consisting of a cooling chamber, an air pump, a connection between the cooling chamber and the air pump, an air reservoir within the cooling chamber, a connection between the air pump and the air reservoir, an outlet from the air reservoir into the car, an adjustable valve for the outlet to regulate the discharge of air, and a tank containing liquid into which the outlet from the valve discharges, substantially as specified. 5th. A car cooling and ventilating apparatus, consisting of a box-shaped receptacle divided into two chambers, an air reservoir within the lower chamber, a perforated upper chamber to receive the cooling material, protected by gauze screens, an air pump, a connection between the air pump and the upper chamber, and a connection between the air pump and the air reservoir, the air adapted to be drawn through the perforations into the upper chamber to the air pump, and then forced into the air reservoir, an outlet from the air reservoir into the car, a valve fitted on the discharge end of the outlet, a tank containing fluid contiguous to the discharge end of the valve, the air from the reservoir adapted to be discharged into the tank and then distributed into the car, substantially as specified. 6th. A car cooling and ventilating apparatus, consisting of a box-shaped receptacle divided into two chambers, an air reservoir within the lower chamber, an upper chamber having perforations and adapted to receive the cooling material, the perforations protected by gauze screens, an air pump, a connection between the air pump and the upper chamber, the air adapted to be drawn through the upper chamber to the air pump, and then forced into the air reservoir, an outlet from the air reservoir into the car, a valve fitted on the discharge end of the outlet, a tank containing fluid contiguous to the discharge end of the valve, the air from the reservoir adapted to be discharged into the tank and then distributed into the car, and mechanism for operating the air pump, substantially as specified. 7th. A car cooling and ventilating apparatus, consisting of a box-shaped receptacle, a screen dividing the box-shaped receptacle into two chambers, an air reservoir within the lower chamber, an upper chamber having perforations, and adapted to receive the cooling material, the perforations protected by gauze screens, an air pump,

a connection between the air pump and the upper chamber, and a connection between the air pump and the air reservoir, the air adapted to be drawn through the upper chamber to the air pump, and then forced into the air reservoir, an outlet from the air reservoir into the car, a valve fitted on the discharge end of the outlet, a tank containing fluid contiguous to the discharge end of the valve, the air from the reservoir adapted to be discharged into the tank and then distributed into the car, mechanism for operating the air pump, consisting of a pinion mounted on the car axle adjacent to the air pump, a framework supporting a train of gear wheels meshing with the pinion on the car axle, a crank on the slowest revolving gear wheel, a pitman connected to the crank and to the piston of the air pump, substantially as specified.

No. 50,493. Non-Fillable Bottle.

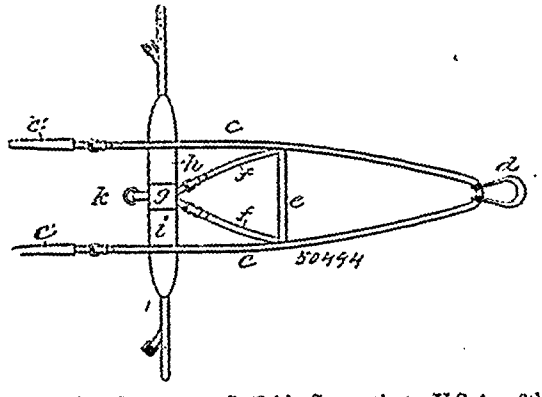
(*Appareil pour empêcher le remplissage des bouteilles.*)



Herman Martin Wendt, Hoboken, New Jersey, U.S.A., 6th November, 1895; years.

Claim.—1st. The combination with the neck of the bottle, or an attachment provided with a tubular plug, a valve adapted to be seated on the upper end of said plug, and to close the opening therethrough, and a tube enclosing said plug, the lower end of which is open and the upper end of which is closed, and provided with side ports or openings, and a cap enclosing said tube, the upper end of which is closed and perforated, substantially as shown and described. 2nd. The combination with the neck of a bottle, of an attachment provided with a tubular plug, a valve adapted to be seated on the upper end of said plug, and to close the opening therethrough, and a tube enclosing said plug the lower end of which is open, and the upper end of which is closed, and provided with side ports or openings, and a cap enclosing said tube, the upper end of which is closed and perforated, said valve being provided with a rod which passes vertically therethrough, and through guides or supports, connected with the attachment, substantially as shown and described. 3rd. The combination with the neck of a bottle, of a tubular plug secured therein, a valve adapted to be seated on said plug, and to close the port or opening therethrough, a tube, the lower end of which is open, and secured to said tubular plug, and the upper end of which is closed, and provided with ports or openings, said tube being also provided with a central opening in the top thereof, and a rod passing vertically through said valve, and through said central opening in the top of said tube and through a guide on the tubular plug, substantially as shown and described. 4th. The combination with the neck of a bottle, of a tubular plug, secured therein, a valve adapted to be seated on said plug, and to close the port or opening therethrough, a tube, the lower end of which is open, and secured to said tubular plug, and the upper end of which is closed, and provided with ports or openings, said tube being also provided with a central opening in the top thereof, and a rod passing vertically through said valve, and through said central opening in the top of said tube, and through a guide below the tubular plug, and a cap the upper end of which is closed and perforated and the lower end of which is connected with the tube which encloses the tubular plug, substantially as shown and described. 5th. The combination with the neck of a bottle, the inner walls of which are provided with an annular chamber at the upper and lower ends of which are formed inwardly directed shoulders, of an attachment comprising a tubular casing C, the upper end of which is open, and the side walls divided or slotted, so as to form spring tongues and the lower end of which is closed, and provided with side ports or openings, and a central perforation, a tubular plug located in the bottom of said casing, a valve adapted to be seated upon said tubular plug, and to close the port or opening therethrough, a tube connected with said tubular plug, the upper end of which is closed and provided with side ports or openings, and a central tubular extension, a cap which encloses said tube, and the upper end of which is perforated, and a rod which passes centrally through the valve and through the tubular extension at the upper end of the tube which encloses the tubular plug, and through the central perforation or opening in the bottom of the outer tubular casing, substantially as shown and described.

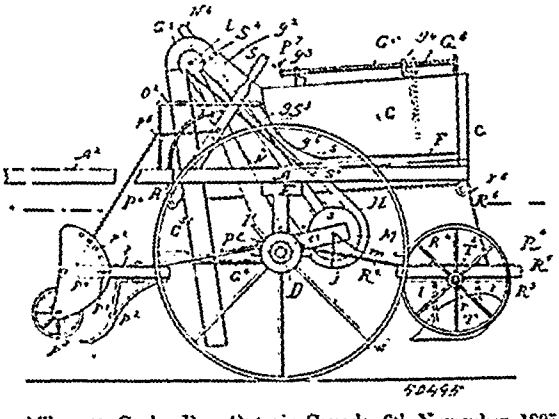
No. 50,494. Harness. (*Harnais.*)



Jonas Archelau Thompson, Suffield, Connecticut, U.S.A., 6th November, 1895; 6 years.

Claim.—1st. In a harness, a saddle or girth in combination with a main strap provided at the front ends with means for attachment to the front ends of the shaft, a cropper attached to the rear portion of the main strap, the said main strap connected to the girth and being adapted to extend from the cropper downwardly to the girth and then upwardly to the shaft, all substantially as described. 2nd. In combination, the vehicle shafts *b*, a saddle *a*, a girth *h*, a main strap *c*, a cropper *d* attached to the main strap, girth straps *e* connecting the main strap to the girth, the said main strap adapted to extend from the cropper downwardly to the point of attachment to the girth, and upwardly to the shafts, and means for attaching the shafts to the girth and to the main strap, all substantially as described. 3rd. In a harness, in combination, a saddle, a girth strap for attaching the shafts of a vehicle to the girth, a main strap, a stay connecting the side parts of the main strap, a cropper attached to the upper and rear portion of the strap, girth straps adjustably connecting the main strap and the girth socket, the girth socket, and the shaft sockets adjustably secured to each front end of the main strap, said main strap adapted to extend from the cropper downwardly to the point of attachment to the girth and then upwardly to the shaft, all substantially as described.

No. 50,495. Planter for Seeds. (*Semoir.*)

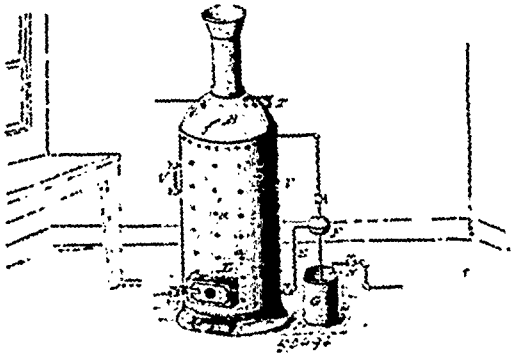


David Turcott, Cache Bay, Ontario, Canada, 6th November, 1895; 6 years.

Claim.—1st. In a planter, the combination with a trough, a seed receptacle lower at the front than the rear, and carried on a suitable frame, of an axle journalled in suitable bearings depending from the said frame, the wheels W journalled on the said axle and giving motion thereto by a pawl and ratchet wheel, an internally geared wheel secured on said axle, a pinion gearing into the said integrally geared wheel, a chain pulley secured on the axle of the said pinion, the said axle being journalled in a fixed bearing on one side of the

said pulley, and a sliding bearing on the other side, a lever and link moving the said pinion either into or out of gear with the said internally geared wheel, a chain pulley journalled above the top of the front end of the said trough or seed receptacle, an endless chain provided with cups or carriers passing over the said chain pulleys, a channel formed in the front of the said trough for the passage of the said endless chain, and a chute to carry the seed to the ground, substantially as set forth. 2nd. In a planter, the combination with a seed receptacle having an endless chain carrier adapted to take the seed out of the said receptacle and place it in the ground, of a drill or tooth pivoted to the frame of the said receptacle and travel in front of the discharged seed or sets, and a hiller consisting of two mould-boards throwing the earth up towards each other and carried by a tongue pivoted to the said frame, and levers and chains for raising both the driller and hiller when not in use. 3rd. In a driller for a planter, the combination with the tongue *p*, pivoted to the main frame of a planter by the arms P, of the tooth P^2 secured to the said tongue, the wheels, roller P^3, plates P^4 in which the said roller is journalled, the said plates being pivoted to the tongue at its front end and having a segmental row of perforations at their rear upper portion, a pin P^5 adapted to hold the plates by passing through any of the said perforations, and an perforating in the tongue, means for raising the said tongue when not in use, substantially as set forth. 4th. In a hiller for a planter, the combination with the tongue R, pivoted to the main frame of the planter by the curved arms R^2, of the slotted plates R^1 secured to the said tongue, the beams R^3 carried adjustably by the said slotted plates, the mould-board T, threaded shanks *t* secured to the said mould-boards, and passing through perforations in the said beams, nuts T^3 having the lower portions made conically adapted to be screwed on said shanks, plates T secured on the said beams and having conical apertures adapted to fit the conical portions of the said nuts, an axle secured in the said tongue at a right angle thereto, and wheels journalled on the said axle, substantially as set forth. 5th. In a planter, the combination with the trough G, of the plates G^4 adapted to travel in said trough, a threaded shaft G^5 journalled above the said trough, and provided with a handle g^3 at its front end, and a threaded bearing g^4 through which the said shaft passes, substantially as set forth. 6th. In a planter, the combination with the trough G, of a shaking device consisting of a lever S^2 pivoted under the said trough, a finger at the upper end of the said lever, engaging a slot formed on the under side of the said trough, a rod S^5 connecting the said lever with the shaker wheel S^1, and the wheel S^4, substantially as set forth.

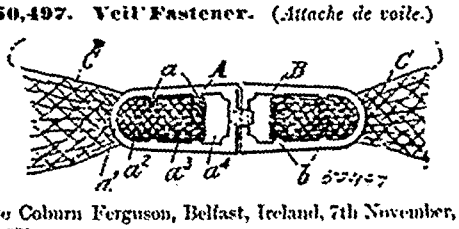
No. 50,496. Boiler. (*Chaudière.*)



George A. Albright and Robert Lacy Holt, both of Burlington, North Carolina, U.S.A., 7th November, 1895; 6 years.

Claim.—The hereinbefore described boiler comprising an outer casing having an annular water jacket on its internal face, a dome member extended over the water jacket, a grate disposed over the lower end of the internal space formed by the annular water jacket, an internal cylinder N having the lower end held in the fire pot, and its upper end extended above the tubular braces Q, connecting the outer water space and cylinder N, the braces P, the steam pipe S, and the feed devices, all arranged substantially as shown and for the purposes described.

No. 50,497. Veil Fastener. (*Attache de voile.*)

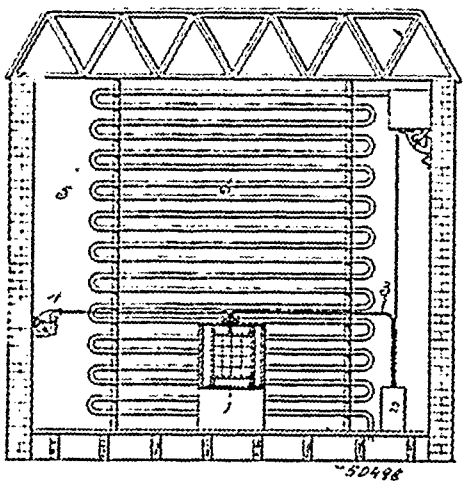


George Coburn Ferguson, Belfast, Ireland, 7th November, 1895; 6 years.

Claim.—A veil fastener made of two coupling parts or members, comprising each a frame with two or more transverse bars or bridge pieces so arranged that the ends of the veil interwoven with said bars or bridge pieces will be firmly held by friction with the latter and with the veil, substantially as described, and with reference to the accompanying drawing.

No. 50,498. Process of Preserving Food by Cold.

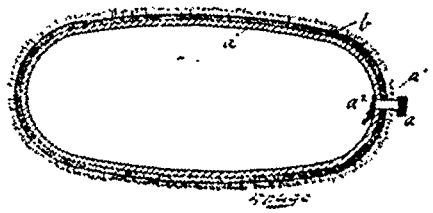
(*Appareil pour préserver les aliments par le froid.*)



Frederic Merwin Peck, Hartford, Connecticut, U.S.A., 7th November, 1895; 6 years.

Claim.—The art of keeping uncooked perishable food products in their natural condition, which consists in placing the products in a receptacle, making the receptacle permanently air-tight, placing this tight receptacle in a chamber provided with means for reducing its temperature, chilling the chamber with the inclosed tight receptacle, withdrawing the deleterious fluids from the chilled receptacle, and then maintaining the temperature of the chamber with the goods in the air-tight receptacle just a few degrees above the congealing point of the fluids in the products to be kept, substantially as described and for the purpose specified.

No. 50,499. Hat Brush. (*Brosse à chapeau.*)



James Johnstone Cowper, Brixton, London, England, 7th November, 1895; 6 years.

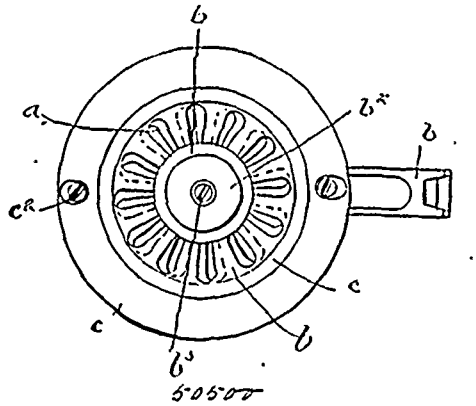
Claim.—1st. A hat brush or polisher, comprising an air chamber suitably covered and having an air-inlet provided with a valve and cap for inflating and disinflating at will, substantially as and for the purpose described. 2nd. A hat brush or polisher, consisting of an air chamber having an air-inlet and valve to permit of its inflation, a fabric covering for the air chamber having a polishing surface, substantially as specified.

No. 50,500. Grate. (*Grille.*)

Charles Jacob Bownet, Quincy, Illinois, U.S.A., 7th November, 1895; 6 years.

Claim.—1st. A grate having one or more inlets for pure air at points intermediate of the bottom and upper surface of the fuel supported by such grate. 2nd. A combined grate and fire pot having inlets for pure air at the bottom of the fuel supported by such grate and fire pot, and at points intermediate of the bottom and upper surface of such fuel, for the purpose set forth. 3rd. A grate having one or more perforated hollow standards thereon, for the purpose set forth. 4th. A combined grate and fire pot, the body portion of the latter being perforated, for the purpose set forth. 5th. A combined grate and fire pot, the former having one or more perforated hollow standards thereon and the body portion of the latter being perforated, for the purpose set forth. 6th. In a heating apparatus, a grate section, an agitator section having one or more perforated hollow standards, and pure air inlets at the bottom and laterally of the fuel supported by such grate section, for the purpose set forth. 7th. In a heating apparatus, a stationary grate section, and an agitator having one or more perforated hollow standards thereon

formed by deflecting inverted conical sections with air spaces between, for the purpose set forth. 8th. In a heating apparatus, a



fire pot having its body portion perforated, a grate section and an agitator section having one or more perforated hollow standards thereon, for the purpose set forth. 9th. In a heating apparatus, a suitably supported grate section and a fire pot section formed of a series of rings set one above the other suitably joined together and supported with spaces between them, for the purpose set forth. 10th. In a heating apparatus, a suitably supported grate section and a fire pot section formed of a series of deflecting rings set one above the other suitably joined together and supported with spaces between them, for the purpose set forth. 11th. In a heating apparatus, a suitably supported grate section, an agitator section and a fire pot section formed of a series of rings set one above the other suitably joined together and supported with spaces between them, for the purpose set forth. 12th. In a heating apparatus, a suitably supported grate section, an agitator section having hollow standards mounted thereon formed of a series of one or more rings and a cone mounted one upon the other with the cone uppermost, suitably connected together with spaces between them, and a fire pot section formed of a series of deflecting rings set one above the other suitably joined together and supported with spaces between them, for the purpose set forth. 13th. In a heating apparatus, a suitably supported grate section, an agitator section having hollow standards mounted thereon formed of a series of one or more deflecting rings and a cone mounted one upon the other with the cone uppermost, suitably connected together with spaces between them and a fire pot section formed of a series of inverted conical sections or deflecting rings set one above the other suitably joined together and supported with spaces between them, for the purpose set forth.

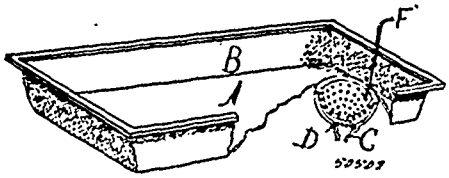
No. 50,501. Elastic Bed Plate.

(*Plaque de fondation élastique.*)

Paul Knoch, Adlerskof, Prussia and Germany, 7th November, 1895; 6 years.

Claim.—1st. The method of preparing elastic supporting plates for railway rails, which consists in superficially impregnating said plates with a hardening substance, constructed and arranged substantially as hereinfefore described. 2nd. An elastic supporting plate for railway rails, consisting of a yielding material having a hardened surface, constructed and arranged substantially as hereinbefore described. 3rd. An elastic supporting plate for railway rails, consisting of a yielding material, impregnated superficially with a hardening substance, constructed and arranged substantially as hereinbefore described. 4th. An elastic supporting plate for railway rails, consisting of a yielding material impregnated superficially on its upper and lower sides with a hardening substance, so as to leave a soft, non-impregnated central layer between the two hardened portions, constructed and arranged substantially as hereinbefore described.

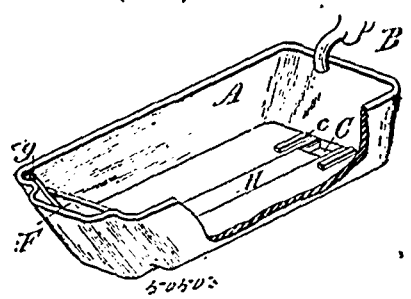
No. 50,502. Sink. (*Evier.*)



William Baxter Malcolm, Toronto, Ontario, Canada, 7th November, 1895; 6 years.

Claim.—A new and useful improvement in sinks made of any kind of material, namely, a concave receiver, and grating at the bottom of the receiver, and a concave strainer with a handle for lifting in and out, made to fit into the receiver, to receive the refuse of the water, substantially as and for the purpose specified.

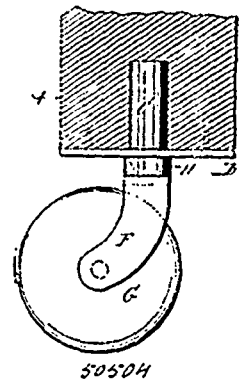
No. 50,503. Sink. (*Evier.*)



Benjamin Franklin Ford, New Castle, Maine, U.S.A., 7th November, 1895; 6 years.

Claim.—1st. In combination with the sink having in its bottom a longitudinal channel, the open top and bottom receptacle adapted to be placed and held at the pump end of the sink and over the said channel, substantially as described. 2nd. The sink having a channel or water passage in its bottom and strips or cleats by its side at the pump end of the sink, combined with the open top and bottom water receptacle. 3rd. In a sink, as described, having a longitudinal channel opening at its end into a vertical outlet or escape passage external to the main body of the sink and in combination with said channel and outlet or escape passage, the vertically sliding, handled gate at the end of said channel and between it and the said outlet or escape passage, substantially as set forth.

No. 50,504. Castor. (*Roulette de meuble.*)



Angelica Hofheimer and Laura Hofheimer, both of Brooklyn New York, U.S.A., 7th November, 1895; 6 years.

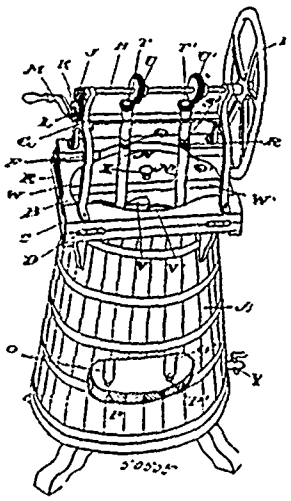
Claim.—1st. The combination with a leg of an article of furniture, of a plate secured to the bottom thereof, and provided with an upwardly directed tubular extension, which is screw-threaded on its inner surface, and adapted to fit within a bore formed in the leg, and to receive the shaft of the cast on which is screw-threaded and adapted to enter said tubular extension, substantially as shown and described. 2nd. The combination with a leg, of an article of furniture, of a plate secured to the bottom thereof, and provided with an upwardly directed tubular extension, which is screw-threaded on its inner surface, and adapted to fit within a bore formed in the leg and to receive the shaft of the castor which is screw-threaded and adapted to enter said tubular extension, said shaft being provided with a shoulder or washer between the bottom of the leg and the head of the jaws between which the roller is mounted, substantially as shown and described. 3rd. In a castor, the combination of the jaws between which the roller is mounted, a screw-threaded shaft connected with the head, by which the jaws are united, and a shoulder or washer thereon, said screw-threaded shaft being adapted to enter a screw-threaded tubular extension formed on a plate which is adapted to be secured to the bottom of the leg, as an article of furniture, substantially as shown and described.

No. 50,505. Churn. (*Baratte.*)

William Deacon, Marmora, Ontario, Canada, 7th November, 1895; 6 years.

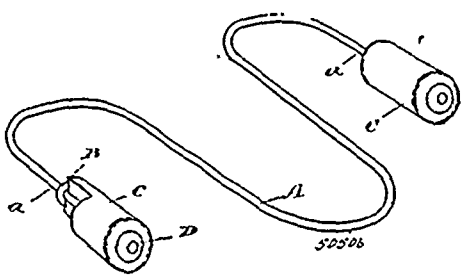
Claim.—1st. A churn consisting of a skeleton frame for the top of the tub, a skeleton top hinged to the skeleton frame, a hinged stay connected to the skeleton frame and top to limit the opening of and support the top in its open position, standards mounted on the skeleton top, a horizontal shaft journalled in the standards, a fly-wheel mounted on one end of the shaft, and a pinion on the other end, a gear wheel mounted on a spindle, journalled in the adjacent standard, meshing with the pinion on the shaft, means for

imparting motion to the spindle, two bevel pinions mounted on the shaft intermediate the pinion and fly-wheel, a stay connecting the



standards below the horizontal shaft, two vertical spindles journalled in the s... a bevel pinion mounted on the top of each of the spindles meshing with the bevel pinions on the shaft, two dashers each consisting of a revolvable standard, and a series of beaters connected to the standard, and a separable connection between each of the spindles and its respective dasher standard, substantially as specified. 2nd. A churn consisting of a skeleton frame for the top of the tub, a skeleton top hinged to the skeleton frame, a hinged stay connected to the skeleton frame and top to limit the opening of and support the top in its open position, standards mounted on the skeleton top, a horizontal shaft journalled in the standards, a fly-wheel mounted on one end of the shaft, and a pinion on the other end, a gear wheel mounted on a spindle, journalled in the adjacent standard, meshing with the pinion on the shaft, means for imparting motion to the spindle, two bevel pinions mounted on the shaft intermediate the pinion and fly-wheel, a stay connecting the standards below the horizontal shaft, two vertical spindles journalled in the stay, a bevel pinion mounted on the top of each of the spindles meshing with the bevel pinions on the shaft, two dashers each consisting of a revolvable standard, and a series of beaters connected to the standard, a separable connection between each of the spindles and its respective dasher standard, a rounded bearing for the lower end of each of the standards, a removable sectional lid to close the top of the tub, and a faucet at the bottom of the tub, substantially as specified.

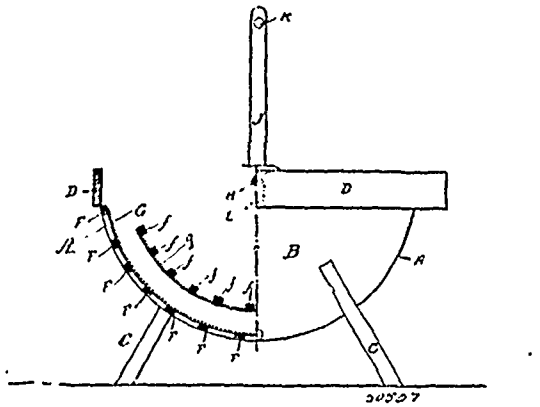
No. 50,506. Garment Holder. (*Porte-vêtement.*)



William Nolan, Toronto, Ontario, Canada, 7th November, 1895; 6 years.

Claim.—1st. A garment holder consisting of a body, an arm at each end of the body, and a head for each of the arms, substantially as specified. 2nd. A garment holder consisting of a substantially U-shaped spring metal wire, an enlarged head fitted on each of the arms of the wire, and a serrated surface for each of the heads, substantially as specified. 3rd. A garment holder consisting of a substantially U-shaped spring metal wire, an enlarged head fitted on each of the arms of the wire, a serrated surface for each of the heads, and washers retaining the heads in position, and allowing of their free revolution, substantially as specified. 4th. A garment holder consisting of a substantially U-shaped spring metal wire, an enlarged head fitted to each of the outer arms of the body of the holder, washers to retain the heads in position, to allow of their free revolution when adjusting the position of the garment on the holder, and a serrated surface for each of the heads, substantially as specified.

No. 50,507. Washing Machine. (*Machine à laver.*)

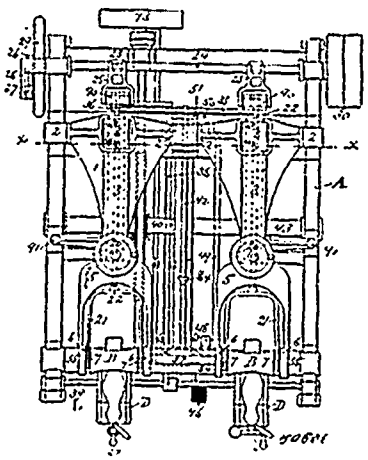


John Terreault, Saint Henri, Québec, Canada, 7th November, 1895; 6 ans.

Résumé.—1er. Dans une machine à laver, la combinaison de la charpente ci-dessus décrite, munie des mortaises I_1, avec les planches E, les barres transversales F, et le tissu metallique G. 2nd. Dans une machine à laver, la combinaison de la charpente ci-dessus décrite avec les planches *e*, les barres transversales *f*, les tourillons H, et les montants J, et la barre K, le tout tel que décrit et pour les fins indiquées.

No. 50,508. Sole Levelling Machine.

(*Machine à dresser les semelles.*)



Erastus E. Winkley and Benjamin Phillips, both of Lynn, Massachusetts, U.S.A., 7th November, 1895; 6 years.

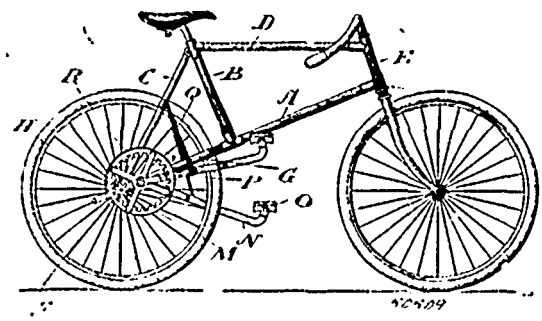
Claim.—1st. In a sole levelling machine, the combination of two shoe supporting jacks, a vibrating levelling roll, associated with each jack, and means common to both jacks for automatically presenting each jack independently to its associated roll when the jack is brought into operative position, substantially as described. 2nd. In a sole levelling machine, the combination of two shoe supporting jacks, a vibrating levelling roll associated with each jack, mechanism for changing the relative lateral inclination of the rolls and jacks, mechanism for oscillating the jacks under the rolls, and connected mechanism operating automatically to disconnect each jack from the oscillating mechanism, substantially as described. 3rd. In a sole levelling machine having a vibrating levelling roll and shoe supporting jack, mechanism for oscillating the jack under the roll consisting of a rocking member and suitable connections with the jack, a rigid arm dependent from said rocking member, a circular adjustment slot in said arm, a cam actuated swinging lever, a connecting rod pivotally secured to the swinging lever and pivotally and adjustably secured in the circular adjustment slot, all substantially as described. 4th. In a sole levelling machine having a vibrating levelling roll, mechanism for laterally rocking the levelling roll consisting of a suitable roll carrier, a segmental gear having a laterally curved peripherial face adapted to rock the roll carrier, a sliding rack engaging with said gear, and mechanism for actuating said rack substantially as described. 5th. In a sole levelling machine, the combination of a vibrating levelling roll, a shoe supporting jack, a cam and connected mechanism for oscillating the jack under the

roll, means for operating the cam, and a clutch mechanism actuated by the cam operating means, arranged to stop the rotation of the cam when the jack is in a convenient position for the removal of a shoe therefrom, substantially as described. 6th. In a sole levelling machine the combination of a laterally rocking roll carrying yoke, longitudinal guide ways in the yoke above its rocking axis, and a levelling roll mounted upon and free to rotate about a trunnion, the opposite ends of which are supported by and reciprocated along said guide ways, substantially as described. 7th. In a sole levelling machine, the combination of a vibrating levelling roll having a predetermined normal lateral inclination or permanent set, mechanism for changing its lateral inclination, and means for adjusting the normal inclination or permanent set of the roll when not acted upon by said mechanism, substantially as described. 8th. In a sole levelling machine having two shoe supporting jacks and a vibrating levelling roll associated with each jack, the combination of a rocking member, means for actuating the same, two sleeves, arranged to tip on the rocking axis of the rocking member, upon which the jacks are mounted, and mechanism for locking the sleeves to the rocking member, substantially as described. 9th. In a sole levelling machine, the combination of two shoe supporting jacks, a vibrating levelling roll associated with each jack, a rocking member and mechanism for actuating the same, two sleeves, adapted to tip on the rocking axis of the rocking member, upon which the jacks are mounted, mechanism for locking the sleeves to the rocking member, and mechanism for operating automatically to unlock the sleeves from said member leaving the same free to rock independently thereof, substantially as described. 10th. In a sole levelling machine having a vibrating levelling roll and shoe supporting jack, a swinging arm, for oscillating the jack, having a circular adjustment way arranged to present a predetermined point on the jack to the roll at the same time, relative to the operation of the machine, for any length of oscillation of the jack, substantially as described. 11th. In a sole levelling machine having a vibrating levelling roll, the combination with suitable mechanism for changing the lateral inclination of the roll, of a pivotally supported bell crank having in one arm a circular adjustment way for adjusting said mechanism, substantially as described. 12th. In a sole levelling machine, the combination of a rocking member, two sleeves loosely mounted on the shaft supporting said member, a socket in each of said sleeves, sliding spring pressed pins on the rocking member adapted to engage with said sockets, suitably placed pivoted pawls for disengaging said pins, and mechanism for actuating said pawls, substantially as described 13th. In a sole levelling machine the combination of a vibrating levelling roll and a shoe supporting jack, and connected mechanisms operating automatically to present the jack, when brought into operative position, to the roll, and to return the jack after the operation of the roll thereon into a convenient position for the removal of a shoe therefrom. 14th. In a sole levelling machine having a vibrating levelling roll mounted in a suitable roll carrier, the combination of a spring secured to a fixed support for automatically applying pressure to the roll, and an adjustable stop for limiting the downward action of said spring, substantially as described. 15th. In a sole levelling machine having a vibrating levelling roll and shoe supporting jack, mechanism for oscillating the jack under the roll consisting of a suitably formed cam and means for rotating the same, a connected rod adapted to be longitudinally reciprocated by the rotation of the cam, a swinging lever connected with the jack and pivotally connected with the connecting rod, substantially as described. 16th. In a sole levelling machine, the combination with a vibrating levelling roll, of a shoe supporting jack, mechanism for variably oscillating the jack under the roll, and means for automatically supplying pressure to the roll during the variable movement of the jack, substantially as described. 17th. In a sole levelling machine, the combination with a vibrating levelling roll and its carrier, of mechanism for vibrating the roll, and means for laterally rocking the roll comprising a gear extension on the carrier and a reciprocating rack engaging the gear extension, substantially as described. 18th. In a sole levelling machine, the combination of two shoe supporting jacks, a vibrating levelling roll associated with each jack, and connected mechanisms operating automatically to change the relative lateral inclination of the rolls and jacks, and to present each jack, after it has been brought into operative position, to its associated roll, while the other jack is left in a convenient position for the removal of a shoe therefrom, substantially as described. 19th. In a sole levelling machine, the combination of a vibrating levelling roll, a shoe supporting jack, and connected mechanisms operating automatically to change the relative longitudinal position and lateral inclination of the roll and jack. 20th. In a sole levelling machine, the combination of a vibrating levelling roll capable of being rocked laterally, a shoe supporting jack, capable of being oscillated longitudinally, and connected mechanisms for automatically rocking the roll and oscillating the jack. 21st. In a sole levelling machine, the combination of a vibrating levelling roll, a shoe supporting jack, and adjustable connected mechanism operating automatically to change the relative position of the roll and jack, and to vary the relative movement between the roll and jack, substantially as described.

No. 50,509. Gear for Bicycles. *(Engrenage de bicycles.)*

Abraham Groves, Fergus, Ontario, Canada, 7th November, 1895; 6 years.

Claim.—1st. In a bicycle, a driving-wheel rigidly connected to an axle journalled in the frame and a pinion rigidly connected to



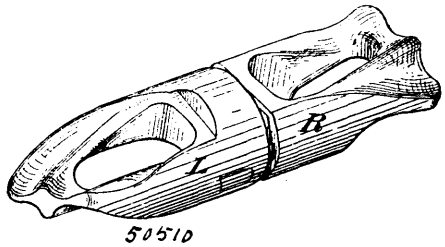
the said axle, in combination with an internal gear-wheel journalled on the frame and meshing with the said pinion, a lever journalled at the same point as the gear-wheel, a friction-dog pivoted on the said lever and engaging with the periphery of the said gear-wheel, and a pedal connected to the lever, substantially as and for the purpose specified. 2nd. In a bicycle, a driving-wheel rigidly connected to an axle journalled in the frame, and a pinion rigidly connected to the said axle, in combination with an internal gear-wheel journalled on the frame and meshing with the said pinion, a lever journalled at the same point as the gear-wheel, a friction-dog pivoted on the *said lever and engaging with the periphery of the said gear-wheel*, a pedal connected to the lever, and a spring connected to the frame and to the lever to raise the lever after it has been depressed by the foot, substantially as and for the purpose specified. 3rd. In a bicycle, a driving-wheel rigidly connected to an axle journalled in the frame, and a pinion rigidly connected to the said axle, in combination with an internal gear-wheel journalled on the frame and meshing with the said pinion, a lever journalled at the same point as the gear-wheel, a friction-dog pivoted on the said lever and engaging with the periphery of the said gear-wheel, a pedal connected to the lever, a spring connected to the frame and to the *lever to raise the lever after it has been depressed by the foot, and* gripping pieces on the pedal to clasp the rider's shoe, substantially as and for the purpose specified. 4th. In a bicycle, a pedal having spring gripping pieces connected to the opposite sides of the pedal to grip the sole of a shoe, substantially as and for the purpose specified. 5th. In a bicycle, a pedal having spring gripping pieces connected to the opposite sides of the pedal to grip the sole of a shoe, one of the spring gripping pieces being laterally adjustable, substantially as and for the purpose specified. 6th. In a bicycle the pedal O, in combination with two curved S-shaped spring grips connected to opposite sides thereof, one of the said grips being laterally adjustable, substantially as and for the purpose specified. 7th. In a bicycle, the frame comprising the lower bar A and forks C running in a straight line from the rear axle to the bicycle head, the rear forks C, the vertical brace B, the upper bar D, and the head E, substantially as and for the purpose specified. 8th. In a bicycle, the frame comprising the lower bar A, and forks G, running in a straight line from the rear axle to the bicycle head, the rear forks C, the vertical brace B, the upper bar D, the head E, rearward extensions on the forks G, and steps V formed thereon, substantially as and for the purpose specified. 9th. In a bicycle, the frame comprising the lower bar A, and forks G running in a straight line from the rear axle to the bicycle head, the rear forks C, the vertical brace B, the upper bar D, the head E, rearward extensions on the forks G, and steps V formed thereon, the forks G being slotted to receive an adjustable stud and having bearings formed therein for the rear axle, substantially as and for the purpose specified. 10th. In a bicycle, a driving wheel rigidly connected to an axle journalled in the frame, and a pinion rigidly connected to the said axle, in combination with an internal gear wheel adjustably journalled on the frame and meshing with the said pinion, a lever journalled at the same point as the gear wheel, a friction dog pivoted on the said lever and engaging *with the periphery of the said gear wheel* and a pedal connected to the lever, substantially as and for the purpose specified. 11th. In a bicycle, a driving wheel rigidly connected to an axle journalled in the frame, and a pinion rigidly connected to the said axle, in combination with an internal gear wheel journalled on the frame and meshing with the said pinion, a lever journalled at the same point as the gear wheel, a friction dog pivoted on the said lever and engaging with the periphery of the said gear wheel, a pedal connected to the lever, and a band of spring metal connected to the frame and passing partly around the periphery of the said gear wheel, its end being provided with a hook with which the rider's foot may engage, *substantially as and for the purpose specified.*

No. 50,510. Rope Coupling. *(Joint de corde)*

Bernhard Kirsch, Vienna, Lower Austria, Austria-Hungary, 7th November, 1895; 6 years.

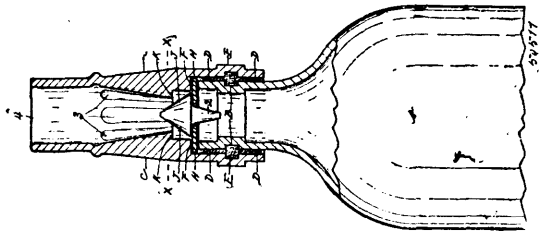
Claim.—1st. A rope coupling provided with a passage for the rope or its strands, and with grooves having a spiral trend or direc-

tion merging into said passage, for the purpose set forth. 2nd. A rope coupling comprising two sections adapted to revolve on or



within each other, each of said sections provided with a passage and with a plurality of spirally formed grooves merging into said passage, for the purpose set forth.

No. 50,511. Device to Prevent the Refilling of Bottles. (*Appareil pour empêcher le remplissage des bouteilles.*)



James O'Donnell, Hamilton, Ontario, Canada, 8th November, 1895; 6 years.

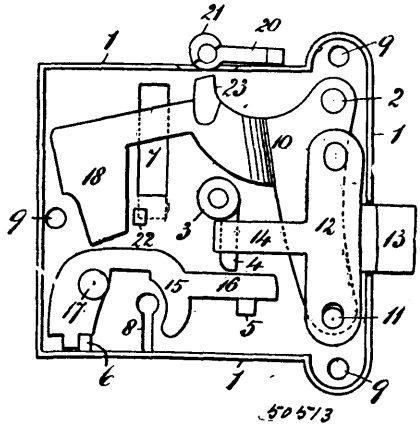
Claim.—1st. In a device in a bottle to prevent refilling, the bottle having around it neck an annular groove, in combination with an attached upper neck having a through vertical opening with lower interior groove to form circular space for cement, the conical plug having tapered lower shank 2, the washer H, having central aperture for said shank, and resting upon the upper end of bottle neck, and against the shoulder F, the shoulder K, having a number of vertical flutes 3, and neck 4, for a cork, substantially as described. 2nd. The attachable bottle neck C, having through vertical opening with upper shoulder K, having a series of openings or flutes, a lower shoulder F, with washer having central aperture to receive the tapered shank 2, of conical plug J, the base of which rests upon said washer, the lower interior groove E, in combination with a bottle having an annular groove B, to conform with groove E, of attached neck, to receive cement D, substantially as described.

No. 50,512. Composition for Finishing Wood Work. (*Composition pour finir le boisage.*)

George H. Worth and Tobias Ryan, both of Mitchell, Ontario, Canada, 8th November, 1895; 6 years.

Claim.—The compounding of the silver white turpentine benzine, boiled linseed oil, varnish, japan dryer, asphaltum stain, sugar syrup, muriatic acid, methylated spirits and burnt sienna, mixed together, substantially in the proportions and for the purposes set forth aforesaid, and also the manner of mixing the same.

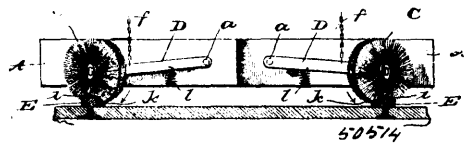
No. 50,513. Springless Lock and Latch. (*Serrure et loquet sans ressort.*)



Alex. Watson, Kinmount, Ontario, Canada, 8th November, 1895; 6 years.

Claim.—1st. The combination with the case provided with posts 2, 3, 4, 5 and 6, of the V-shaped gravitating lever 10, having the arms approximately at an angle of 45°, and pivoted at the elbow to the lock case by post 2, and the latch bolt 13, having a cross arm 12, pivoted to the lower end of lever 10, and provided with an arm 14, sliding between posts 3 and 4, as set forth. 2nd. The combination with the gravitating lever V, lever 10, having one arm provided with a weight 18, and the other arm pivoted to the lock bolt 13, of the tumbler 15 engaged by the weight 18, and having an arm 16 engaging the lever 10, when the tumbler is projected by a key, said tumbler engaged by a fixed post 6 in the lock case, to hold the bolt 13 locked, as set forth. 3rd. The combination with the case provided with an exterior pin at the top of said case, of the pawl 20 pivoted on said pin and having a mutilated hub 21, and a gravitating lever 10 having an upward extension 23, engaging and disengaging said hub when the mutilated portion is out of engagement by turning the pawl to prevent locking, and a bolt 13 having a cross arm 12, pivoted to the lower end of the said lever, as set forth. 4th. The combination of the lock case having lips 27, 28, and slots 7, 7 of the tilting bar 25, passing through said slots and fulcrumed on said lips, to lift the gravitating lever for unlatching, as set forth.

No. 50,514. Track Cleaner. (*Nettoyeur de voies.*)



Arthur Samuel Hickley, Asbury Park, New Jersey, U.S.A., 8th November, 1895; 6 years.

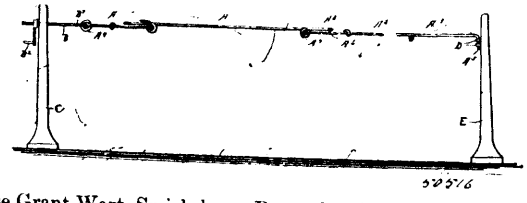
Claim.—1st. The combination with a railway car, of a vertically adjustable and revoluble brush provided with a horizontal axle extending from one side of the brush only and attached to the outer end of a bar which is pivotally connected at its opposite end to the car, the brush being supported to cross the rail of the track at an angle thereto, and in frictional contact with the side and upper surface of the head or tread of the rail and rotated by the motion of the car. 2nd. The combination with a railway car, of a vertically adjustable and revoluble brush extending diagonally across the rail of the track and in frictional contact therewith, an axle for the brush extending from one side of the brush only and supported in a bracket on the car, and an arm to the outer end of which arm said axle is attached and the inner end of the arm pivotally connected to the car. 3rd. The combination with a railway car, of a vertically adjustable and revoluble brush having an axle extending from one side thereof, a bracket having a vertical slot with which said axle engages, and a bar engaging the axle at its outer end and pivotally connected at its inner end to the car.

No. 50,515. Hitching Post. (*Enrênoire.*)

Charles A. Hanson, Rock Island, Illinois, U.S.A., 8th November, 1895; 6 years.

Claim.—1st. The chain, and the hitching post, having a horizontal opening through which the chain passes and vertical grooves in opposite sides of the opening, combined with a roller which has a vertical play in the grooves, and which automatically closes the opening above the chain, substantially as shown. 2nd. The combination of the hitching post, having a horizontal opening through its upper end, and the chain which passes through the opening, combined with a vertically moving roller or device for closing the opening above the chain, substantially as described.

No. 50,516. Clothes Line. (*Corde à linge.*)



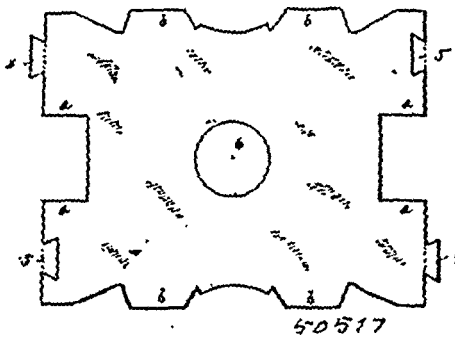
Jesse Grant Wart, Smicksburg, Pennsylvania, U.S.A., 8th November, 1895; 6 years.

Claim.—1st. The wire clothes line composed of sections, one of which has a loop formed at one end and extending in alignment with its body, and one of the other sections being formed with a similarly arranged loop provided at its inner end with a downwardly projecting eye through which the loop of the first section passes, as

shown and described, whereby the loops are hinged together, and when the line is drawn taut one loop projects over the other, parallel thereto, substantially as set forth. 2nd. A sectional wire clothes line, the sections of which at their adjacent ends are provided with longitudinally extending horizontal loops, the loops of the ends of one section having downwardly projecting hinge eyes at the inner ends which hinge upon the outer ends of cross-bars of the larger loops of the other sections and the loops which carry said hinge eyes lying above and parallel with the loops to which they are hinged, a straining device at one end of the line and an attaching device for the other end, whereby when the line is taut the loops form parallel longitudinal clamping jaws which may be opened by flexing the line upwardly, as shown and described.

No. 50,517. Crown Piece for Bicycle Forks.

(Couronne pour fourches de bicycle.)

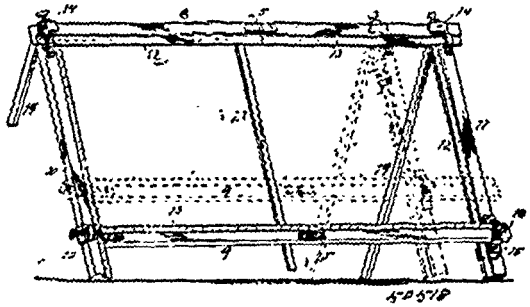


50517

Frank H. Beecher and Robert G. Cornforth, both of Seymour, Connecticut, U.S.A., 8th November, 1895; 6 years.

Claim.—1st. A crown-piece for bicycles shaped from a single blank of metal and consisting of a rounded body, a central hub open at both ends and adapted to receive the steering bar and sockets which are adapted to receive the side bars of the fork, said blank being provided at its ends with portions *a a*, which are closed together to form the ends of the sockets, and with portions *b b*, which are closed together to form the under side of the body and the edges of which assist in forming the hub and sockets. 2nd. A crown-piece for bicycles shaped from a single blank of metal consisting of a rounded body, a central hub open at both ends and adapted to receive the steering bar and sockets which are adapted to receive the side bars of the fork, said blank being provided at its ends with portions *a a*, which are closed together to form the ends of the sockets, said portions *a a* being provided with tongues and recesses, whereby the portions of the blank which form the ends of the sockets are locked together, and with portions *b b*, which are closed together to form the under side of the body and the edges of which assist in forming the hub and sockets.

No. 50,518. Curtain Stretcher. *(Métier à rideau.)*

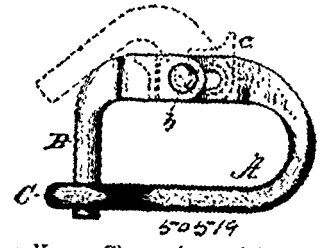


50518

Wilhelm Niemand, Newport, Kentucky, U.S.A., 8th November, 1895; 6 years.

Claim.—1st. In a collapsible curtain-stretcher frame of adjustable size, the combination of two short and two long rails, fittings at the upper ends of the short rails to receive the upper long rail, fittings to support the lower long rail on the short sides, each of the long rails being in two sections which are hinged together by hinges 25, flanges 26 and 27 at the reverse side of the sections near their meeting ends and projecting at right angles therefrom, a screw 28 carried loosely by one of the flanges of each set, a collar 29 on each screw whereby in conjunction with its handle it is confined to the flange by which it is carried, and a screw-threaded opening in the other flange adapted to be engaged by screw 28, for the purpose of drawing the two rail sections endwise together to render them rigid. 2nd. In a collapsible curtain-stretcher frame of adjustable size, the combination of two short rails with fittings at their upper ends, a long rail 8, adapted to be received by them, a long rail 9, also supported on the short rails, being provided for such purpose at one end with a permanently secured fitting and resting near its other end on a loose fitting adjustable on either of the rails meeting thereat, the long rails being in two sections connected by hinges 25, flanges 26 and 28, projecting rearwardly from the sections near their meeting ends, a screw 28 carried loosely by one of the flanges in each set, a collar 29 on each screw whereby in conjunction with its handle it is confined to the flange by which it is carried, and a screw-threaded opening in the other flange adapted to be engaged by screw 28 for the purpose of drawing the two rail sections endwise together.

No. 50,519. Clevis. *(Fer d'attelage.)*



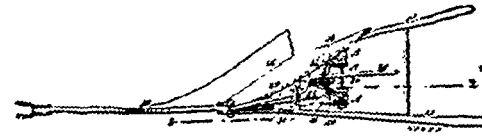
50519

W. Irving Cormany, Kansas City, assignee of August Morganfield, Ogden, Kansas, both of the U.S.A., 8th November, 1895; 6 years.

Claim.—1st. In a clevis provided with a pin pivotally attached to one side thereof and engaging an eye in the opposite side of the same, the lock-piece pivoted in conjunction with said pin and made to shut over the end of said clevis for the purpose of securing said pin in position when so engaging said eye, substantially as shown and described. 2nd. The combination of a clevis provided with a slot in one end and an eye in the other end thereof, with a pin pivotally attached thereto by a bolt passing through said slot and a lock-piece pivoted in conjunction with said pin and made to shut over the end of said clevis, substantially as and for the purpose set forth.

No. 50,520. Subsoil Attachment for Ploughs.

(Charrue à sous-sol.)



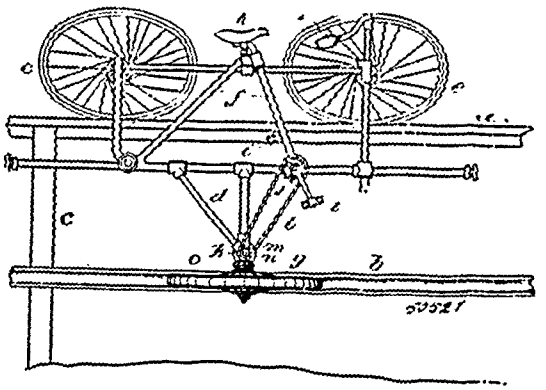
Theodore Woodard, Garland, and Robert Irwin, Fort Scott, both of Kansas, U.S.A., 8th November, 1895; 6 years.

Claim.—1st. A subsoil attachment for ploughs, the same consisting of vertically adjustable subsoil ploughs, a forward subsoil plough located between the rear ones and in advance thereof, a draft device adjustably connected with both the forward and the rear subsoil ploughs, and a lifting lever connected with one of the said ploughs, as and for the purpose specified. 2nd. A subsoil attachment for ploughs, the same consisting of one or a gang of adjustable subsoil ploughs which, when in a gang comprise a forward plough located between rear ploughs and a draft device for the subsoil ploughs adapted for connection with the main plough in which draft device one or all of the subsoil ploughs may have free movement, as and for the purpose specified. 3rd. In a subsoil attachment for ploughs, two transversely aligning subsoil ploughs having convexed inner or opposing edges, the said edges being made to diverge at their forward ends, and a third plough located in advance of and between the rear ploughs, the front plough comprising a shank and a wing at each side of the shank, one wing in advance of the other, the wings being practically in horizontal alignment with the inner edges of the rear ploughs, as and for the purpose specified. 4th. In a subsoil attachment for ploughs, the combination with vertically arranged apertured shanks, of shares attached to the said shanks and adapted for subsoil purposes, a forward subsoil plough adapted to track the main share when attached to an ordinary plough, the said forward subsoil plough having an apertured shank extending in an upwardly direction, an adjustable connection between the rear subsoil ploughs and the forward one, which rear plough may be run alone or in connection with the two forward ones, a draft device adjustably connected with both the forward and rear subsoil ploughs at their shanks, and a lever for adjusting said ploughs and connected with one of them, as and for the purpose specified. 5th. In a plough, the combination, with the beam, stock, share and handles thereof, of a subsoil attachment, the same consisting of the two rear subsoil ploughs provided with apertured shanks, a forward subsoil plow located intermediate of the rear ones and likewise provided with an arpertured shank, an adjustable connection between the shanks of the forward and rear ploughs, a draft device adapted for engagement with the main plough and having adjustable connection with the shank of the forward plough, an adjusting lever fulcrumed upon

the main beam of the plough, being adjustably connected with one of the subsoil shanks, and a locking mechanism connected with the said lever, as and for the purpose specified.

No. 50,521. Aerial Bicycle and Track.

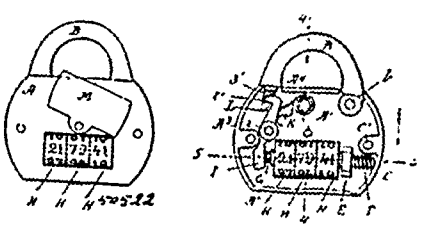
(*Bicycle aérien et evie.*)



Arthur W. Crossley, Boston, and John J. McCormack, Brookline, assignees of Willard Herbert Gilman, Boston, all of Massachusetts, U.S.A., 8th November, 1895; 6 years.

Claim.—1st. An aerial or elevated bicycle and track, embodying in its construction an upper or top rail and a lower or side rail, the carriage arranged at the side of the track and provided with supporting wheels arranged to run on the upper rail, and a driving wheel to run on the side rail. 2nd. An aerial or elevated bicycle track, embodying in its construction an upper or top rail and a lower or side rail, the carriage and its seat arranged at the side of the track and provided with a supporting wheel or wheels arranged to run on the upper rail, and a driving wheel or wheels to run on the side rail, and pedals adapted to be operated by the occupant of the seat, the said pedals being in operative connection with the driving wheels. 3rd. The combination, with the upper inclined rail and the lower vertical rail and their support, of the carriage arranged at one side of the said rails, the inclined supporting wheels arranged to run on the upper rail, the framing connecting the supporting wheels with the carriage, the horizontally arranged driving wheel below the carriage, adapted to run on the lower vertical rail, a seat in the carriage, and mechanism in the carriage adapted to be operated by the occupant and communicate motion to the driving wheel.

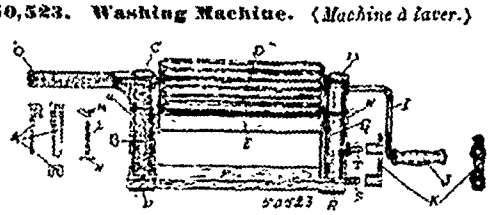
No. 50,522. Permutation Lock. (*Serrure à combinaison.*)



Stefano Bozano, Boston, Massachusetts, U.S.A., 8th November, 1895; 6 years.

Claim.—In a permutation lock, in combination an enclosing case, a pivoted bow B, a spring pressed pivoted end piece C, a stationary slitted sleeve F, a locking bolt G, longitudinally adjustable in said sleeve and having side projections *g*, a series of lettered or numbered discs H, journalled on said sleeve and having internal grooves *h*, and a spring pressed hook lever I, adapted to engage with the free end of the bow, substantially as and for the purpose set forth.

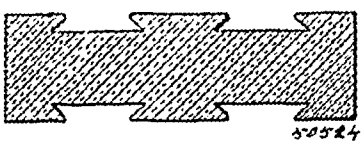
No. 50,523. Washing Machine. (*Machine à laver.*)



Johnson Maithland Grover, Toronto, Ontario, Canada, 8th November, 1895; 6 years.

Claim.—1st. In a washing machine, the combination of a rotary corrugated roller, with two adjustable compression rolls and an adjustable rubbing board, substantially as described. 2nd. In a washing machine, the combination of a rotary corrugated roller, with centrally adjustable rocker arms supporting two compression rolls and rubbing board, substantially as shown and described. 3rd. In a washing machine, the combination of adjustable rocker arms having slotted projected supports with two compression rolls, and spiral springs and supporting rods 9, substantially as shown and described. 4th. In a washing machine, the combination of a supporting rod 9, with a compression spring, lock nut and stationary pin, substantially as shown and described. 5th. A washing machine adjustably attachable to suit receptacle, by two projecting studs entering a rigid cleat, an extended slotted arm to receive the adjustable clamp, substantially as shown and described. 6th. In a washing machine, the combination of detachable bearings and lock nut, with slotted tubular standard, substantially as described.

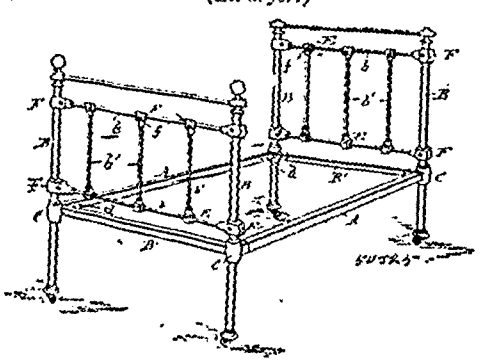
No. 50,524. Brick. (*Brique.*)



Stephen Isaac Adams, Ramhurst, York Road, Southend-on-Sea, England, 8th November, 1895; 6 years.

Claim. A brick, either header, stretcher, quoin, or any kind of brick, provided with dovetailed shaped recesses either above only or above and below, lengthwise or crosswise, substantially as and for the purposes set forth and as illustrated in the accompanying drawing.

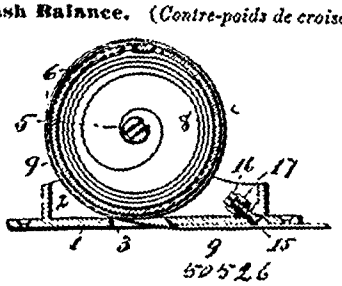
No. 50,525. Bedstead. (*Lit de fer.*)



Edward J. Barcalo, Buffalo, New York, U.S.A., 8th November, 1895; 6 years.

Claim.—1st. The combination with the post B, the side rail A and end rail B^1, of a coupling consisting of a sleeve C which receives the post B, and a pair of shanks C^1 arranged substantially at right angles to each other and fitted in the side and end rails, and clamping devices arranged on said rails and bearing against said shanks, substantially as set forth. 2nd. The combination with the side and end rails A, B^1, and a post B of a bedstead, of a coupling having a sleeve C secured to the post B, and shanks C^1 fitted in the ends of said rails, and each provided with a notch c^1 having an inclined side, and clamping screws *d* arranged on said rails and bearing against the inclined faces of said shanks, substantially as set forth. 3rd. In a metallic bedstead, the combination with an upright and a transverse member *b*, b^1, of a detachable coupling E, consisting of a pair of sections *e*, e^1 provided with horizontal notches e^3, and below said notches with a socket e^4, and a clamping screw *f* connecting the two sections, substantially as set forth.

No. 50,526. Sash Balance. (*Contre-poids de croisée.*)

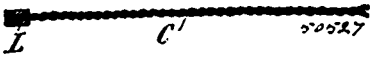


Edward Franklin Smith, Rochester, New York, 8th November, 1895; 6 years.

frame having the rear flanges, at least one of them having an open slot, the spring-operated drum and its pintle arranged in the slot, of the brake-plate arranged at the side of the drum and engaging the latter near its centre, the engaging surfaces of the plate and drum being at an angle to the open side of the slot, whereby the pintle and drum will be held in position, substantially as described. 2nd. In a sash-balance, the combination with the main frame, the spring-operated drum and its supporting pintle, of the brake plate arranged at the side of the drum engaging the drum near its centre, the co-operating faces of the brake and drum extending parallel and concentric with the pintle, substantially as described. 3rd. In a sash-balance, the combination with the main frame, the spring-operated drum and its supporting pintle, of the brake plate arranged at the side of the drum and engaging the latter near its centre, the co-operating faces being parallel and concentric with the pintle, and the adjusting screw for moving the plate at right angles to the supporting pintle, substantially as described. 4th. In a sash-balance, the combination with the main frame, the spring-operated drum and its supporting pintle, of the brake-plate arranged at the side of the drum having the inwardly turned flange engaging the drum near its centre, said flange and the surface it engages being concentric with the pintle, and the adjusting screw engaging the plate and adapted to move it at an angle to the pintle, substantially as described. 5th. In a sash-balance, the combination with the main frame, the spring-operated drum and its supporting pintle, of the brake-plate arranged at the side of the drum having the inwardly turned flanges at each end, one engaging the drum near its centre and the securing screw engaging the other flange, substantially as described. 6th. In a sash-balance, the combination with the main frame, the spring-operating drum and its supporting pintle, of the brake-plate arranged at the side of the drum and engaging the latter near its centre, having the slotted flange at the other end, the spring and the adjusting screw, substantially as described.

No. 50,527. Electrical Conductor.

(*Conducteur électrique.*)



The Electric Bell and Resistance Company, Newark, assignee of George Franklin Atwood, Orange, and Jonas Walter Aylsworth, Newark, all in New Jersey, U.S.A., 8th November 1895; 6 years.

Claim.—1st. A flexible fibrous carbon conductor surrounded with a flexible coating of insulating material. 2nd. A flexible solid non-metallic fibrous conductor surrounded with a flexible coating of insulating material. 3rd. A flexible non-metallic fibrous conductor surrounded with a flexible coating of insulating material and having metallic tips secured to its ends. 4th. A flexible fibrous carbon conductor surrounded with a flexible coating of insulating material and having metallic tips secured to its ends. 5th. A flexible non-metallic fibrous conductor surrounded with a flexible coating of insulating material and having metallic tips electro-plated upon its ends. 6th. A flexible fibrous carbon conductor surrounded with a flexible coating of insulating material and having metallic tips electro-plated upon its ends. 7th. A flexible non-metallic fibrous conductor surrounded throughout its length with insulating material and wound about the core of an electro-magnet. 8th. A flexible fibrous carbon conductor surrounded throughout its length with a coating of insulating material and wound about the core of an electro-magnet. 9th. A flexible fibrous carbon conductor surrounded throughout its length with a coating of insulating material and wound in spiral form upon a spool, bobbin or support, substantially as shown.

No. 50,528. Manufacture of Wood Pulp.

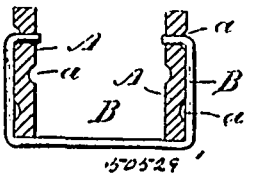
(*Fabrication de pulpe.*)

The National Patent Box Company, Chicago, Illinois, assignee of Edward Nelson, Nausau, Wisconsin, U.S.A., 8th November, 1895; 6 years.

Claim.—1st. The herein described method, which consists in subjecting wood fibres to the combined action of steam, kerosene, salt and saltpetre, grinding said fibres and forming the same into a pulp, and then impregnating said pulp, while containing a percentage of moisture, with rosin, glue and asphaltum, substantially as described. 2nd. The herein described composition of matter for the treatment of wood pulp, comprising dissolved glue, disintegrated rosin and asphaltum, substantially as described. 3rd. The herein described composition of matter for the treatment of wood pulp, comprising glue, linseed oil, rosin, turpentine and asphaltum, substantially as described. 4th. The herein described composition of matter for the treatment of wood pulp, comprising glue, linseed oil, rosin, turpentine, asphaltum, colouring matter and white or red lead, substantially as described.

No. 50,529. Construction of Scrap Piles for Rolling.

(*Construction de fragment de fer pour laminée.*)

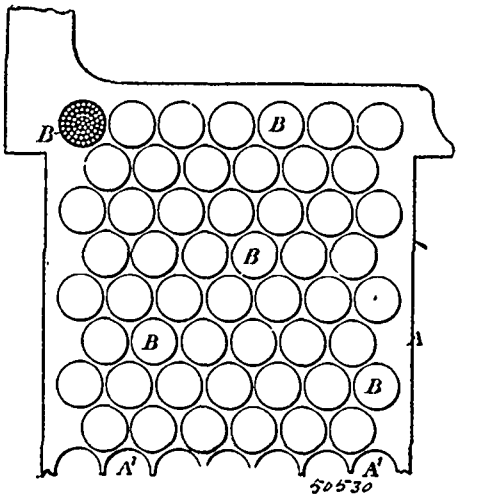


John Henry Poole, St. John, New Brunswick, Canada, 9th November, 1895; 6 years.

Claim.—1st. A skeleton pile, consisting of two side plates placed on edge and held together by two or more band hoops or ties each passing across two of the edges and having their ends inserted in holes provided in said plates, substantially as set forth. 2nd. A skeleton pile, consisting of two plates A having one or more longitudinal grooves *a*, with holes a^1, punched in one of said grooves near the upper edge of the plates and bands, hoops or ties B near the ends of said plates and passing under and across the bottom edges and up the sides of said plates and having their ends turned and inserted in said holes a^1, substantially as set forth. 3rd. A pile constructed of a skeleton having side plates held together by bands or ties passing across two of the edges of said plates and having their ends inserted in holes made in said plates, bars or plates at the bottom and top supported on said bands or ties and small scrap in the centre, substantially as set forth. 4th. A pile consisting of a skeleton made of side plates set on edge and held together by bands or ties passing across two of the edges and having their ends inserted in holes in said plates, a plate at the bottom supported on said bands or ties and having its ends turned up and small scrap in the centre and a plate or bars on top and having the joints filled with turnings or borings, substantially as set forth.

No. 50,530. Plate for Secondary Voltaic Batteries.

(*Plaque pour pile voltaïque secondaire.*)



The Chloride Electrical Storage Syndicate, Clifton Junction, assignee of John Gustave Adolf Rhodin, Clifton Hall, both in England, 9th November, 1895; 6 years.

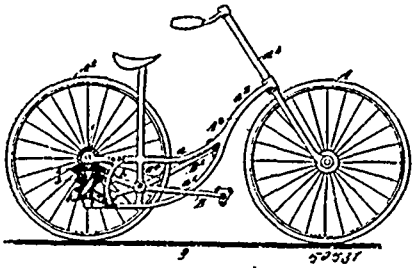
Claim.—1st. A plate for secondary batteries, consisting of a perforated frame plate, the holes of which are filled with plugs composed either of bundles of lead wires, or of a coiled strip of lead, on one or both sides of which ridges or projections are formed, thus producing porous or cellular plugs to the interstices of which the electrolyte has access, substantially as described. 2nd. The use for plates for secondary batteries, of porous or cellular plugs formed of bundles of lead wires, adapted to be introduced into the holes of a perforated frame plate, substantially as described. 3rd. The use for plates for secondary batteries, of porous or cellular plugs formed of coiled sheet or strips of lead having ridges or projections formed on one or both sides thereof and adapted to be fitted into the holes of a perforated frame plate, substantially as described.

No. 50,531. Bicycle. (*Bicycle.*)

Cora Ann Slocomb di Brazza Savorgnan, assignee of Detalmo di Brazza Savorgnan, both of Rome, Italy, 9th November, 1895; 6 years.

Claim.—1st. In a bicycle, a cam block, a foot-operating lever, and an anti-friction roller journalled on the said lever and engaging with

the cam block, substantially as specified. 2nd. In a bicycle, a cam block having a spiral cam groove, a foot-operating lever, and an



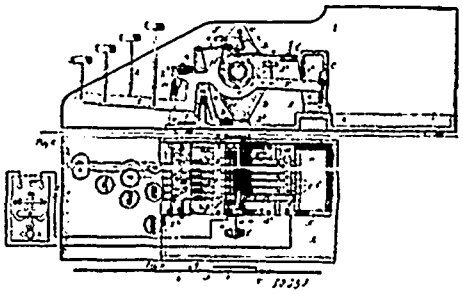
anti-friction roller carried on the said lever, comprising an outer shell, two segmental sections within said shell, bearing rollers movable in grooves formed in said segmental sections, and also in grooves on the supporting parts extended from the foot lever, and a guide for said anti-friction roller, substantially as specified. 3rd. In a bicycle, a cam block, a foot lever engaging therewith, anti-friction rollers journalled on portions projecting from said lever, the said anti-friction rollers being eccentric one to the other, and a guide track for each of said anti-friction rollers, substantially as specified. 4th. In a bicycle, a block having a spiral cam groove therein, a foot lever, an anti-friction roller on the said lever engaging in the said cam groove and comprising an outer shell, segmental blocks secured therein, other segmental blocks in said shell movable relatively to the first named blocks, means for causing said movement, and bearing rollers in said blocks, substantially as specified. 5th. In a bicycle, a foot-operating lever having a fulcrum comprising knife-edged bearing blocks, substantially as specified. 6th. In a bicycle, an operating foot lever having a fulcrum comprising knife-edged bearing blocks having a bearing on a portion of the frame, and means for preventing an upward movement of the lever relatively to the frame, substantially as specified. 7th. In a bicycle, a foot lever having a fulcrum comprising a portion of the frame provided with recesses substantially V-shaped in cross section, and having their apexes at the ends of the fulcrum of the lever, bearing blocks having knife-edged bearings in the apex of the said recesses, means for preventing a vertical movement of the lever relatively to the frame, and means for preventing a lateral movement of said lever, substantially as specified. 8th. In a bicycle, a foot lever, knife-edged bearing blocks on said lever, recesses in the frame in which said blocks engage, bearing blocks rigidly mounted on the frame and engaging in recesses formed in the lever, for preventing an upward movement of the lever relatively to the frame, and adjustable bearing points for preventing the lateral movement of the lever relatively to the frame, substantially as specified. 9th. In a bicycle, a foot lever fulcrumed on the frame, and a cushion carried by the frame, for receiving the impact of the lever on its down stroke, substantially as specified. 10th. In a bicycle, a spirally-grooved block having gear connections with the drive wheel of the machine, a fulcrumed foot lever having an engagement in said spiral groove, and a second foot lever having operative connection with the first named foot lever, substantially as specified. 11th. In a bicycle, a spirally grooved cam block having pivot bearings in a portion of the frame of the machine, the said bearings comprising anti-friction rollers and bearing points, and a vertically adjustable block for one of said bearing points, substantially as specified. 12th. A bicycle, comprising a frame portion having recesses therein, each provided with an annular groove, one wall of which consists of a removable ring, a cam block having a journal provided with annular grooves, and anti friction rollers in said grooves, substantially as specified. 13th. A driving mechanism for a bicycle, comprising a spirally grooved cam block having gear connection with a wheel of the vehicle, a motor carried by the vehicle, and a connection between the motor and the cam block, substantially as specified. 14th. A driving mechanism for a four-wheeled vehicle, comprising cam blocks having gear connection with the rear wheels of said vehicle, and a motor located in the body of said vehicle and having a piston rod connection with the cam blocks, substantially as specified. 15th. A wheel for a vehicle, comprising a hub portion, a spoke band, and a yielding cushion between the hub portion and band, substantially as specified. 16th. A wheel for a vehicle, comprising a hub portion having extension flanges, a spoke band having interior flanges, the yielding cushion, and the guide fingers, substantially as specified.

No. 50,532. Automatic Telegaph Machine.

(*Machine télégraphique automatique.*)

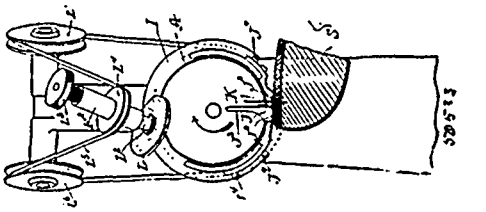
The World Flash Company, Chicago, assignee of Charles Elmer, Oak Park, both of Illinois, U.S.A., 9th November, 1895; 6 years.

Claim.—1st. In automatic telegraph machines, the combination with the rotating driver and with the circuit make-and-break ring mounted loosely and separately about said driver, but movable to and from the same and supported intermittently thereon at the ring-rim whereby the ring is revolved in single direction only, of the shifter brake controlled from the character key to throw said ring into and out of engagement with the driver, substantially as des-



cribed. 2nd. The combination with the rotating driver and with the reciprocating shifter controlled by the character key of the circuit make-and-break ring interchangeably supported at its inner rim upon said driver, and alternately at its outer rim upon said shifter, substantially as described. 3rd. The combination with the rotating driver and with the character key lever having a shifter brake thereon, of the circuit make-and-break ring loosely surrounding said driver and sustained alternately at its inner and outer rim by said driver and shifter brake respectively, substantially as described. 4th. The combination with the rotating driver, of the character key lever having a shifter brake, the circuit make-and-break ring loosely surrounding said driver and intermittently sustained thereon, the latch to hold the key-lever depressed, and a trip pawl carried thereby and projected by said lever into the path of the revolving ring to engage at intervals therewith, substantially as described. 5th. The combination with the rotating driver, of the character key-lever having a shifter brake, the circuit make-and-break ring loosely surrounding said driver and intermittently sustained thereon, the latch to hold the key-lever depressed, a trip pawl carried thereby and projected by said lever into the path of the revolving ring to engage at intervals therewith, and a spring contact piece bearing upon said ring to govern the electric circuit, substantially as described. 6th. In automatic telegraph machines, the combination of a pivoted lever bearing a desired character, a spokeless annular ring divided on its circumference by insulated blocks, so that during its revolution it is adapted to make or break connections with an electric circuit a corresponding number of times, and provided with gear teeth on its rim, a rotating cylindrical pinion for revolving such ring, and a tension spring for holding such actuating lever in its initial position, the whole so constructed and arranged that when the actuating lever is depressed the ring is thrown into engagement with its rotating mechanism, and when such lever is returned to its initial position the ring is held out of engagement with its operating pinion, substantially as described. 7th. In automatic telegraph machines, the combination of a toothed driver connected with a source of electric energy, an annular spokeless ring provided with serrations adapted to engage with and be driven by the toothed driver and make and break connections with an electric circuit a predetermined number of and length of times, a spring for holding such ring in engagement with its toothed driver and which completes the electric circuit, a character-bearing key lever forming a shifter brake to engage, disengage and arrest the motion of such annular ring, a pivoted latch adapted to hold such key-lever in its depressed or actuated position, provided with a trip pawl adapted to be actuated by the rotating ring when the desired signal has been transmitted and permit the key-lever to resume its original position, means on such key-lever for holding the trip pawl out of engagement with the rotating ring when the key-lever is in its original position, and pins on such rotating ring to actuate such trip pawl, substantially as described.

No. 50,533. Machine for Trimming Boot and Shoe Uppers. (*Machine pour parachever les empeignes des chaussures.*)



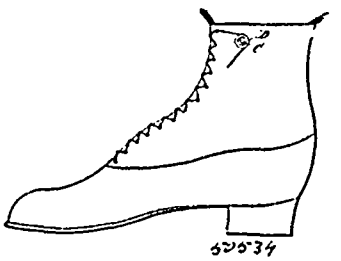
Elmer Stephen Harris, Haverhill, Massachusetts, U.S.A., 9th November, 1895; 6 years.

Claim.—1st. In a trimming machine of the character specified, the combination of two rests separated by a recess formed to receive the projecting material to be trimmed, said rests being formed to support the surfaces of a boot or shoe at opposite ends of the said material, a knife having its cutting edge extending across the said

recess above the acting faces of the said rests and in position to trim the projecting material at a height determined by the projection of the said acting faces below the knife, and means for operating said knife. 2nd. In a trimming machine of the character specified, the combination of two rests separated by a recess formed to receive the projecting material to be trimmed, said rests being formed to support the surfaces of a boot or shoe at opposite sides of the said material, a knife having a continuously acting cutting edge such as that possessed by an annular rotating knife, a rotary disc knife, or a band knife, and having its cutting edge extending across the said recess above the acting faces of the said rests and in position to trim the projecting material at a height determined by the projection of the said acting faces below the knife, and means for operating said knife by moving it progressively in one direction. 3rd. In a trimming machine of the character specified, the combination of an annular rotating knife secured to a suitable shaft turning in fixed bearings on a supporting frame, a belt-driven pulley secured to the said shaft, and two rests secured to and supported by the said frame, the said rests being separated by a recess formed to receive the projecting material to be trimmed and formed to support the surfaces of a boot or shoe at opposite sides of the said material. 4th. In a trimming machine of the character specified, the combination of an annular rotating knife secured to a suitable shaft turning in fixed bearings on a supporting frame, a belt-driven pulley secured to the said shaft, two rests secured to and supported by the said frame, the said rests being separated by a recess formed to receive the projecting material to be trimmed and formed to support the surfaces of a boot or shoe at opposite sides of the said material, and a grinding wheel adapted to sharpen the said annular knife secured to a suitable shaft turning in bearings on the said supporting frame and driven by a belt and suitable pulleys, the said grinding wheel being adjustable to and from contact with the edge of the said knife.

No. 50,534. Shoe Lace Fastener.

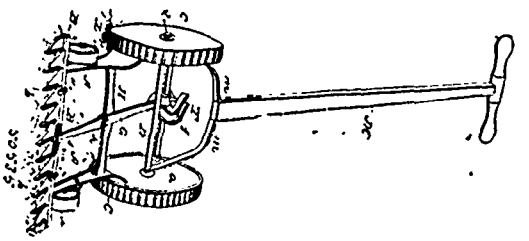
(*Agrafe pour lacet de chaussure.*)



Chris. Jay Johnson, Gloversville, New York, U.S.A., 9th November, 1895; 6 years.

Claim.—A shoe lace fastener, consisting of an attachment comprising a shaft which is adapted to be passed through the material of the shoe near the top thereof, and a rubber disc secured on said shaft and the head also secured to the said shaft by which the disc is held in place, said parts being combined and arranged, and adapted to be connected with a shoe, substantially as shown and described.

No. 50,535. Lawn Mower. (*Faucheuse de pelouse.*)



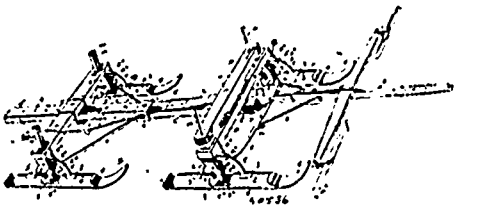
Rowley K. Ortt, Norristown, Pennsylvania, U.S.A., 9th November, 1895; 6 years

Claim.—In a lawn mower, the combination of the drive wheels C, journalled within a suitable frame A, pinions *c*, secured upon a shaft E, and receiving motion from the drive wheels, cam wheel F, secured upon the shaft E, operating lever G, stationary finger bar B, and knife B^1, adapted to be reciprocated when the drive wheels are rotated, as shown and described.

No. 50,536. Bob-Sleigh. (*Traîneau.*)

Andrew A. Smith, Hotchkiss, and William R. Gale, Dalta, both of Colorado, U.S.A., 9th November, 1895; 6 years.

Claim.—1st. The combination with the front and rear sleds, having cross-bars provided with depending knees to which the runners are pivoted, of a reach extending under both beams and pivoted by a king bolt to the front beam, a double clip embracing the rear beam and extending down below its under side and embracing the reach

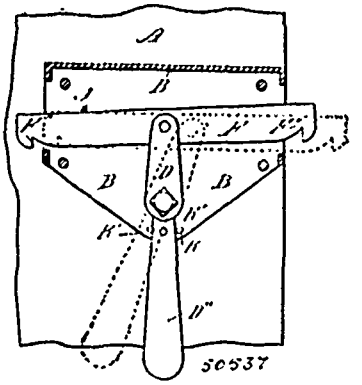


with its sides or ends and lower cross-bars, and a pin passed through the rear beam and any one of the series of upper apertures in the reach between the front and rear cross-bars of the clip, and braces extending forwardly from the rear knees to a slide mounted adjustably on the reach, substantially as set forth. 2nd. In a bob-sled, the knee comprising the top cross-bar adapted to be bolted to the under side of the beam, side arms depending therefrom and converging towards their lower transversely apertured ends and the integral guards or guides d^2, d^3, projecting from the front and rear of the upper end of the knee, and forming slideways for a curved runner standard, substantially as set forth. 3rd. In a bob-sled, the knee comprising a top cross-bar adapted to be bolted to the under side of the beam, side arms depending therefrom, and converging towards their lower apertured rounded ends, the front and rear guards or guides integral with the upper end of knee and the apertured ears on forward edges of the side arms, substantially as set forth. 4th. The combination with the beam knee having depending side arms converging at their lower apertured ends, and the integral oppositely projecting guards or guides at the upper end, of the segmental runner standards working between said side-arms and guided in said guards or guides, the said standards being provided with a middle portion to which the lower ends of the said knee-arms are pivoted, substantially as set forth. 5th. The combination with the beam-knee having depending side-arms converging at their lower rounded apertured ends, and the integral oppositely projecting guards or guides at the upper end of the knee, of the segmental runner standard having a middle portion or brace provided with a foot at its lower end on which the lower rounded ends of the knee arms rock, said lower ends embracing and pivoted to the lower end of the said standard brace or middle portion, substantially as set forth. 6th. The combination with the runner having a segmental or curved standard of the beam-knee having side arms and integral oppositely projecting guards straddling the said standard and pivotally connected at the lower ends of the side arms with the runner between the ends of the standard, the lower rounding ends of said side arms resting upon the upper side of the runner or an attachment thereof to take the strain off the pivot, substantially as set forth. 7th. The combination with the beam and the depending knees secured at their upper ends to the lower side of its ends, said knees each comprising depending side arms having apertured rounded lower ends, and the integral oppositely projecting guards or guides at the upper end of the knee, of the runners, each having a segmental standard working between the knee arms beneath the beam and provided with a middle portion or brace having a foot at its lower end secured to the runner, the lower rounded ends of the knee being pivoted to the lower end of said middle portion or brace, and rocking on said foot, substantially as set forth. 8th. The combination with the beam and the runners having segmental standards, of the knees depending from the lower sides of the beam ends and pivotally connected at their lower ends with the runners intermediate of the ends of said segmental standards, the integral guards or guides extending front and rear from the upper ends of the knees, and braces extending from the forward guides or guards to the beam, substantially as set forth. 9th. The rear sled comprising the beam, having a depending middle clip and pin for the reach, and depending knees at its ends, each having integral front and rear guards or guides and integral depending side arms, the reach slide having an adjusting pin and connected to said knees by braces, and the runners, each having an arched or segmental standard or brace working between the knee arms and guards or guides, and a perpendicular middle portion or brace secured to the runner and to the lower end of which the lower ends of the knee arms are pivoted, substantially as set forth. 10th. The runner formed of a flat steel shoe curved upwardly at its front end, a wooden brace or strengthening strip on the upper side of the shoe, and having a cut-away portion between its ends, the segmental standard secured at its ends to the runner, and having a central vertical middle portion or brace provided at its lower end with a foot resting in said cut-away portion and there secured to the runner, substantially as set forth. 11th. The combination with the front and rear sleds, and a reach extending from the rear sled to and pivoted to the cross-bar of the front sled, and there provided with a clip, of the rigid brace connected at its middle to the said clip and at its ends to the knee of the front sled, and the tongue pivoted at its rear end to the front end of said reach clip, substantially as set forth. 12th. The combination with the front sled, and the rigid curved brace connected at its rear ends to the knees, the clevis or clip to embrace the front end of the reach and to which the said

curved brace is secured at its middle, the tongue connected to the front end of clip or clevis, and braces extending rearwardly from the tongue to said curved brace, substantially as set forth.

No. 50,537. Sliding-door Lock.

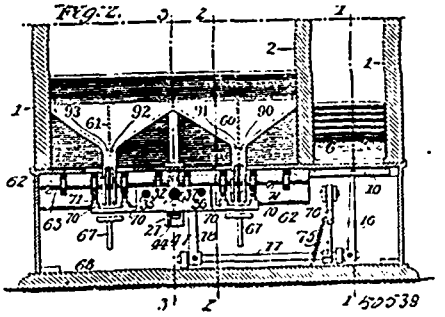
(*Serrure de porte roulante.*)



William Everett Johnson and Merrill Mathias Cooney, both of Coon Rapids, Iowa, U.S.A., 9th November, 1895; 6 years.

Claim.—1st. An improved latch for sliding-doors, comprising a suitable frame adapted to be secured to a sliding door, a shaft extended through said frame and door, a knob on its outer end, a lever fixed to said rock shaft with its inner end projecting below the latch frame, a latch having a hook formed on its forward end extended horizontally through the device and pivotally attached to the upper end of said lever some distance above its pivot pointal, a rod extended transversely through the frame of the device above the rear end of the latch for the purposes stated, and a device secured to a stationary upright and adapted to be engaged by said latch, substantially as and for the purposes stated. 2nd. An improved latch and lock for sliding doors comprising a suitable frame adapted to be secured to a sliding door, a shaft extended to said frame and door, a knob on the outer end, a lever fixed to said rock shaft with its inner end projecting below the latch frame, a latch having a hook formed on its forward end extended horizontally through the device and pivotally attached to the upper end of said lever some distance above its pivotal point, a rod extended transversely through the frame of the device above the rear end of the latch for the purposes stated, and a device secured to a stationary upright adapted to be engaged by said latch and a bolt or rod adapted to be passed through the frame and the handle of said lever when the latch is in engagement with the said device secured to the stationary upright to lock the doors, substantially as set forth. 3rd. An improved latch and lock for sliding doors, comprising a suitable frame adapted to be secured to a sliding door, a shaft extended through said frame and door, a knob on its outer end, a lever fixed to said rock shaft with its inner end projecting below the frame, a latch having a hook formed on both of its ends extended horizontally through the device and pivotally attached to the upper end of said lever some distance above the pivotal point, a guide adapted to be extended through the frame directly above either end of the latch for the purposes stated, and a bolt adapted to be passed through the frame and said lever when locked with either end of the latch projection and a device adapted to be engaged by said latch, substantially as and for the purposes stated.

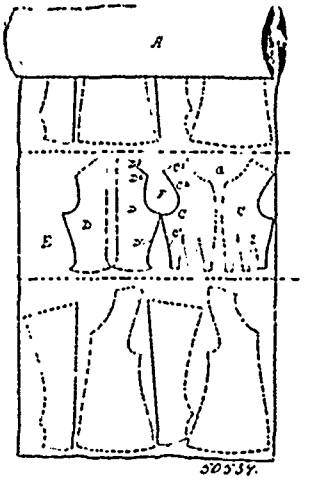
No. 50,538. Machine for Upsetting Arms of Carriages and Buggies. (*Machine pour refouler les bras de voiture.*)



Donald Ewen McLaurin, Tiverton, Ontario, Canada, 9th November, 1895; 6 years.

Claim.—A device for upsetting carriage and buggy arms, comprising a box A, with slot G, combined with countersunk head slide C, and with screw D, and crank F, and box L, all formed, arranged and combined substantially as and for the purpose hereinbefore set forth.

No. 50,539. Fabric. (*Tissu.*)

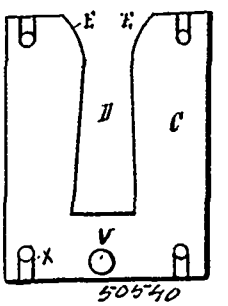


Annesley Keneally, Bushey Grove, England, 9th November, 1895; 6 years.

Claim.—1st. As a new article of manufacture, a roll or piece of fabric bearing thereon a series of outline patterns of two parts necessary to form a series of complete garments, substantially as and for the purpose specified. 2nd. As a new article of manufacture, a roll or piece of fabric bearing thereon a series of outline patterns of the parts necessary to form a series of complete garments, lines being marked across the roll to indicate where the material must be cut to sever a complete garment, substantially as and for the purpose specified.

No. 50,540. Pant-Leg Holder.

(*Porte-jambe de pantalon.*)



William Stuart Foster, Kalamazoo, Michigan, U.S.A., 9th November, 1895; 6 years.

Claim.—In a pant-leg holder, a catch-device, comprising a slotted-plate and a catch-plate, the catch on the catch-plate being longitudinally concaved and having the overflaring edges forming the side-shoulders, and provided with the end shoulders, one of which is abrupt and the other inclined, substantially as set forth.

No. 50,541. Process of Reducing Caseine in Milk.

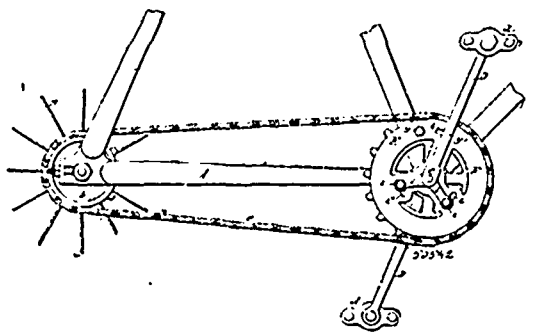
(*Procédé pour réduire la caséine dans le lait.*)

Dr. Gustav Gaertner, Schulerstrasse, Austria, 11th November, 1895; 6 years.

Claim.—1st. A process for the reduction of the proportion of caseine contained in animal milk, at the same time maintaining or regulating the proportion of fat, said process consisting in diluting natural animal milk with as much of a liquid free of caseine as to reduce to the desired proportion the caseine contained in the mixture, then in treating the mixture in a centrifugal separator, the outflow of the specially lighter final product being regulated so as to control the proportion of fat contained in the same, substantially as hereinbefore described and for the purpose stated. 2nd. A process for the treatment of natural animal milk, consisting in first treating in a centrifugal separator the natural animal milk without any addition, the apparatus being regulated as hereinbefore stated, and in then adding to the resulting cream or rich milk, a liquid containing no caseine, substantially as hereinbefore described. 3rd. The process

of treating animal milk to reduce the proportion of caseine and to maintain or regulate the proportion of fat, substantially as herein described and for the purpose stated.

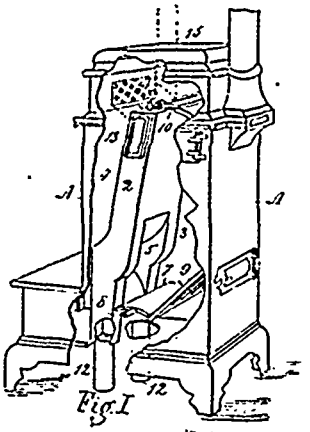
No. 50,542. Velocipede Brake. (*Frein de vélocipede.*)



Robert Scott Anderson, Toronto, Ontario, Canada, 11th November, 1895; 6 years.

Claim.—1st. The combination with a velocipede frame provided with an inner brake member, of a driving member, a driven member loosely connected with the driving member and an outer brake member connecting the driving member with the driven member and capable of movement toward and from the inner brake member, substantially as set forth. 2nd. The combination with a velocipede frame provided with a bearing and a shaft journalled in said bearing, of a drum secured to said frame, a driving wheel mounted loosely around said shaft, a crank secured to said shaft and loosely connected with said wheel, and a brake band surrounding the outer side of the brake drum and secured with its rear end to the driving wheel and with its front end to said crank, substantially as set forth. 3rd. The combination with a velocipede frame provided with a bearing and a shaft journalled in said bearing, of a brake drum secured to said frame, a driving wheel mounted loosely around said shaft, a brake band surrounding the outer side of the brake drum and connected at its rear end to said driving wheel, a crank secured to said shaft and provided with radial arms, a pin connecting the front end of the brake band with the crank and passing through a segmental slot in the driving wheel and pins secured to said arms and also arranged in segmental slots in the driving wheel, substantially as set forth.

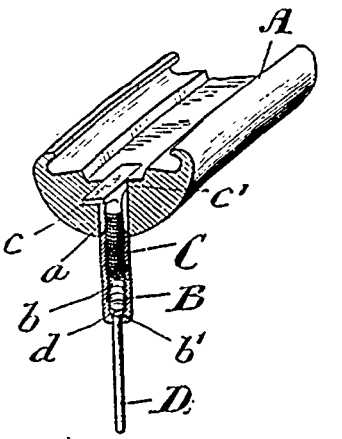
No. 50,543. Heating Stove. (*Poêle.*)



Frank V. Knauss, Portsmouth, Ohio, U.S.A., 11th November, 1895; 6 years.

Claim. In a heating stove the combination of the herein described magazine for receiving and roasting soft coal or other fuel and liberating the constituent gases thereof, with an adjoining chamber for burning said gases, a hot air chamber interposed between the said fuel magazine and combustion chamber provided with an opening for the passage of the gases from the burning fuel to the said combustion chamber, an air duct provided with suitable perforations adapted to reinforce the gases with atmospheric air, deflecting plates within the hot air chamber and means for utilizing and distributing the resultant heat, substantially as and for the purpose herein set forth.

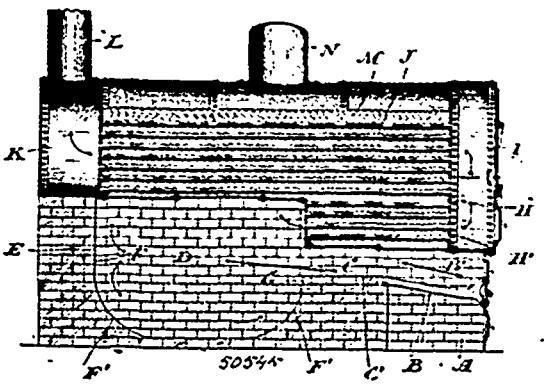
No. 50,544. Detachable Spoke for Wheels.
(*Rais de roue.*)



Frederick Samuel Thring, Toronto, Ontario, Canada, 11th November, 1895; 6 years.

Claim. 1st. In a vehicle wheel, a spoke with a head formed thereon, the inner end of the spoke being detachably connected to the hub, in combination with a threaded nipple sleeved on the spoke and provided with a shoulder to form a bearing for the outer head, means being provided for adjustably connecting the nipple to the rim, substantially as described and for the purpose specified. 2nd. In a vehicle wheel, the combination with the rim A, of the unthreaded spoke D, having outer head d, inner head d^1, and curved neck d^{11}, the threaded nipple B, the screw C, with squared head c, designed to fit into a slot c^1, and to pass through a hole a, formed in the rim, the hub E, and eyelets F, substantially as described. 3rd. In a vehicle wheel, the unthreaded spoke D, adjustably connected at its outer end to the rim and provided with an inner head d^1, and curved neck d^{11}, in combination with the hub E, in which is formed eyelet F, comprising the hole f, and slot f^1, substantially as described and for the purpose specified. 4th. In a vehicle wheel, the unthreaded spoke D, detachably connected to the hub, and provided with an outer head d^1, in combination with nipples B, threaded at b, and having shoulder b^1, the screw C, with squared head c, and rim A, with slot c^1, and hole a, formed therein, substantially as described and for the purpose specified. 5th. In a vehicle wheel, the rim A, with holes a, in combination with threaded screws C, designed to grip the rim so as to prevent turning, the nipples B, with threads b, and shoulders b^1, the unthreaded spokes D, with outer heads d, and inner heads d^1, curved necks d^{11}, the hub E, with eyelets F, comprising the holes f and slots f^1, substantially as described and for the purpose specified.

No. 50,545. Furnace. (*Fournaise.*)

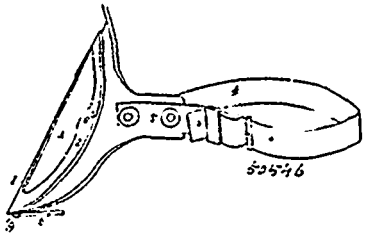


John Walter Flavell Sole, Guelph, Ontario, Canada, 11th November, 1895; 6 years.

Claim.—1st In a device of the class specified, the combination of a combustion chamber closed at its rear end, against which the heated and liberated gases from the fire chamber may be projected in such a manner as to be deflected, and a boiler provided with a series of short tubes so located as to be immediately over the fire bridge wall and the fire chamber, and forming outlets through which the inflamed and deflected gases pass to the chamber in the front of the boiler, then through the long tube of the boiler to the rear chambers and smoke stack, substantially as described and

specified. 2nd. In a device of the class specified, a combustion chamber having its rear end completely closed so as to deflect and throw back the heat and liberated gases, and the outlet therefrom located immediately over the fire bridge wall and the fire chamber, so that the outflow of gases inflamed in the combustion chamber may pass to the front of the boiler in a direction opposite to that in which they entered the combustion chamber, substantially as described and for the purpose specified. 3rd. A furnace so constructed that the draft from the fire chamber may enter in an oblique direction and provided with a combustion chamber having its rear end completely closed, and the outlet therefrom immediately located over the fire bridge wall and the fire chamber so that the outflow of inflamed gases may pass to the front of the boiler in a direction opposite to that in which they entered the combustion chamber, substantially as described and for the purpose specified. 4th. In a device of the class specified, the combination of the ash chamber A, the grate B, the inlet C, between the fire bridge wall C^1, and the boiler H, the combustion chamber D, having its rear wall E built up to the boiler so as to close the rear end, short tubes H^1 formed in the lower part of the boiler H, front chamber I, long tubes J, rear chamber K, and smoke stack L, substantially as described and for the purpose specified.

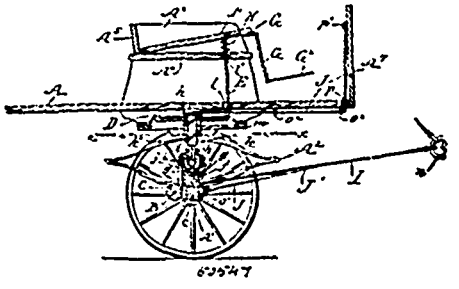
No. 50,546. Horse Boot. (*Botte à cheval.*)



Joseph Duffy, Terre Haute, Indiana, U.S.A., 11th November, 1895; 6 years.

Claim.—In a horse boot, the combination with a leather or other flexible shield of a wear plate thereto, and a spur hinged to said plate adapted to be inserted between the hoof and shoe, substantially as set forth.

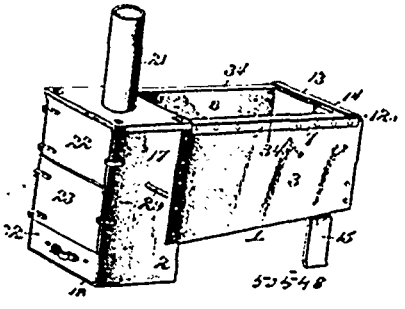
No. 50,547. Vehicle Attachment for Stopping Horses.
(*Attaché de voiture pour arrêter les chevaux.*)



Joseph Aloysius Mullen, New York, State of New York, 11th November, 1895; 6 years.

Claim.—1st. The vehicle attachments for checking horses, herein shown and described, comprising reins adapted to be secured to the harness of the horse, operative devices connected with the vehicle wheels, and adapted to be connected with said reins, whereby the revolution of the vehicle wheels is caused to tighten said reins and to check the animal, and means for throwing the operative devices into or out of engagement with the wheels, substantially as shown and described. 2nd. The vehicle attachments for checking horses herein shown and described, comprising operative devices, adapted to be thrown into contact with or disengaged from the hubs of the wheels, reins adapted to be connected with the harness of the horse, and to be secured to said operative devices, and means whereby said operative devices may be thrown into or out of engagement with the hubs of the wheel, said parts being constructed, combined and arranged, as herein described, and as shown in Figs. 1 to 3, of the drawing. 3rd. The vehicle attachments for checking horses, herein shown and described, comprising operative devices, adapted to be thrown into contact with or disengaged from the hubs of the wheels, reins adapted to be connected with the harness of the horse and to be secured to said operative devices, and means whereby said operative devices may be thrown into or out of engagement with the hubs of the wheel, said parts being constructed, combined and arranged as herein described, and as shown in Figs. 4 to 7, inclusive. 4th. A vehicle attachment for checking horses, comprising a shaft gearing with the wheel hubs, to revolve therewith, spools or drums upon said shaft, reins adapted to be connected to the harness of the horse, and secured to said spools or drums, an auxiliary seat above the vehicle seat and connected with the spools or drums so as to maintain the same in revoluble relation with the hubs when the seat is raised, and release the same from connection therewith when the seat is depressed, and means whereby said seat is normally raised, substantially as shown and described. 5th. In a vehicle attachment for checking horses, the combination therewith, of sliding sleeves mounted on the forward axle adjacent to each wheel, drums connected with said sleeves and adapted to revolve thereon, each of said drums being provided on its outer side or surface with projecting teeth, which are adapted to interlock with corresponding teeth formed on the hubs of the wheels, and means for operating said drums to cause them to engage with said hubs and reins connecting said drums with the harness of the animal, said parts being constructed, combined and arranged as herein described, and as shown in Figs. 4 to 7, inclusive. 6th. The combination with a wagon or other vehicle, of a sliding drum, mounted on one of the axles and adapted to engage with the hub of one of the wheels, and means for operating said drum, whereby it may be connected with and revolved by the hub, said parts being constructed and arranged substantially as shown and described. 7th. The combination with a wagon, carriage or other vehicle, of drums mounted on the forward axle adjacent to the wheels, on each side said drums being connected with sliding sleeves and adapted to revolve thereon, and said drums being each provided on the outer surface thereof, with teeth adapted to engage with corresponding teeth formed on the hubs of the wheels, and said sleeves being provided with extensions in which are mounted eccentrics, rods or bars connected with said eccentrics, and extending forward and upward, and provided with crank arms by which they are operated, said crank arms being pivotally connected with a rod or bar, and said drums being provided with lines or reins which are adapted to be wound thereon, and also to be connected with the bridle bit, substantially as shown and described.

No. 50,548. Food Cooker, etc.
(*Appareil à cuire les aliments, etc.*)



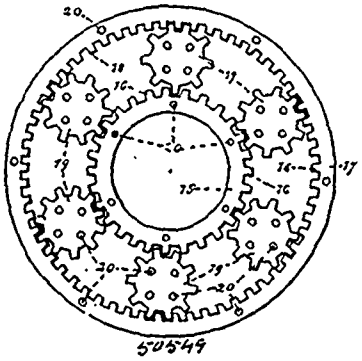
Gottlieb Schneider, Kendallville, Indiana, U.S.A., 11th November, 1895; 6 years.

Claim.—1st. A device of the character described, comprising a vertically arranged fire-box, and a relatively horizontal smoke-box forming a continuation of the fire-box, and having longitudinally and inwardly extending portions at the top edges of and a short distance from the bottom of its sides, a pan or boiler supported upon the lower inwardly extending portions and of less width than the distance between the sides of the smoke-box, and having a hot air space at its bottom, ends and sides, and a horizontal partition arranged in the fire-box about in the plane of the lower inwardly extending portions and provided with a damper controlled opening, whereby the heat can be compelled to pass around the said pan, or directly through the fire-box, substantially in the manner set forth, for the purpose described. 2nd. A device of the nature specified, comprising a vertically disposed fire box, and a relatively horizontal smoke-box, the latter having upper and lower inwardly extending portions at its sides, a pan or boiler located within the upper portion of the smoke-box and supported upon the lower inwardly extending portions, and having a hot air space at its bottom, ends and sides, a fire grate removably inserted within the lower portion of the fire-box, a smoke stack communicating with the upper portion of the fire-box, and a horizontal partition removably supported within the fire-box and located in the place of the said lower inwardly extending portions, and having a damper-controlled opening, whereby the heat may be caused to circulate around the said pan or boiler, or pass directly through the fire-box to the said smoke stack, substantially as set forth, for the purpose described. 3rd. In a food cooker, the herein described pan, a boiler, comprising similar side pieces which have their bottom and end portions bent inwardly and overlapping and secured together by having fastenings passed through the overlapping edge portions, the bottom of the device having a longitudinal depression in which is fitted a plate, and having a channel iron placed exterior to the depressed part, the said plate and channel iron being secured together by positive means, substantially as set forth. 4th. The herein specified device for the purposes aforesaid, comprising a fire-

box having its sides provided with inner extensions, a fire grate, and a horizontally-disposed partition removably supported upon the saide inner extensions and the partition being provided with a damper-controlled opening, a smoke box extending horizontally from the fire-box and provided with inner flanges at the top and a short distance from the bottom edges at its sides, a removable plate for closing the rear portion of the smoke box, and a pan, or boiler, supported within the smoke box by the lower side extensions and properly positioned by the top side extensions, and having an outer flange at its upper end, and said pan, or boiler, being surrounded at its bottom, ends and sides by a hot-air space through which the heat and products of combustion are caused to circulate by the said damper controlling the opening in the horizontal partition, substantially as set forth.

No. 30,549. Axle Bearing and Hub for Bicycles.

(*Coussinet d'essieu et moyeu de roue de bicycle.*)



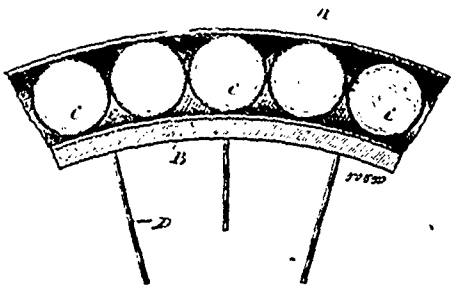
Amos C. Stilson, Bradford, Pennsylvania, U.S.A., 11th November, 1895; 6 years.

Claim.—1st. In a bicycle axle bearing, the hub consisting of a hollow cylinder provided at each end with a cylindrical chamber of a larger diameter than the hollow cylinder having an annular flange surrounding the periphery, and provided with screw-threaded caps, substantially as and for the purpose hereinbefore set forth. 2nd. In a bicycle axle bearing, the combination of the hub, consisting of a hollow cylinder provided at each end with a cylindrical chamber of a larger diameter than the hollow cylinder, having an annular flange surrounding the periphery and provided with a screw-threaded cap, and the axle formed with the central portion of a larger diameter than the ends, and of a lesser diameter than the passage-way through the hollow cylinder, the ends of which are provided with screw-threads, substantially as and for the purpose hereinbefore set forth. 3rd. In a bicycle axle bearing, the combination of the large track rings, having the rim provided with teeth on its inner periphery placed between them, the rollers having the pinions placed between them, the small track rings, having the ring with teeth on its outer periphery placed between them, all fastened together respectively by rivets or their equivalents, substantially as and for the purpose hereinbefore set forth. 4th. In a bicycle axle bearing, the combination of the large track rings, having the rim provided with teeth on its inner periphery placed between them, the rollers having the pinions placed between them, the small track rings, having the ring with teeth on its outer periphery placed between them, all fastened together respectively with rivets or their equivalents, and the axle formed with the central portion of a larger diameter than the end portions and of a lesser diameter than the passage-way through the hollow cylinder, the ends of which are provided with screw-threads, substantially as and for the purpose hereinbefore set forth. 5th. In a bicycle axle bearing, the combination of the hub, consisting of a hollow cylinder provided with cylindrical chamber of a larger diameter than that of the hollow cylinder, having an annular flange surrounding the periphery and provided with screw-threaded caps, the axle formed with the central portions of a larger diameter than the end portions and of a lesser diameter than the passage-way through the hollow cylinder, the end portions being provided with screw threads, and the large track rings, having the rim provided with teeth on its inner periphery placed between them, the rollers having the pinions placed between them, the small track rings, having the ring with teeth on its outer periphery placed between them, all fastened together with rivets or their equivalents, substantially as and for the purpose hereinbefore set forth.

No. 30,550. Pneumatic Tire. (*Bandage pneumatique.*)

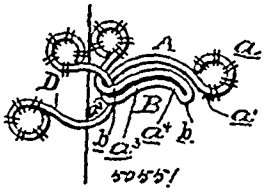
Phillip Henry Jenkins and Thomas Jenkins, both of Toronto, Ontario, Canada, 11th November, 1895; 6 years.

Claim.—1st. In a pneumatic tire, a series of receptacles of elastic material adapted to contain air, and held in operative position on the rim of the wheel by suitable means, substantially as described and for the purpose specified. 2nd. In a pneumatic tire, a series of hollow rubber balls containing air and secured in operative position on the rim of the wheel by suitable means, substantially as and for the



purpose specified. 3rd. In a pneumatic tire, a series of independent air-tight hollow rubber balls containing air and secured in operative position in close contact with each other, on the rim of the wheel by means of an outer covering, substantially as described and specified. 4th. A pneumatic tire comprising the following elements: the outer covering A, and means for securing the same to the rim, and a series of independent hollow rubber balls C, enclosed by the covering, substantially as described and specified.

No. 30,551. Hook and Eye. (*Crochet et œillet.*)

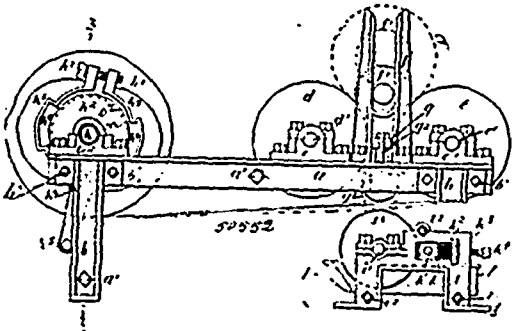


The Singer Safety Hook and Eye Company, assignee of Julius Berkey, both of Grand Rapids, Michigan, U.S.A., 11th November, 1895; 6 years.

Claim. 1st. A hook consisting of a shank curved laterally substantially throughout its length, a tongue arranged at one side of the shank and curved laterally toward and substantially parallel with the concaved edge of the shank, its outer portion approaching in relative close proximity to the outer portion of the shank, whereby a restricted throat is formed, substantially as described. 2nd. A hook constructed of a single piece of wire and consisting of a shank laterally curved throughout its length and having an eye at its end, a tongue arranged at one side of the shank and curved laterally substantially throughout its length in the direction of the concaved edge of the shank, its outer end portion approaching in close proximity to the outer portion of the shank, whereby a restricted throat is formed, and a loop formed with the opposite end of the wire at a point adjacent to the plane of the heel of the hook, substantially as described. 3rd. A hook having a laterally curved shank and a laterally curved tongue laying at one side of the plane of the shank, substantially as described.

No. 30,552. Dampening Apparatus.

(*Appareil à refroidir.*)

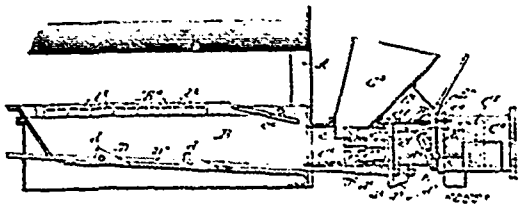


The Canadian Fibre Chamois Company, Montreal, Quebec, assignee of Arthur Stafford, Lancaster, Ontario, both in Canada, 11th November, 1895; 6 years.

Claim.—1st. In a dampening apparatus, the combination of a carrier, draw-off mechanism, moistening mechanism and means for operating the draw-off mechanism, for the purpose set forth. 2nd. In dampening apparatus, the combination of a removable carrier, draw-off mechanism, moistening mechanism and means for operating such draw-off mechanism, for the purpose set forth. 3rd. In dampening apparatus, the combination of a carrier, draw-off mech-

anism consisting of a removable receiver roll and one or more friction rolls in contact therewith, moistening mechanism and means for operating such friction roll or rolls, for the purpose set forth. 4th. In dampening apparatus, the combination of a carrier-draw-off mechanism, regulable moistening mechanism and means for operating such draw-off mechanism and for regulating such moistening mechanism, for the purpose set forth. 5th. In dampening apparatus, the combination of a removable carrier, draw off mechanism consisting of a removable receiver roll and a friction roll in contact therewith, moistening mechanism and means for operating such friction roll, for the purpose set forth. 6th. In dampening apparatus, the combination of a removable carrier, draw-off mechanism, regulable moistening mechanism and means for operating such draw-off mechanism and regulating such moistening mechanism, for the purpose set forth. 7th. In dampening apparatus, the combination of a carrier, draw-off mechanism consisting of a removable receiver roll, and one or more friction rolls in contact therewith, regulable moistening mechanism and means for operating such friction roll or rolls and regulating such moistening mechanism, for the purpose set forth. 8th. In dampening apparatus, the combination of a removable carrier, draw-off mechanism consisting of a removable receiver and friction roll or rolls in contact therewith, regulable moistening mechanism and means for operating such friction roll or rolls and regulating such moistening mechanism, for the purpose set forth. 9th. In dampening apparatus, the combination of a removable carrier, draw-off mechanism consisting of a removable receiver roll and a friction roll in contact therewith, regulable moistening mechanism, cutter mechanism and means for operating such cutter mechanism and friction roll, and regulating such moistening mechanism, for the purpose set forth. 10th. In a dampening apparatus, a rotary carrier for the material to be dampened, a rotary draw-off, moistening mechanism, and means for controlling and regulating the speed of rotation of said carrier and draw-off, for the purpose set forth. 11th. In a dampening apparatus, a rotary carrier for the material to be dampened having annular friction surfaces and removable and adjustable tension clips adapted to be secured about said friction surfaces with varying degrees of pressure thereon, for the purpose set forth. 12th. In a dampening apparatus, a rotary carrier for the material to be dampened, consisting of a hollow cylindrical core, having its ends detachably connected to trunnions suitably supported, and means for detachably connecting such trunnions and core together, for the purpose set forth. 13th. In a dampening apparatus, the rotary carrier for the material to be dampened, consisting of a hollow cylindrical core having its ends detachably connected to trunnions suitably supported, and having annular friction surfaces and removable and adjustable tension clips adapted to be secured about said friction surfaces with varying degrees of pressure thereon, and means for detachably connecting such trunnions and core together, for the purpose set forth. 14th. In a dampening apparatus, a rotary carrier for the material to be dampened, a rotary draw-off, moistening mechanism of roller form and a drier bar of varying diameter, and means for controlling and regulating the speed of rotation of said carrier and draw-off, for the purpose set forth. 15th. In a dampening apparatus, a rotary carrier for the material to be dampened, moistening mechanism of roller form and a drier bar of varying diameter for controlling the extent of moisture carried by such moistening roller, for the purpose set forth. 16th. In a dampening apparatus, moistening mechanism of roller form and a drier bar of varying diameter for controlling the extent of moisture carried by such roller, for the purpose set forth. 17th. In a dampening apparatus, moistening mechanism of roller form, an adjustable drier bar of varying diameter for controlling the extent of moisture carried by such roller, and means for adjusting such drier bar, for the purpose set forth. 18th. In a dampening apparatus, the combination with the supporting frame having elongated journal bearings therein, of one or more friction rolls journalled in stationary bearings, and a take-up roll journalled in said elongated bearings, for the purpose set forth. 19th. In a dampening apparatus, a rotary moistening device, the speed of rotation of which can be varied, for the purpose set forth. 20th. In a dampening mechanism, the combination of a presser roller, a slide rod located above same, means for loosely connecting such presser roller and slide rod together, and such slide rod having inclined planes on its upper side, for the purpose set forth.

No. 50,553. Mechanical Stoker. (*Chauffeur mécanique.*)

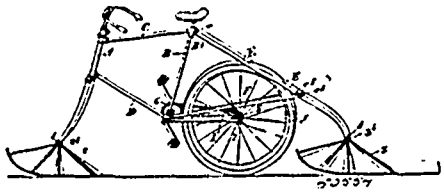


Fred A. Daley, La Grange, assignee of John M. Roe, Austin, both of Illinois, U.S.A., 11th November, 1895; 6 years.

Claim.—1st. In a mechanical stoker, the combination with a retort and a primary feed mechanism, of an auxiliary feed mechanism, located in said retort, and driving connection between said primary and auxiliary feed mechanism, substantially as described. 2nd. In a mechanical stoker, the combination with a retort and a primary feed mechanism, of an auxiliary feed mechanism, comprising a feed rod located in said retort, and movable longitudinally thereof, and means to impart a reciprocating movement thereto, substantially as described. 3rd. In a mechanical stoker, the combination with a retort or fuel magazine and a primary feed mechanism, of an auxiliary feed mechanism, located in said retort and comprising a rod or bar supported and longitudinally movable in bearings formed in the front and rear ends of said retort, lateral projections from said rod or bar and means to impart a reciprocal movement thereto, substantially as described. 4th. In a mechanical stoker, the combination with a retort and a feed-ram, of an auxiliary feed mechanism, located in said retort and comprising a rod or bar supported and longitudinally movable in bearings formed in the front and rear ends of said retort, projections from said rod or bar, and driving connection between said feed-ram and said rod or bar, whereby a reciprocating movement imparted to said feed-ram, will impart a corresponding movement to said rod or bar, substantially as described. 5th. In a mechanical stoker, the combination with a retort of substantially uniform depth and a primary feed mechanism, of an auxiliary feed mechanism, located in said retort and comprising a rod or bar supported and longitudinally movable in bearing formed in the front and rear ends of said retort, adjacent to the bottom thereof, lateral projections from said rod or bar and means to impart a reciprocating movement thereto, substantially as described. 6th. In a mechanical stoker, the combination with a retort or fuel magazine and a primary feed mechanism, of an auxiliary feed mechanism, located in said retort, adjacent to the bottom thereof, and comprising a rod or bar supported and longitudinally movable in bearings formed in the front and rear ends of said retort, lateral projections on said rod or bar, means to impart a reciprocating movement to said rod or bar and means to vary the travel thereof, substantially as described. 7th. In a mechanical stoker, the combination with a retort or fuel magazine and a feed-ram, of an auxiliary feed mechanism, located in said retort, adjacent to the bottom thereof, and comprising a rod or bar supported and longitudinally movable in bearings formed in the front and rear ends of said retort, lateral projections from said rod or bar and driving connection between said feed-ram and said rod or bar, said driving connection comprising a link secured to the end of said rod or bar, the free end of which is supported adjacent to a rigid projection or lug on said feed-ram, pins secured in said link, which project into the path of said projection on the feed-ram, said pins being interchangeable in a series of holes formed in said link, whereby the travel of said rod or bar may be varied, substantially as described. 8th. In a mechanical stoker, the combination with a retort of fuel magazine of substantially uniform depth and a feed-ram, of an auxiliary feed mechanism, located in said retort, adjacent to the bottom thereof, and comprising a rod or bar supported and longitudinally movable in bearings formed in the front and rear ends of said retort, lateral projections from said rod or bar and driving connection between said feed-ram and said rod or bar said driving connection comprising a link secured to the end of said rod or bar, the free end of which is supported adjacent to a rigid projection or lug on said feed-ram, pins secured in said link, which project into the path of said projection on the feed-ram, said pins being interchangeable in a series of holes formed in said link, whereby the travel of said rod or bar may be varied, substantially as described. 9th. In a mechanical stoker, the combination with a retort of substantially uniform depth and a feed-ram, of an auxiliary feed mechanism, located in said retort, adjacent to the bottom thereof, and comprising a rod or bar-supported and longitudinally movable in suitable bearings formed in the front and rear ends of said retort, lateral projections from said rod or bar, a forked link pivoted to the end of said bar rod, which projects without the furnace, a ring secured in the inside of the feed-ram adjacent to the end thereof remote from said furnace, a rigid projection therefrom which projects through a slot in the ram cylinder, the forked end of the link, pivoted to the auxiliary feed rod or bar, embracing said rigid projection on the feed ram and resting on a transverse pin secured therein, a series of holes formed in said link and pins interchangeably secured in said holes, one on each side of the projection on the feed ram, substantially as described. 10th. In a mechanical stoker, the combination with a retort or fuel magazine provided with tuyeres adjacent to its upper inner edges, means to supply air to said tuyeres, a primary feed mechanism, and an auxiliary feed mechanism, located in said retort, substantially as described. 11th. The combination in a furnace of an underfeed mechanical stoker, comprising a retort or fuel magazine, a primary feed mechanism, an auxiliary feed mechanism, located in said retort, tuyeres adapted to deliver air to said furnace adjacent to the upper inner edges of said retort, and means for supplying air under pressure to said tuyeres, the bottom of said furnace being either entirely closed, or partially closed, adjacent to the sides of said retort, substantially as described. 12th. The combination in a furnace of an underfeed mechanical stoker, comprising a retort or fuel magazine, of substantially uniform depth, a primary feed mechanism, an auxiliary feed mechanism, located in said retort, adjacent to the bottom thereof, comprising a rod or bar supported and longitudinally movable in suitable bearings formed in the front and rear ends of said retort, operative connection between said primary and auxiliary feed mechanisms, tuyeres adapted to deliver

air to said furnace adjacent to the upper inner edges of said retort and means to supply air under pressure. to said tuyeres, the bottom of said furnace being either entirely closed or partially closed, adjacent to the sides of said retort or fuel magazine, substantially as described. 13th. In a mechanical stoker, the combination with a feed-ram, rigidly connected to a piston rod affixed to the piston of a steam cylinder, of a valve gear for operating the valve controlling the ports of the steam cylinder, said valve gear comprising a lever pivoted at its lower end to the steam cylinder and to which the valve stem is connected above its pivoted point, a lever pivoted between its ends to the side of the ram cylinder in a substantially upright position, the lower end of said lever being connected by means of a link with a lug projecting from the bottom of the feed-ram through a slot in the ram cylinder, a rod pivoted to said lever above its pivotal point and passing through a hole in the lever to which the valve stem is attached, and nuts threaded to said rod on opposite sides of said lever so connected to the valve stem, substantially as described.

No. 50,554. Bicycle Sled. (*Traineau-bicycle.*)



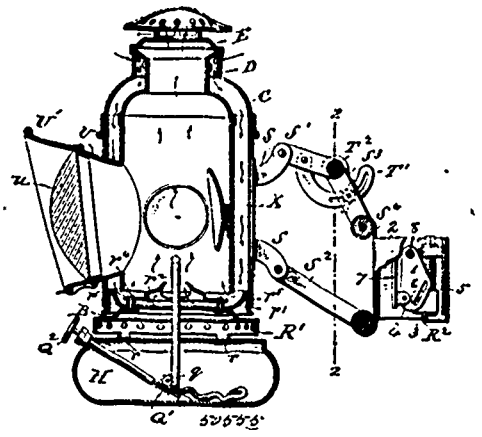
Franklin Clark and Henry Cornwell, both of Norwich, Ontario, Canada, 11th November, 1895; 6 years.

Claim.—1st. In a bicycle sled, the combination with the forked standard having a runner journalled on the axle thereof, as specified, of the seat standard provided with a long double brace secured thereto, and a double reach connecting it to the pedal sleeve, and a runner journalled on an axle at the lower end of the long double brace, as and for the purpose specified. 2nd. In a bicycle sled, the combination with the forked standard having a runner journalled on the axle thereof, as specified, and a rear runner suitably journalled on the frame, of the drive wheel swung on reaches journalled in the rear ends of the double reach, the forward end of which is supported on the pedal axle sleeve, and driving means from the pedal axle to the wheel, as and for the purpose specified. 3rd. In a bicycle sled, the combination with the forked standard having a runner journalled on the axle thereof, as specified, of the seat standard having the long double brace secured thereto, a double reach suitably connected at the rear end to the double brace, and having flat slotted front ends, a sleeve secured near the bottom of the seat standard and having rear off-sets, a bolt extending through the off-sets and nuts securing the forward end of the double reach in position on the bolt, and a runner journalled on the axle at the lower end of the long double brace, as and for the purpose specified. 4th. The combination with the runners journalled in and supporting the frame, as specified, of the double reach having the drive wheel journalled in the rear ends of the reach, and means connected with the pedal axle sleeve for exerting a downward pressure on the rear end of the reach, as and for the purpose specified. 5th. The combination with the runners journalled in and supporting the frame, as specified, of the double reach having the drive wheel journalled in the rear ends of the reach, the pedal sleeve provided with annular end discs h, and sleeves h^1, and the loop coiled spring K connected to the sleeve and disc and looped to a pin on the sleeve h^1, as shown and for the purpose specified. 6th. In a machine of the class described, the combination with the drive wheel and rim thereof, of a tire provided with prongs and means for fastening such tire to the rim, as and for the purpose specified. 7th. In a machine of the class described, the combination with the drive wheel and rim thereof, of a rubber tire provided with a metallic supplemental tire fitting within the groove, provided with prongs having the ends overlapping each other, the lower end and having a slot, a sleeve with a flat head, a countersunk screw extending through the overlapping ends of the tire into the flat-headed sleeve, and a nut on the inner threaded end of the sleeve, all arranged as and for the purpose specified.

No. 50,555. Bicycle Lantern. (*Lanterne de bicycle.*)

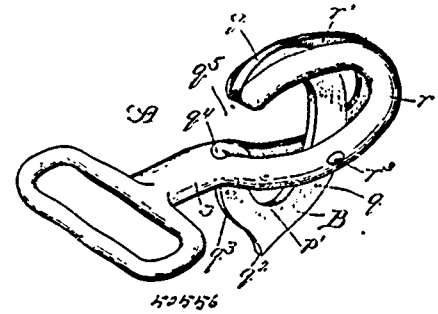
The Hitchcock Lamp Company, assignee of John W. Bragger, both of Watertown, New York, U.S.A., 13th November, 1895; 6 years.

Claim.—1st. In combination, in a lantern, an inner and an outer casing A and F, respectively with an intervening space X, the cap G fitted over the upper end of said outer casing and provided with a series of apertures, a Cap G^3 fitted over the top of said inner casing, and having an outwardly flaring portion which is connected to the upper end of cap C, a base portion carrying a burner having a plate J, whose outer circumference is disposed beneath the lower edge of the said inside casing, a slight space intervening between the two, substantially as shown and described. 2nd. In combination, with a lantern, the brackets S, the links S^2, pivoted to the lower brackets S, the clamp S^4, pivoted to arms S^2, of the toggle links S^1, each connected at an end to a bracket S, and



the links S^3, pivoted to the member S^4, of the adjustable thumb-screw T^2, hollow cylinder T^3, adapted to hold the adjacent ends of the said links, and allow of a tilting of the said lantern, all substantially as shown and described. 3rd. In a lantern the combination with the oil tank of a wick holder, a shaft carrying a pinion wheel mounted thereon, spur wheels on said wheel shaft, of an obliquely disposed turning post having a worm at its lower end designed to mesh with the said pinion, and a turning wheel at its other end, substantially as shown and described. 4th. In a lantern the combination with the base portion, the lugs r, the perforated ring R^1, mounted on said lugs, the lugs r^1, integral with said ring, the shell supporting plate mounted on said lugs r^1, of the burner plate R, having a widened aperture, substantially as shown and described. 5th. In combination with a bicycle lantern, having the brackets S, the links S^1 and S^2, S^3 and S^4, of the curved segment T, having an elongated slot, and a thumb-screw T^1, adapted to engage in said longitudinal slot, whereby the lantern may be held at different angles, substantially as shown and described. 6th. In combination with the brackets of a lantern, the boxing 2, the screw 1, journalled therein, the plate 3, having a screw-threaded aperture through which said screw works, the lug 4, on said plate, of the plate 6, pivoted on the pin 8, the oblique slot 5, in said plate 6, and the clamping plate 7, carried by the plate 6, and means whereby said screw may be turned, all substantially as shown and for the purpose set forth.

No. 50,556. Snap-Hook. (*Crochet à ressort.*)



Wesley Eckert and Charles Howard Freeman, both of Elk Point, South Dakota, U.S.A., 13th November, 1895; 6 years.

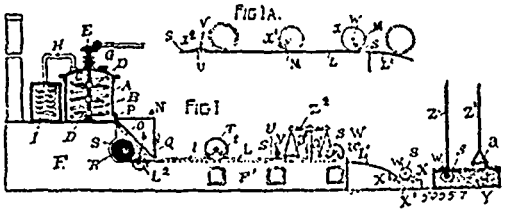
Claim.—A snap-hook comprising, in combination, the shank portion s, bifurcated hook portion r, having the slot r^1 and stop r^2, C-shaped latch pivoted between its ends in the slot and presenting a bearing surface p, and concave bearing surface p^1, at opposite sides of the pivot, the stops q^2, q^1, on the latch, to engage the stop r^2, the forks of the hook portion bearing yieldingly against opposite sides of the latch, and the parts being constructed and combined to operate substantially as and for the purpose set forth.

No. 50,557. Process of and Apparatus for Treating, Working and Handling Bituminous, etc. (*Procédé et appareil pour traiter, travailler et manier le bitume, etc.*)

Eugene Fitchué Badgley and Mrs. Arabelle Playfair Phillips, both of San Francisco, California, U.S.A., 13th November, 1895; 6 years.

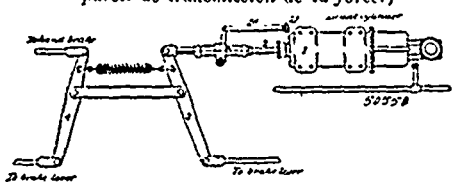
Claim.—1st. The combination of a furnace having a lateral extension or table, a mixer arranged over the furnace, a feeder at the end of the table adjacent to the furnace and receiving compound from

the mixer, and a reel placed in rear of the feeder and below the mixer whereby it is brought close to the furnace and source of heat,



said reel carrying a roll of suitable material adapted to pass under the feeder and receive the plastic compound therefrom. 2nd. The combination of a table, a feeder arranged over the table and discharging onto the same, a mixer located at the end of the table and above and discharging into the feeder, and a vertically adjustable ironing roller movable over the table to compress the compound thereon. 3rd. The combination of a table, a feeder arranged above the table, a mixer located at the end of the table above the feeder and discharging into said feeder, a reel located in the rear of the feeder and carrying a roll of suitable material adapted to pass under the feeder and receive plastic compound therefrom, a mandrel at the opposite end of the table upon which said material and the compound deposited thereon is wound, an ironing roller mounted upon and movable over the table between the feeder and the mandrel, and means for heating the table, the mixer and the feeder. 4th. The combination of a table upon which compounds may be spread, a grooved scraper placed on said table, and a rotary cutter adapted to co-act with said scraper to cut the compounds. 5th The combination of a mixer, a hot table, a feeder receiving a compound from the mixer and discharging it onto the table, a mandrel for forming articles from the compound, a water-pan, and an absorbent roller arranged in the water-pan and adapted to receive moisture and transmit it to the article on the mandrel. 6th. The combination of a hot table, a feeder, a sheet of suitable material adapted to pass under the feeder and to receive a plastic compound therefrom over the table, and an intermediate basin containing a lighter compound through which the material is passed. 7th. The combination of a hot table, a feeder, a roll of material adapted to pass under the feeder and to receive a plastic compound therefrom over the table, an intermediate basin also containing a plastic compound through which said material is passed, and auxiliary plates supporting the material through the compound in the basin and onto the table. 8th. The herein-described mode of treating, working and handling bituminous or similar compounds and articles made therefrom, which consists, first, in tempering and mixing said compounds, simultaneously drying sheets of flexible material, then working the said compounds and sheets together in a hot state upon a structure and with tools and appliances kept at a higher temperature and fashioning the same into various articles of manufacture, and finally subjecting the manufactured articles to the action of a cooling agent to hasten their setting and hardening, substantially as specified.

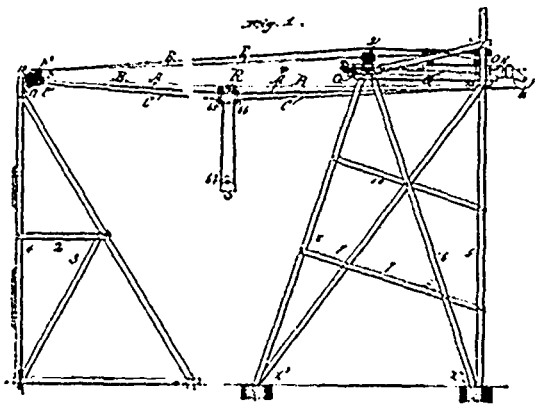
No. 50,558. Slack Adjuster for Power Transmitting Machinery. (*Compensateur pour appareil de transmission de la force.*)



Charles Goodwin Emery, New York, assignee of Edward G. Shortt, Carthage, and Joseph Eli Normand, Watertown, all in New York, U.S.A., 13th November, 1895; 6 years.

Claim. 1st In an adjuster for compensating for wear, slack or similar variation in power transmitting machinery, the combination of a movable and fixed a connection part, and a worm and gear arranged between such parts and adapted upon operation of the worm to adjust such parts relatively. 2nd. The combination in an adjusting mechanism, of a fixed and a movable connection, a gear engaging the movable piece, a worm wheel meshing with said gear and devices for turning said worm by the movement of the mechanism carrying the adjuster. 3rd. The combination in an adjusting mechanism of a movable and a fixed connection, a gear and worm for connecting said connections and operating to adjust the same relatively, mechanism for turning said worm to effect said adjustment, and a casing, as the casing 5 and 6, for containing and protecting the movable parts of the adjuster. 4th. In combination in an automatic adjuster, a casing or similar supporting device, a connection part fixed to said casing and a connection part adjustable in and carried by the casing, a worm and gear mounted in the casing and adjustably uniting the fixed and movable connection parts. 5th. In combination with a power transmitting mechanism, an adjusting mechanism therefor consisting of a relatively fixed connection and a movable connection joining parts of said power mechanism, and of a worm and gear arranged between said connections and capable of operation to adjust them relatively.

No. 50,559. Aerial Hoisting and Transfer Apparatus. (*Monte-charge.*)



Willis Durwood Sherman, Brooklyn, New York, U.S.A., 13th November, 1895; 6 years.

Claim. 1st. In hoisting and transfer apparatus, the combination of a track shaped on a circular arc, a pivotal support at the centre of said arc, a carriage travelling on said track, a trolley bridge attached at one end to said carriage, and at the other end to said pivotal support, a trolley on said bridge and cables for operating said carriage and trolley, substantially as described. 2nd. In hoisting and transfer apparatus, the combination of a track shaped on a circular arc, a rack thereon, a carriage travelling on said track and provided with a pinion meshing with said rack, an endless cable for operating said pinion, and a drum for said cable, substantially as described. 3rd. In hoisting and transfer apparatus the combination of a track shaped on a circular arc, a pivotal support at the centre of said arc, a rack on said track, a carriage travelling on said track and provided with a pinion meshing with said rack, a trolley bridge attached at one end to said carriage, and at the other end to a pivotal support at the centre of said circular arc, a trolley travelling on said trolley bridge, a fall rope carried by said trolley, a carriage rope for operating said pinion, a trolley rope for operating said trolley, and drums for said carriage rope, said trolley rope and said fall rope. 4th. In hoisting and transfer apparatus, the combination of a track, a carriage adapted to travel thereon, a bridge operated by said carriage, a trolley adapted to travel on said bridge, and a fall rope carried by said trolley, a power shaft, and a hoisting engine adapted to be driven from said power shaft, and a main shaft and a plurality of drums which are adapted to be independently driven from said main shaft, and any two of which drums are also adapted to be simultaneously revolved in opposite directions, substantially as described. 5th. In hoisting and transfer apparatus, the combination with a main cable or bridge and a trolley, of an extensible boom adapted to carry an end of the main cable and to reciprocate in a line which is substantially parallel with the main cable whereby the effective length of the main cable can be increased or diminished as described. 6th. In hoisting and transfer apparatus, the combination of a track arranged on a circular arc, a carriage adapted to travel thereon, a main cable or bridge carried by said carriage, and an extensible boom arranged to oscillate about the centre of said track and carry an end of said cable, also to reciprocate in a direction substantially parallel to the main cable, substantially as described. 7th. In hoisting and transfer apparatus, the combination of a track arranged on a circular arc, a carriage adapted to travel thereon, a cable carried by said carriage, a boom adapted to carry an end of said cable, and housings for said boom, one of which is arranged to oscillate about the centre of said track and the other to move laterally in the plane of said track. 8th. In hoisting and transfer apparatus, and in combination with a cable bridge, a linearly reciprocating boom, formed as a hollow tube, equipped with sheaves 26, 27, 28, and adapted to permit said cable bridge to pass through said tube. 9th. In hoisting and transfer apparatus, the combination with the timber 20, the boom and the operating rope E, of a housing N^1, supporting said boom and supported by and sliding on said timber 20, a sheave 21 journalled in said housing and adapted to be operated by said rope E, sheave I, and connections for driving sheave I, from sheave 21, and a stationary boom cross rope wound on sheave I. 10th. In hoisting and transfer apparatus, the combination of a circular track, a carriage adapted to travel on said track, an extensible boom adapted to oscillate about the centre of the track, and a main cable led from said carriage to the fore end of the boom, thence to the rear end thereof, and thence to the centre of said track. 11th. In hoisting and transfer apparatus, the combination of a circular track, a carriage adapted to travel thereon, an extensible boom adapted to oscil

late about the centre of the track, and a main cable led from said carriage to the fore end of said boom and thence to a block in a loop of an auxiliary cable, the lengths of which lead to the rear end of the boom, and thence to points at the centre of oscillation to either side of said boom. 12th. In hoisting and transfer apparatus, the combination of a track-shaped on a circular arc, a carriage adapted to travel thereon, and an endless rope for operating said carriage led with parallel lengths from said carriage to the centre of the track, and a drum for moving said rope. 13th. In hoisting and transfer apparatus, the combination of a track, a carriage adapted to travel thereon, an oscillatory boom, a cable or bridge carried by the carriage and boom, a trolley adapted to travel on said cable or bridge, a rope for operating the trolley rove therefrom back to the carriage, thence forward substantially parallel to the boom and to the centre of oscillation thereof, thence to a drum and back to the said centre of oscillation, thence forward to the fore end of the boom, and thence backward substantially parallel to the boom to the trolley, substantially as described. 14th. In hoisting and transfer apparatus, the combination with a track, carriage adapted to travel thereon, extensible boom and winch, of a fall rope led from the carriage through the trolley by the front end of the boom, thence to the rear end thereof, thence to the centre of oscillation of the boom, and thence to the winch. 15th. In hoisting and transfer apparatus, the combination with a track, an oscillatory extensible boom, a carriage and a trolley, of a main cable, a trolley moving rope, and a fall rope, and said cable and ropes each leading to the centre of the boom's oscillation, and being provided with three whips or lengths which are substantially parallel to the boom. 16th. The combination with the extensible boom, the carriage, the trolley, and the main cable or bridge supported by said boom and carriage, of the fall rope, the trolley moving rope, the carriage moving rope, and the boom extending rope, of a winch for the fall rope and drums for the other ropes, which said winch and drums are each arranged to be driven independently of the others. 17th. The combination with the extensible boom, the carriage, the trolley, and the main cable or bridge supported by said boom and carriage, of the fall rope, the trolley moving rope, the carriage moving rope, and the boom extending rope, of a constant motion main shaft, and a winch for the fall rope and drums for the other ropes, said winch and drums being each arranged to be independently driven from said main shaft. 18th. The combination in hoisting and transfer apparatus of a main shaft, gear trains driven therefrom and actuating a counter shaft in the reverse direction from the main shaft, loose gears on said main and counter shaft arranged to operate drums for the carriage and the trolley rope, and clutch mechanisms on said main and counter shafts for engaging and engaging said loose gears. 19th. In a hoisting and transfer apparatus, the combination with the main cable or bridge, the carriage supporting one end of said cable or bridge, the trolley, the fall rope, the rope for moving the trolley, and the rope for moving the trolley, and the rope for moving the carriage, of the drums for said trolley rope and carriage rope, a winch for the fall rope, a shaft and clutch mechanism for clutching said winch to said shaft so that it may be driven independently of said drums. 20th. In hoisting and transfer apparatus, the combination with a main shaft and gearing for actuating the drums of the several ropes, of a drum for operating the boom rope journalled in a frame adjacent to the gearing of one of the aforesaid drums, and said frame being pivotally supported, a train of gearing on said frame meshing with the gear of said boom rope drum, and one gear in said train being journalled in line with the pivot of said frame, and a lever for oscillating said frame about said pivot. 21st. In hoisting and transfer apparatus, the combination with a track, a carriage, and an extensible oscillatory boom, of a cable tramway suspended from said carriage and from the centre of oscillation of said boom and having a whip parallel to the boom and carried thereby, and also a whip from the rear end of the boom to the centre of oscillation therefor, substantially as described. 22nd. In hoisting and transfer apparatus, the combination with an extensible cable having a loop carried by a travelling boom, of a trolley rope having a length which extends from a sheave at one anchorage of the tramway to the outer end of the travelling support, and from thence has a loop that extends to a sheave at the other anchorage of the cable, whereby the effective length of the cable can be increased or diminished without changing the length of the trolley rope. 23rd. In a hoisting and transfer apparatus, the combination with an extensible cable tramway having a loop carried by a travelling boom of a fall rope which extends from an anchorage adjacent to one of the anchorages of the tramway to the outer end of the travelling support, and from thence has a loop that extends to a sheave at the outer anchorage of the tramway, whereby the effective length of the cable can be increased or diminished without changing the length of the fall rope.

No. 50,560. Carriage Pole Tip.

(*Embou de timon de voiture.*)

Daniel O. Fisher, Grand Rapids, Wisconsin, U.S.A., 13th November, 1895; 6 years.

Claim.—The combination with the pole tip 2, having a collar 3, and parallel lugs 4, rearwardly thereof, of a forwardly extending hook 5, having an inwardly turned point and provided at the heel with two parallel ears 6, a pintle 7, passing through said ears and

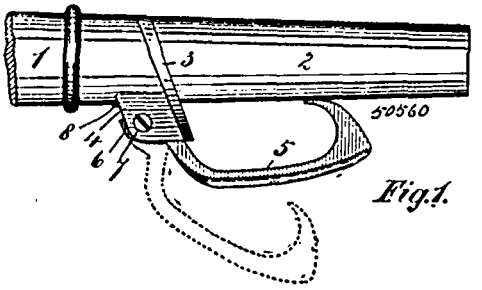
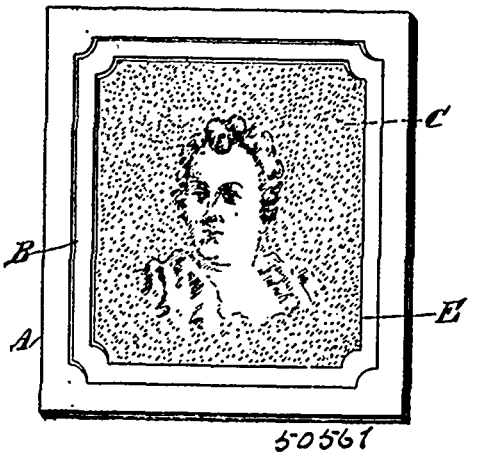


Fig. 1.

lugs, and a spiral spring 8, surrounding said pintle, to keep the free end of the hook in tensional contact with the tip.

No. 50,561. Picture. (*Image.*)

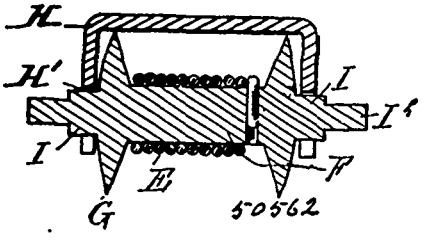
Fig. 1.



Ludwig Knoefel, New York, State of New York, U.S.A., 13th November, 1895; 6 years.

Claim.—As a new article of manufacture, a picture consisting of a white marble slab having a grained surface, a drawing produced on the said grained surface by a lithographic crayon, and a coating of varnish covering the drawing and grained surface, substantially as shown and described.

No. 50,562. Device for Straining and Spacing Fence Wires. (*Appareil pour bander et espacer le fil de fer pour clôtures.*)



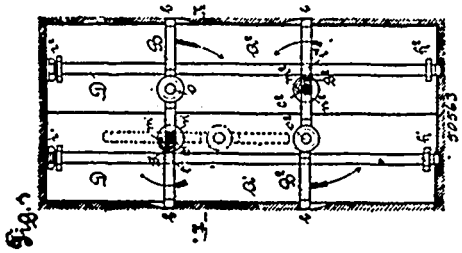
Elmer H. Stowell, Drayton Plains, and George W. Terry, Pontiac, both in Michigan, U.S.A., 13th November, 1895; 6 years.

Claim.—1st. A wire straining device comprising a spool to which the end of a wire is secured having sharpened flanges bearing against the post, shaft extensions at the end of the spool, having two squared sections I, I^2, and a yoke having bifurcated legs adapted to engage the squared section I, and a cross bar extending across the spool having teeth adapted to enter a post, substantially as described. 2nd. The combination with the spool F, and the wire, of a spring tension device comprising the two heads K, guide rod L, looped wire M, and spring M^1 between the heads, the rod and wire being secured to opposite ends of the wire, substantially as described.

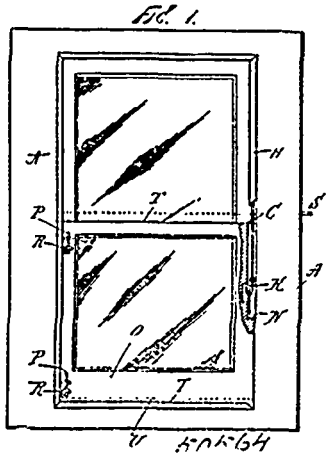
No. 50,563. Burglar-proof Fastening Device for Doors. (*Appareil à l'épreuve des voleurs pour portes.*)

Josef Wanek and Josef Patvon Tovis, both Esztergam, Hungary, 13th November, 1895; 6 years.

Claim.—1st. A burglar-proof door fastening device, comprising the cross-bars B^1, B^2 on the inner side of the door, and the vertical bars D^1, D^2, adapted to engage recesses *b* in the door frame, substantially as described. 2nd. In a door fastening device, the combination of a pair of cross-bars B^1, B^2, a door, a knob on said door adapted to shift the cross bars into a plane parallel with the door, locks c^1, c^2, to secure the bars in place, pins g^1, g^2, on the cross-bars and the vertical bolts D^1, D^2, substantially as described. 3rd. In a door fastening device, the combination of the vertical bolts D^1, D^2, the cross-bars B^1, B^2, the pins g^1, g^2, and the forks I^1, I^2, substantially as described.



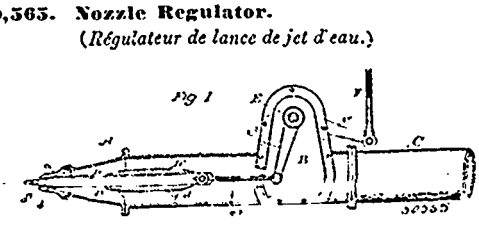
No. 50,564. Window Sash. (*Cadre de châssis.*)



Emily Jane Tichenor, Lake View, New Jersey, U.S.A., 13th November, 1895; 6 years.

Claim.—The combination with a window frame, of a sash vertically movable therein and provided with counterbalance weights, one side of said sash being provided with loops or eyes adapted to engage with the vertical hooks secured to the frame, and the opposite side of the sash being provided with a plate having a hole or perforation therein adapted to receive a hook connected with the cord or chain to which the counterbalance weight on said side is attached, substantially as shown and described.

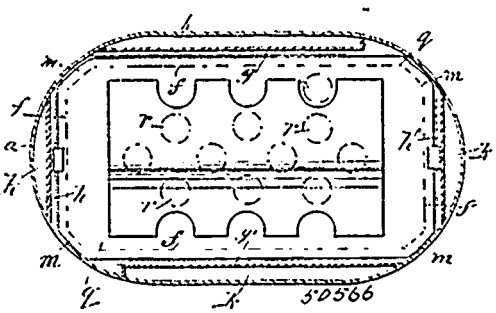
No. 50,565. Nozzle Regulator.
(*Régulateur de lance de jet d'eau.*)



André Chavanne, Grass Valley, California, U.S.A., 13th November, 1895; 6 years.

Claim.—1st. A nozzle regulator consisting of a nozzle having a conical tip, a plug mounted within the nozzle and slidable in the line of the axis thereof, said plug having a head corresponding to and adapted to fill, when projected, the conical exit of the nozzle or its tip, and having also an extension beyond said head, formed in portions of successively smaller diameters, whereby the issuing water is caused to assume an annular form concentric with the end of the plug, and its volume and force may be varied. 2nd. A nozzle regulator consisting of a nozzle having a conical tip, a plug slidable in the axis of the nozzle, and having a conical head conforming to and adapted to close, when projected, the conical tip of the nozzle, and having also an extension beyond said head formed in portions of successively smaller diameters, said portions joining each other by inclined or bevelled shoulders. 3rd. A nozzle regulator consisting of a nozzle having a conical tip, a plug lying and adapted to be moved in the line of the axis of the nozzle, and having a head with a forward extension formed in portions of successively smaller diameters adapted to control the nozzle exit, and the means for operating said plug consisting of an oscillating shaft having a crank arm connected with said plug and a second crank arm and an operating rod connected with said second crank arm. 4th. In combination with the nozzle having a conical tip, the water casing or chamber and water connection, a regulator for said nozzle consisting of a plug slidable in the line of the axis of said nozzle and having a head formed in portions of successively smaller diameters, adapted to control its exit, an oscillating shaft mounted within the casing or chamber and extending through a suitable stuffing-box to the outside, a crank arm on said shaft within the chamber or casing and having a connecting rod attaching it to the plug, a crank arm on the outer end of said shaft and an operating rod connected with said crank arm. 5th. In combination with the nozzle, having a conical tip, the water chamber or casing and water connection, a guide sleeve in the line of the axis of said nozzle, and lying within it, a plug mounted and adapted to slide in said guide sleeve and having a conical forward end with an extension therefrom formed in portions of successively smaller diameters adapted to control the nozzle tip, the oscillating shaft mounted within the casing or chamber and extending through a suitable stuffing-box to the outside, a crank arm on said shaft within the chamber or casing and having a connecting rod attacking it to the plug, a crank arm on the outer end of said shaft, and an operating rod or connection connected with said crank arm. 6th. The water nozzle, the chamber or casing, and the water connection as described, in combination with a regulator for the nozzle consisting of a sleeve within said nozzle and in the line of its axis, a plug or valve adapted to slide in said sleeve and having a forward end or head with a conical portion, and an extension formed with portions of successively smaller diameters, said head or end being adapted to control the exit of the nozzle tip, the oscillating shaft within the chamber or casing of the nozzle and extending through a suitable stuffing-box to the outside, a crank arm on said shaft within the chamber or casing and having a connecting rod attaching it to the plug or valve, a crank arm on the outer end of said shaft, and an operating rod connected with said crank arm.

No. 50,566. Clothes Boiler. (*Bouilloire à linge.*



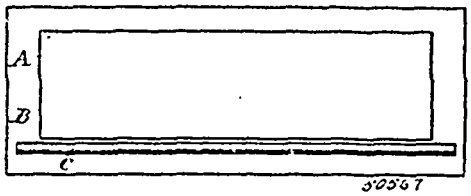
Alexander Adams, Montreal, Quebec, Canada, 13th Novemb 1895; 6 years.

Claim.—1st. A clothes boiler having a free water space at the bottom thereof and one or more passages leading from such water space to a point near the top of such boiler, and one or more valve-controlled passages leading from the interior of such boiler to such water space, substantially as and for the purpose set forth. 2nd. A clothes boiler having a perforated removable diaphragm extending across the interior a short distance from the bottom thereof to secure a free water space, means for supporting such diaphragm and means for opening and closing the perforations in same, and a central passage leading from such water space to a point near the top of the boiler, for the purpose set forth. 3rd. In a clothes boiler, the combination of the perforated diaphragm *q*, extending across the boiler at a point near the bottom thereof, and with or without shield *r*, the perforated valve plate *t*, carried by said diaphragm and adapted to control the openings in same, and the central passage 6, all co-acting substantially in the manner and for the purpose set forth.

No. 50,567. Manufacture of Inflatable Inner Air Tubes for Pneumatic Tires. (*Fabrication de tubes intérieurs à air pour bandages pneumatiques.*)

Fred William Morgan, Chicago, Illinois, U.S.A., 13th November 1895; 6 years.

Claim. 1st. The within described process of preparing inflatable air tubes for pneumatic tires consisting essentially in the following



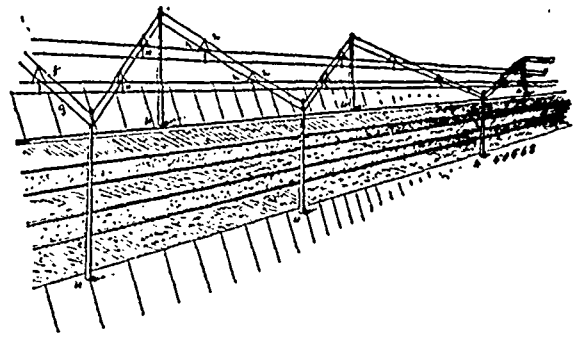
steps, to wit: forming unvulcanized rubber into a thin film, placing said film upon a cushion table, forming said film into a multiply tube having its plies in direct contact one with another by rolling the film, thus arranged, upon a mandrel, and during such operation subjecting the film or plies of film to compression between the cushion table and the mandrel, and vulcanizing the multiply tube thus formed so as to unite the plies of film and adapt the tube for service in a pneumatic tire-sheath. 2nd. The within described process of preparing inflatable air-tubes for pneumatic tires consisting essentially in the following steps, to wit: forming unvulcanized rubber into a thin film, placing a sheet of said film upon a cushion table, orming said film into a multiply tube having its plies in direct contact one with another by manually rolling a free and independent mandrel upon the film thus arranged, and during such operation subjecting the film or plies of film to compression between the cushion table and the mandrel at the will of the operator, and vulcanizing the multiply tube thus formed so as to unite the plies of film and adapt it for service in a pneumatic tire-sheath. 3rd. The within described process of manufacturing inflatable air-tubes for pneumatic tires consisting in forming unvulcanized rubber into a thin film, spreading a sheet of said film upon a cushion table, forming said sheet of film into a multiply tube having its plies in direct contact one with another by rolling it about a mandrel, subjecting the film while being thus rolled to compression between the mandrel and the yielding cushion table, removing wrinkles or gathers in the sheet of film during said operation by stretching the portion of the sheet in advance of the mandrel, and vulcanizing the multiply tube thus formed so as to unite the plies and adapt it for service in a pneumatic tire-sheath. 4th. The within described process of preparing inflatable air-tubes for pneumatic tires consisting in spreading a sheet of thin unvulcanized rubber film upon a cushion table, forming said sheet of film into a multiply tube having its plies in direct contact with one another by manually rolling an independent mandrel over the film thus arranged, subjecting the film while being thus rolled to compression between the mandrel and the cushion table and during the formation of the tube upon the mandrel giving the latter a temporary and limited back movement for the purpose of stretching the film in advance of the mandrel, and vulcanizing the multiply tube thus formed so as to unite the plies and adapt it for service in a pneumatic tire sheath. 5th. The within described process of preparing inflatable air-tubes for pneumatic tires consisting in forming unvulcanized rubber into a thin film, spreading such film upon a cushion table, forming said film into a multiply tube having its plies in direct contact one with another by rolling a free and independent mandrel over the film thus arranged upon the cushion table and during such operation subjecting the film to compression between the yielding cushion table and the mandrel, removing the multiply tube thus formed from the mandrel by forcing air carrying powdered soapstone or the like in between the mandrel and tube so as to permit the mandrel to be drawn from the tube, and vulcanizing said tube after its removal from the mandrel. 6th. An apparatus for preparing inflatable air-tubes for pneumatic tires from unvulcanized rubber film, consisting in a cushion table adapted to receive a sheet of unvulcanized rubber film from which the said tube is to be made, and an independent flexible mandrel upon which the film can be rolled to form a multiply air-tube, substantially as and for the purpose described. 7th. An apparatus for preparing inflatable air tubes for pneumatic tires from unvulcanized rubber film, consisting in a cushion table adapted to receive a sheet of unvulcanized rubber film from which the said tube is to be made and an independent flexible wooden mandrel upon which the film can be rolled to form a multiply air-tube, substantially as and for the purpose described. 8th. As an improved article of manufacture, a multiply air tube for pneumatic tires characterized by the within described formation, and composed of a plurality of plies of rubber film directly united to each other by compression and vulcanization, substantially as described.

No. 50,568. Electric Railway.

(*Chemin de fer électrique.*)

John Cummings Henry, Westfield, New Jersey, U.S.A., 13th November, 1895, 6 years.

Claim.—1st. In an electric railway, parallel aerial wires suspended over the roadway, said wires carrying current of different signs, one of said wires being located above and acting as a guard to protect the other. 2nd. In an electric railway system, the combination of a source of electricity and an electric circuit, connected therewith



and having both outgoing and return wires suspended over the railway, one of said wires being grounded and the other insulated from the ground and one being supported over the other to protect it, substantially as set forth. 3rd. In an electric railway system, the combination of a source of electricity, an electric circuit connected therewith, and a motor or motors having means of connection with both outgoing and return wires thereof, one of said wires being rounded and the other being insulated and the grounded wire being supported over the railway above the other, substantially as set forth. 4th. In an electric railway system, the combination of a source of electricity, continuous main conductors extending along the said railway and connected to opposite poles of said source, working conductors, and metal posts arranged along the railway for supporting said working conductors and electrically connecting one of the same, with one of the main conductors, substantially as set forth. 5th. In an electric railway system, in combination with an overhead working conductor, metal posts supporting the same and electrically connecting it to ground, substantially as set forth. 6th. In an electric railway, the combination of exposed working conductors, buried feeding conductors, and a metal ground-post which incloses and protects the insulated intermediate positive conductor and which is itself in direct electrical communication with the negative conductor and below with the negative main. 7th. In an electric railway, the combination of overhead working conductors, feeders connected thereto through ground-posts and positive supporting wires, and negative supporting wires placed above and protecting said positive supporting wires, substantially as set forth. 8th. In an electric railway, the combination of the negative cross-supporting wires and the straddling suspenders therefrom which support and connect therewith the negative line-wires at two points so as to protect the positive wires without liability to short circuit therewith, substantially as set forth. 9th. In an electric railway, the combination with a stationary source of current and with collectors on the motor-cars, of the compound buried main, one or more lines of ground-posts and positive and negative line-wires supported therefrom and having through said posts numerous connections, the positive line-wire through insulated conductor with the supply-main and the negative line-wire directly through said posts with the return main, substantially as set forth. 10th. In an electric railway, the combination with a stationary source of current and with collectors on the motor-cars, of a tubular grounded return-main, a non-conducting filling therein, a supply-main of low resistance embedded in said filling and having electrical connection with the positive pole of said current-source, a system of overhead electrically connected supporting wires for the out-going current, a system of overhead electrically connected supporting wires for the return-current insulated from said first system, numerous means of communication between said systems and said mains consisting of metallic ground-posts which uphold said systems and which afford direct electrical communication from said second system to the grounded return-main and which support and insulate intermediate conductors from said supply-main to the said first system and positive and negative line-conductors which are suspended from and are respectively electrically connected with said supporting systems, substantially as set forth.

No. 50,569. Box Corner Binder.

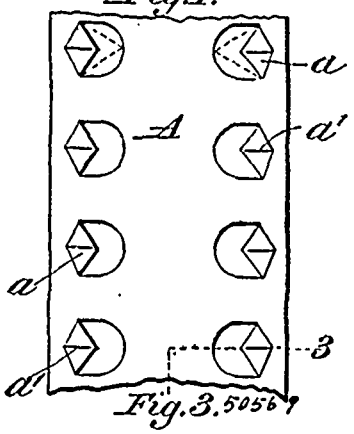
(*Ferrement pour angles de boîtes.*)

Albert Alonzo Wood, Atlanta, Georgia, U.S.A., 13th November, 1895; 6 years.

Claim. 1st. A binder strip consisting of a strip of thin metal, having spurs punched and bent up therefrom, the hole wherefrom said spurs are punched being enlarged, substantially as and for the purpose set forth. 2nd. A binder-strip consisting of a thin strip of metal, having spurs punched and bent up therefrom, and small hooks on the points of said spurs, substantially as specified. 3rd. A binder-strip consisting of a thin metal strip, having spurs punched and

bent up along its edges, said spurs being strengthened by lateral bending extending from the base nearly to the point and being

Fig. 1.

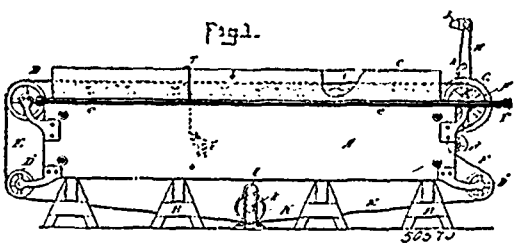


left approximately flat on the point, substantially as and for the purpose specified.

No. 50,570. Electro-depositing Device.

(*Appareil d'ouvrage galvano-plastique.*)

Fig. 1.



John Bossard, Dubuque, Iowa, U.S.A., 13th November, 1895; 6 years.

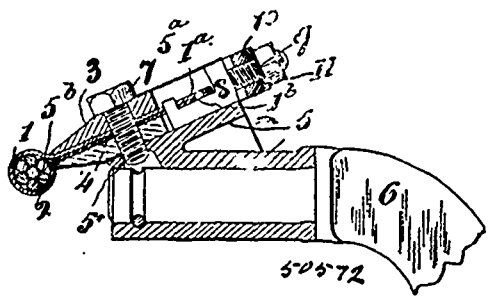
Claim.—1st. An electro-depositing device, consisting of a tank and depositing bath therein, a bridge over said tank, hooks from which the articles to be deposited upon are suspended, electric connection between said bridge and hooks, an endless belt travelling outside of the bath and engaging with the said hooks by means of which the articles are automatically drawn through the bath, and means for imparting an intermittent motion to said belt while drawing the articles through the bath, for the purposes shown. 2nd. An electro-depositing device of the character described, consisting of a tank containing a depositing bath, one or more anode bars suspended in said bath, hooks above the bath for supporting the articles to be deposited upon one or more crooked cathode bars, along and against which the said hooks engage while passing through the bath, and an endless belt engaging with the aforesaid hooks for causing the article to travel through the bath, whereby said articles are given an undulatory or crooked movement, for the purposes shown. 3rd. In an electro-depositing device of the character described, a tank containing a depositing bath, one or more anodes suspended in said bath, one or more cathode bars arranged above said bath, hooks supporting the articles to be deposited upon and bearing against the said cathode bars and means for increasing and decreasing the anode surfaces to any extent and at any place at will along the line of travel of the articles through the bath, as and for the purposes shown. 4th. An electro-depositing device, consisting of a tank containing a depositing bath, an endless bath for moving the articles to be deposited upon through the bath, one or more cathode bars above said bath, hooks for carrying the articles to be deposited upon and connected to the said belt, one or more anodes suspended in said bath and a switch attached to each anode whereby the electric current may be directed to any one or more points along the line of travel of the articles in the bath at will, for the purposes shown. 5th. An electro-depositing device, consisting of a tank and depositing bath therein, a bridge over said bath from which the articles to be deposited upon are suspended, a belt above said bridge, means for causing said belt to travel above said bridge and outside of the bath, whereby the articles to be deposited upon are advanced through the bath and a cathode bar above said bath and having an undulatory or crooked bearing face for causing the articles to be deposited upon to take an undulatory or crooked movement through the bath, for the purposes shown. 6th. An electro-depositing device, consisting of a tank containing a depositing bath, a bridge spanning said bath longitudinally and above the bath, means for suspending the articles to be deposited upon in the bath and from said bridge, and an endless belt travelling above said bridge and outside of the bath for advancing the articles through the bath, for the purposes shown. 7th. In an electro-depositing device, the combination of a tank containing a depositing bath a series of anode carriers above said bath and connected with a source of electrical supply, anodes suspended from said carriers and immersed in the depositing bath, and a separate switch for each carrier, whereby the current to the various anodes may be controlled, substantially as described. 8th. An electro depositing device, consisting of a tank containing the depositing bath, one or more anodes suspended within the bath, means for connecting and disconnecting at will, one or more anodes with the electrical current, without connecting or disconnecting the remaining anodes, one or more crooked cathode rods above the bath, a bridge from which the articles to be deposited upon are suspended, an endless belt for advancing the articles through the bath with their supporters bearing against said cathode bar, and means for determining the rate of speed the articles shall travel through the bath, for the purposes shown.

No. 50,571. Manufacture of Saponaceous Products from Petroleum. (*Fabrication de produits saponacés du petrôle.*)

Charles Weygang, Edneys, Hants, England, 13th November, 1895; 6 years.

Claim. The herein described manufacture of a petroleum oil or oleaginous liquid that can be dissolved in and mixed with water by melting rosin in petroleum gradually, adding alkali, decanting the clear liquor produced, again gradually adding alkali and decanting, and the application of the product thus obtained in the manufacture of soap siccative vehicle for pigments and lubricant.

No. 50,572. Apparatus for Transporting Loads by Means of Travelling Ropes or Cables. (*Appareil pour transporter des charges au moyen de cordes ou cables.*)



John Pearce Roe, London, England, 13th November, 1895; 6 years.

Claim.—1st. A clip for permanent attachment to a travelling rope comprising a clip body, a separate metal strap encircling said rope and fixed to said clip body, and means for simultaneously drawing up both ends of said strap, substantially as herein described. 2nd. A clip for permanent attachment to a travelling rope, comprising a clip body against one end of which said rope can abut, a sheet metal strap of approximately uniform thickness made separate from said clip body adapted to fit around the rope to which the clip is to be fixed and having its end portions brought close together, means for simultaneously drawing up the two end portions of said strap so as to firmly connect said rope to said clip body, and means for fixing the end portions of said strap upon said clip body, substantially as herein described. 3rd. A clip for permanent attachment to a travelling rope, comprising a clip box provided at its nose end with an abutment for the rope and with a slot between said abutment and clip box, a metal strap made separate from said clip box and adapted to fit said rope, the end portions of said strap being arranged to pass over and below said nose and one of them to pass through said slot so that they can be brought close together, means for drawing up said strap so as to force the rope upon which it is fitted against said abutment, and means for clamping the end portions of said strap upon each other and upon said clip box, substantially as herein described. 4th. A clip for permanent attachment to a travelling rope, comprising a clip box provided with a longitudinal abutment for said rope and with a slot between said abutment and clip box, a sheet metal strap made separate from said clip box and adapted to fit said rope, the end portions of said strap being arranged to pass over and below said nose, and one of them to pass through said slot so that they can be brought close together, plates between which the juxtaposed end portions of said strap are clamped and held against said abutment, means for drawing up the end portions of said strap, and means for forcing said plates together and for connecting them to said clip box, substantially as herein described. 5th. The combina-

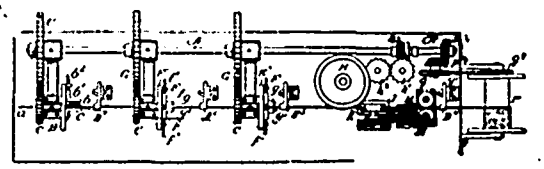
tion in a clip for permanent attachment to a travelling rope, of a clip box the sides of which are connected at the nose and by a V-shaped abutment 5ª, a metal strap arranged to pass above and below said abutment and around the rope to be held against the same, and having its end portions brought close together, plates between which the juxtaposed end portions of said strap are directly clamped, means for simultaneously drawing up both end portions of said strap, and a screw for tightening said plates upon the end portions of said strap and for connecting them to said clip box, substantially as herein described. 6th. A clip for permanent attachment to a rope comprising a clip body, a separate strap fixed thereto and encircling said rope, and means for tightening said strap upon said rope, said means comprising a hook-shaped device adapted to engage said strap and provided with a screw-threaded extension, a bridge-piece beyond which said extension passes, and a tightening nut fitting the outer portion of said screw threaded extension and bearing against said bridge-piece, substantially as herein described for the purpose specified. 7th. In apparatus for transporting loads by means of a travelling rope or cable, the combination with a clip, adapted to be fixed upon said rope or cable, and a clip hanger suspended therefrom, of a lower hanger for carrying the load to be transported, and a box or frame connected to the upper end of said lower hanger and provided with a recessed portion into which the lower end of said clip hanger is adapted to take so as to support said box or frame and attached parts when said clip hanger moves upwards relatively to the lower hanger, substantially as herein described. 8th. In apparatus for transporting loads by means of a travelling rope or cable, the combination with a clip fixed upon said rope, and a clip hanger suspended therefrom, of a lower hanger for carrying the load to be transported, a box or frame connected to the upper end of said lower hanger, an oscillating device journalled in the top of said box or frame and formed at its under side with a recess into which the lower bent end of said clip hanger is adapted to take, and a locking device adapted to prevent the lower bent end of said clip hanger passing completely through the box in a lateral direction until after it has fully entered the recess in the top of the box or frame, substantially as herein described. 9th. In apparatus for transporting loads by means of a travelling rope or cable, the combination with a clip fixed upon said rope and a clip hanger suspended therefrom, of a lower hanger for carrying the load to be transported, a box or frame connected to the upper end of said lower hanger, an oscillating device journalled in the top of said box or frame and formed with a recess at its under side into which the lower bent end of said clip hanger is adapted to take, and a locking device for holding said oscillating device in the engaging portion until after the said lower end of the clip hanger has fully entered the recess in said device, substantially as herein described. 10th. In apparatus for transporting loads by means of a travelling rope or cable, the combination with a clip fixed upon said rope or cable and a hanger suspended therefrom, of a lower hanger for carrying the load to be transported, a box or frame connected to the upper end of said lower hanger, an oscillating device journalled thereon and formed with a recess in its under side into which the lower bent end of said clip hanger is adapted to take, and a locking device comprising an arm pivoted to said box or frame and provided with a shoulder adapted to hold said oscillating device in position for the lower bent end of said clip hanger to pass into the same, said arm being arranged to project outward in such a manner that it can be tripped by a fixed pin or projection arranged in the path of said arm, substantially as herein described for the purpose specified. 11th. Apparatus for transporting loads, comprising a travelling rope or cable, a clip fixed thereto, a clip hanger suspended from said clip and having its lower end bent and formed with a recess, a lower hanger carrying a box to contain the load to be transported, a box or frame connected to the upper end of said lower hanger, an oscillating device 25, journalled in said box or frame and formed at its under side with a V-shaped recess and with a transverse rib to engage the recessed lower bent end of said clip hanger, the centre of oscillation of said device being arranged slightly to one side of the apex of the V-shaped recess in its under side, a pin or projection adapted to hold said oscillating device in place, and a tripping arm 26, pivoted to said box or frame and provided with a shoulder or abutment adapted to hold said oscillating device in position until after engagement with said clip hanger substantially as herein described. 12th. In apparatus for transporting loads by means of travelling ropes, the combination with a hanger for suspending the box for containing the load to be transported, of a box or frame 17, fitted to the upper end of said hanger, and provided with a wheel 18, an oscillating device 25, journalled in said box or frame and formed with a V-shaped recess in its under side, the centre of oscillation of said device being arranged at one side of the apex of said recess, a pin or projection for suspending said device in said box or frame, and an arm 26, pivoted to said box or frame and provided with a shoulder or abutment adapted to hold said oscillating device in position to permit the lower bent end of a clip hanger to engage the recess in its under side, substantially as herein described.

No. 50,573. Manufacture of Electrical Conductors.

(*Fabrication de conducteur électrique.*)

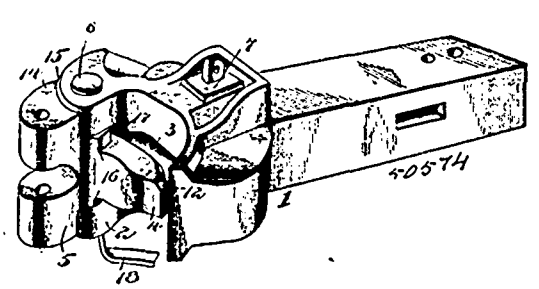
Louis Welton Downes, Providence, Rhode Island, U.S.A., 13th November, 1895; 6 years.

Claim. 1st. The *described process of applying* a fibrous insulating covering, such as asbestos, to an electrical conductor, which process



consists in coating the conductor with an adhesive substance, wrapping or winding the fibre thereon, brushing or carding the latter to raise a nap, and then pressing or compacting the fibre, substantially as set forth. 2nd. In the manufacture of insulated electrical conductors, the improvement which consists in applying a fibrous covering of asbestos to the wire, brushing the fibre in one direction, and compressing and reducing it to a smooth surface and uniform diameter, substantially as described. 3rd. In the manufacture of insulated electrical conductors, the improvement which consists in coating a wire with adhesive substance, wrapping it with fibrous asbestos, *brushing out the nap in one direction, rolling the fibrous covering* upon the wire, and then applying thereto a water-proofing substance, substantially as described. 4th. In an apparatus for the purpose specified, the combination of devices for feeding a wire longitudinally, a rotating brush or carding device having its axis of rotation coincident with the axis of the wire, and means for compressing and matting the fibre, substantially as described. 5th. The combination with the wire-feeding mechanism of a rotating brush, for acting on the surface of the wire as it advances, pressure rolls having their axes parallel with the wire, and mechanism for rotating the rolls circumferentially about the same as it is fed forward, substantially as described. 6th. The combination with the wire feeding mechanism of a rotating brush, pressure rolls having their axes parallel with the wire, means for turning the rolls circumferentially around the wire, means for applying to the surface of the wire a water-proofing compound, and finishing pressure rolls, all arranged and operating, substantially as described. 7th. As an article of manufacture, an electrical conductor having a compact, uniform covering of asbestos fibre, wound spirally thereon, matted, compressed and waterproofed, substantially as described. 8th. As an article of manufacture, an electrical conductor, having a thin, compact, uniform covering of asbestos *fibre wound thereon and attached by adhesive substance, the fibres* being matted and compressed into a coherent fabric, substantially as described. 9th. In an apparatus for brushing and combing out the covering applied to electrical conductors for insulating the same, and for analogous purposes, a revolving carding-wheel adapted to be rotated about and in contact with the circumference of the insulated conductor, substantially as described. 10th. In apparatus of the kind described, the combination with means for holding the covered tire, of a revolving carding-wheel adapted to be rotated about and in contact with the circumference of the covered wire, and means for adjusting said wheel towards and from the axis of the wire, substantially as described. 11th. The combination with the disc and the rotating, revolving carding-wheel, of a holder for the covered wire composed in part of a tube through which the wire passes, cut away at one side to expose the latter to the action of the teeth on the carding-wheel, substantially as described.

No. 50,574. Car Coupler. (*Attelage de chars.*)

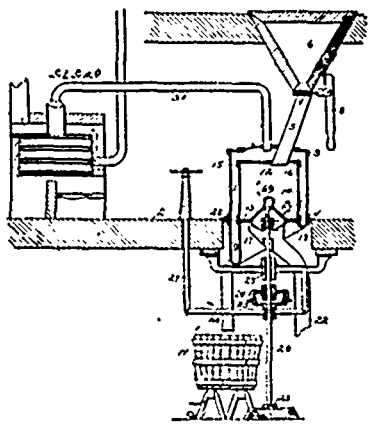


David J. Schulte and Alexander L. Chambers, both of Latrobe, Pennsylvania, U.S.A., 14th November, 1895; 6 years.

Claim.—1st. In a car coupling, the combination of a draw-head having knuckle pin receiving eyes, and provided in rear of the same at the inner and outer sides thereof with shoulders, a knuckle provided with corresponding shoulders at its inner and outer sides, the outer shoulders limiting the opening of the knuckle and the inner shoulders being in contact with those of the draw-head when the knuckle is closed, and a knuckle pin, substantially as described. 2nd. In a car coupling, the combination of a draw-head provided with knuckle pin receiving eyes and having in rear of the same shoulders, a knuckle pin arranged in the eyes, a knuckle pivoted between the eyes by said pin and provided with shoulders engaging

those of the draw-head when the knuckle is closed, to relieve the knuckle pin of stram, substantially as described. 3rd. A supporting device for car couplings, designed to be arranged at the bottom thereof, and constructed of a single piece of material, and consisting of a substantially L-shaped bracket provided at its top with a knuckle pin opening, whereby the device is adapted to be readily applied to any ordinary draw-head having a knuckle, and the rearwardly and upwardly extending arm located at the top of the bracket and conforming to the configuration of the lower face of the draw-head, and adapted to fit in a recess or indentation to lock the device against pivotal movement on the knuckle pin, substantially as described.

No. 50,575. Method of and Apparatus for Drying Malt, etc. (*Méthode et appareil pour sécher le malt, etc.*)



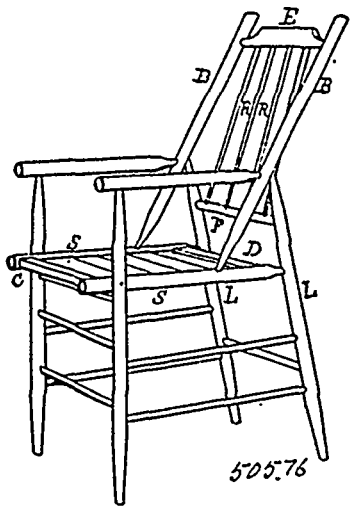
Louis Wagner and John Marr, both of Baltimore, Maryland, U.S.A., 14th November, 1895; 6 years.

Claim.—1st. The herein described method of treating malt which consists in subjecting it to the action of centrifugal force for the extraction of water from the interior of the grain without unduly hardening or caramelizing the exterior of the grain, substantially as set forth. 2nd. The herein described method of treating malt which consists in first removing the water from the interior of the grain or kernel by centrifugal force, and then removing the water from the exterior of the grain by a current of air, substantially as set forth. 3rd. The herein described method of treating brewers' grain, or distillers' refuse by centrifugal force for the extraction of wate" and saccharine matter, substantially as set forth. 4th. The herein described apparatus for treating malt, brewers' grain, distillers' slop and other materials, consisting of the combination of a rotary filtering or straining vessel having an air exit, and an opening or conduit for air connected therewith and adapted to deliver air to said vessel to be forced through the material while subjected to centrifugal force, substantially as set forth. 5th. The combination with a casing having entrance and exit openings, of a rotary filtering vessel therein having a discharge aperture in its bottom for delivering material outside of said casing, substantially as set forth. 6th. The combination of the casing having an opening in its bottom and the annular trough, of the rotary filtering vessel in said casing fitting in said opening, and having a discharge opening in its bottom, a shaft carrying said vessel, and a conduit leading from the discharge opening, substantially as set forth. 7th. The combination of a casing having an air exit, a rotary filtering vessel therein, a furnace, and an air conduit passing from the latter and delivering into said casing, substantially as set forth. 8th. The combination of a casing having an air exit, a rotary filtering vessel therein, a heating apparatus and an air conduit from the latter and delivering into said casing, substantially as set forth.

No. 50,576. Chair. (*Fauteuil.*)

John D. Howe, Saint John, New Brunswick, Canada, 14th November, 1895; 6 years.

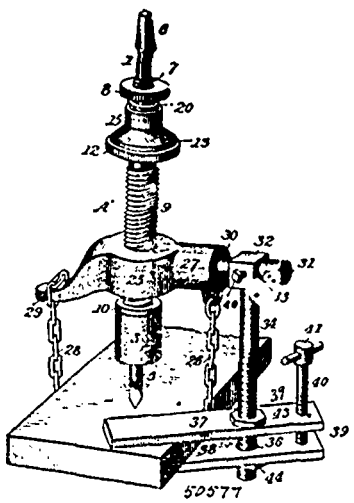
Claim.—As an article of manufacture, a chair comprising side frames connected by a seat, a back frame and cross bars, each side frame composed of front and rear legs connecting bars and a back bar, the rear leg extending above the point of connection with the seat bar, the back bar having connection with the seat bar in front of the point at which the rear leg and seat bar are connected, and



secured to the upwardly extended rear leg, all formed, arranged and combined substantially as set forth.

No. 50,577. Adjusting Device for Drills.

(*Appareil d'ajustage pour foret.*)

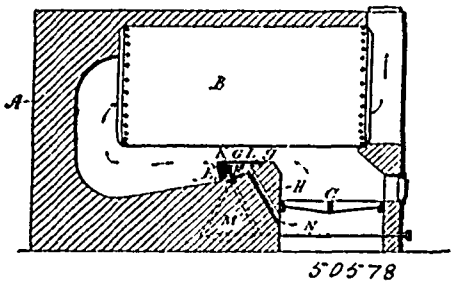


William J. Mewer, Old Orchard, Maine, U.S.A., 14th November, 1895; 6 years.

Claim.—1st. A rotary drill stock or holder, a rotary feed take-up, and a friction clutch between said holder and take-up whereby the latter is advanced with the feed of the drill, substantially as described. 2nd. A rotary drill support or holder having a head for receiving the drill and formed at its upper part with a projection or key and a threaded section, a feed take up surrounding said holder and formed in its upper end with an enlarged flange, the combined friction ring and sleeve, the washer confined between said ring and flange and the nut, all substantially as shown and described. 3rd. A rotary drill support or holder comprising the holder, the feed take-up consisting of the flanged sleeve, the friction clutch or ring, and the washer between said ring and flange, the saddle provided with means for attachment to the object to be drilled and having a screw-threaded opening through which the sleeve works, and an elastic cushion, substantially as described. 4th. A rotary drill support or holder comprising a rotary feed take-up, means for advancing said take-up with the feed of the drill, a saddle or yoke, and a clamp attached to said saddle or yoke and adapted to embrace the object to be drilled, substantially as described. 5th. In a rotary drill support or holder such as herein described, the combination with the saddle or yoke, of the pin or plug screwing into one end thereof, the screw-threaded rod pendent from said pin and removably attached thereto, the clamping jaws for embracing the object to be drilled, the adjusting set screw for said jaws, and the jamb nuts, substantially as described.

No. 50,578. Steam Boiler Furnace.

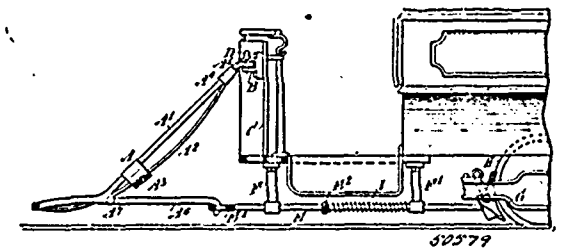
(*Fournaise de chaudière à vapeur.*)



Enoch Renslow Rolfe Hoyt, New York, State of New York, U.S.A., 14th November, 1895; 6 years.

Claim.—1st. In a furnace, the combination with a combustion chamber and bridge wall, of a series of heating plates arranged in rear of the bridge wall and forming the rear wall of a heating chamber, a series of air passages, a corrugated plate arranged across the chamber between the bridge wall and heating plates, and a flue arranged to conduct air from below the grate of the furnace to the chamber between the bridge wall and the wall formed by the heating plate, substantially as shown and described, for the purpose specified. 2nd. In a furnace, the combination with a combustion chamber and bridge wall, of a series of heating plates placed upon each other arranged in rear of the bridge wall and provided with a series of air passages which increase in width and decrease in height from their forward to their rear ends, a plate arranged over the space between the bridge wall and the wall formed by the heating plates, and a flue arranged in the bridge wall to conduct air from below the grate in the furnace to the chamber between said bridge wall and heating plates, substantially as shown and described, for the purpose specified. 3rd. In a furnace, the combination with a combustion chamber and bridge wall, of a series of heating plates arranged in rear of the bridge wall and forming the rear wall of a heating chamber, a series of air passages formed in said plates, a corrugated plate covering the space between the bridge wall and the wall formed by the heating plates, a damper arranged in the chamber between such plates and bridge wall controlling the exit of the air from said heating chamber, and a flue arranged to conduct air to such heating chamber, substantially as shown and described, for the purpose specified. 4th. In a furnace, the combination with a combustion chamber and bridge wall, of a series of heating plates arranged in rear of the bridge wall and forming a series of air passages, said plates being of different widths and arranged so that the rear end of each plate projects slightly beyond the corresponding end of the next lowest plate in the series, a plate arranged over the space between the bridge wall and heating plates, and a flue arranged to conduct air to the heating chamber formed between the bridge wall and heating plates, substantially as shown and described. 5th. In a furnace, the combination with a combustion chamber and bridge wall, of a series of plates arranged in rear of the bridge wall and having grooves formed in their upper and lower faces, whereby when the plates are assembled a series of air passages are formed between every pair of plates, said passages increasing in width, and decreasing in height from their forward to their rear sides, a cover plate arranged over the space between the bridge wall and heating plates, and a flue arranged to conduct air from below the grate in the furnace to the heating chamber formed between the bridge wall and heating plates, substantially as shown and described, for the purpose specified. 6th. In a furnace, the combination with a combustion chamber and bridge wall, of a series of heating plates arranged in rear of the bridge wall and having grooves formed in their faces, whereby when the plates are assembled a series of air passages are formed between each pair of plates, the passages between each pair of plates being out of vertical alignment with the passages next above and below them, a cover plate arranged over the space between said plates and wall, and a flue arranged to conduct air from below the grate in the furnace to the heating chamber formed between the bridge wall and heating plates, substantially as shown and described, for the purpose specified. 7th. In a furnace, the combination with a combustion chamber and bridge wall, of a series of plates arranged in rear of the bridge wall and forming a series of air passages which increase in width and decrease in height from their forward to their rear ends, said plates being of different widths and so arranged that the rear end of each plate projects slightly beyond the rear end of the next lowest plate in the series, a metallic plate arranged over the heating chamber formed between the bridge wall and heating plates, a series of flues arranged in the bridge wall to conduct air from below the grate in the furnace to the heating chamber between the bridge wall and heating plates, and a damper arranged in said heating chamber, substantially as shown and described, for the purpose specified.

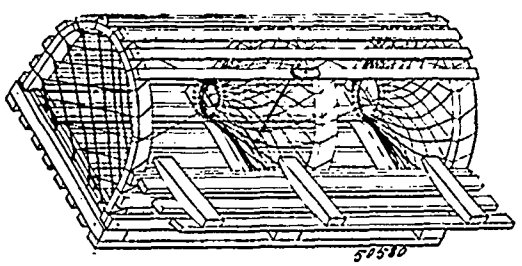
No. 50,579. Car Fender. (*Défense de chars.*)



John Landau, William H. Harvey, and Thomas J. Kenna, all of Brooklyn, New York, U.S.A., 14th November, 1895; 6 years.

Claim.—1st. A car fender, comprising a scoop or basket mounted to swing at its upper end from the dash-board of the car, hooks held on the lower end of the said scoop, spring-pressed bars fitted to slide on the car and engaged by the said hooks, the said bars engaging the brake shoes, and acting to force the latter in contact with the car wheels whenever the said basket strikes or receives an obstruction, substantially as shown and described. 2nd. In a car fender, the combination of a basket composed of a U-shaped bar having rods between its arms, and having eyes formed at the extremities of its arms, brackets on the platform to which said eyes are connected, hooks extending rearwardly from the lower sides of the basket, and spring-pressed bars respectively connected to the hooks and mounted at the bottom of the car, substantially as described. 3rd. In a car fender, the combination of a basket capable of mounting to swing rearwardly, a rod projecting rearwardly from the lower extremity of the basket and having a hook thereon, a second rod movable longitudinally in a fixed line and having an eye which receives the hook of the first rod, and an expansive spring embracing the second rod, substantially as described.

No. 50,580. Lobster Trap. (*Parc à homard.*)



Edward A. Wheeler, Botsford, New Brunswick, Canada, 14th November, 1895; 6 years.

Claim.—The combination in a lobster trap closed at one end and provided at its opposite end with a funnel-shaped entrance, of a partition placed at about the centre of the trap back of the bait, said partition being also funnel-shape but having a passage of a smaller diameter than the first passage or entrance, substantially as shown and described.

No. 50,581. Composition to Cure Spavins, etc., on Horses. (*Composition pour guérir les éparvins, etc.*)

Joseph Lachance, Montreal, Quebec, Canada, 14th November, 1895; 6 years.

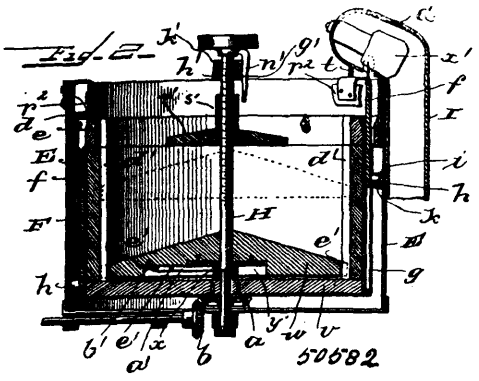
Claim.—A compound composed of quicksilver, nitric acid, alcohol, ink, and sulphuric acid, in the proportions and for the purpose set forth.

No. 50,582. Seed Planter. (*Semoir.*)

Joseph A. Mengel, McKeansburg, George K. Binkley, Orwigsburg, and George H. Gerber, Pottsville, all in Pennsylvania, U.S.A., 14th November, 1895; 6 years.

Claim.—1st. In a seed planter, a revoluble hopper provided with pockets to receive seed, in combination with vertically reciprocating spears to engage the seed and a seed conductor. 2nd. In a seed planter, a revoluble hopper provided with pockets to receive seed, in combination with vertically reciprocating spears, means for projecting the spears into the pockets to engage the seed and a seed conductor. 3rd. In a seed planter, a revoluble hopper provided with pockets to receive seed, in combination with vertically reciprocating spears, a spring for projecting the spears into the pockets to engage the seed and a seed conductor. 4th. In a seed planter, a revoluble hopper provided with pockets to receive seed, in combination with vertically reciprocating spears, means for pro-

jecting the spears into the pockets to engage the seed, means for supporting the seed while the spear is being withdrawn

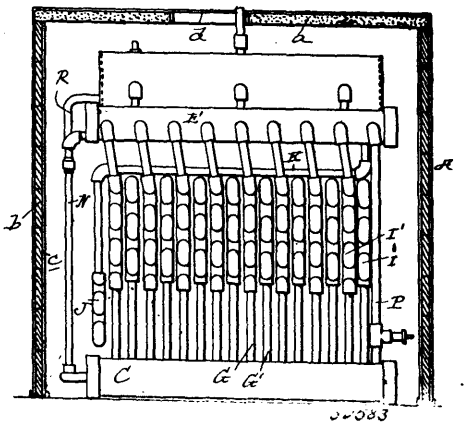


and a seed conductor. 5th. In a seed planter, a revoluble hopper provided with pockets to receive seed, in combination with vertically reciprocating spears, means for projecting the spears into the pockets to engage the seed, a slotted support for the seed while the spear is being withdrawn, and a seed conductor. 6th. In a seed planter, a revoluble hopper provided with a vertically adjustable bottom, in combination with means for raising seed from the hopper and a seed conductor. 7th. In a seed planter, a revoluble hopper provided with a vertically adjustable bottom, and means for limiting the upward movement of said bottom, in combination with means for raising the seed from the hopper and a seed conductor. 8th. In a seed planter, a revoluble hopper provided with a vertically adjustable bottom, and a friction brake for limiting the upward movement of said bottom, in combination with means for raising the seed from the hopper and a seed conductor, 9th. In a seed planter, a revoluble hopper provided with a vertically adjustable bottom, and a friction brake operated by said bottom for limiting its upward movement, in combination with means for raising the seed from the hopper and a seed conductor. 10th. In a seed planter, a revoluble hopper provided with a vertically adjustable bottom, a disc, a vertically separated nut and a lever interposed between said disc and nut, in combination with means for raising the seed from the hopper and a seed conductor. 11th. In a seed plant, a revoluble hopper provided with a vertically adjustable bottom, a screw-threaded rod connected to said bottom, a nut engaging said rod, and a device connected to said nut to limit the upward movement of the bottom, in combination with means for raising the seed from the hopper and a seed conductor. 12th. In a seed planter, a revoluble hopper provided with a vertically adjustable bottom, guides in the hopper to prevent rotation of said bottom, a clamp, a screw-threaded rod engaged by the said clamp on the outer side of the bottom, a vertically separated nut having an arm on one side thereof, a disc and a lever connected thereto and engaging the arm of the nut, in combination with means for raising the seed out of the hopper and a seed conductor. 13th. In a seed planter, a revoluble hopper provided with pockets to receive seed, and a vertically adjustable bottom, in combination with vertically reciprocating spears to engage the seed and a seed conductor. 14th. In a seed planter, a revoluble hopper provided with pockets to receive seed and a vertically adjustable bottom, in combination with vertically reciprocating spears to engage the seed, means for projecting and retracting the spears, a support for the seed, and a seed conductor. 15th. In a seed planter, a revoluble hopper provided with pockets, means for directing the seed outward toward said pockets, means for further directing the seed toward the pockets and removing an excess of seed from the pockets and vertically reciprocating spears to engage the seed in the pockets and a seed conductor. 16th. In a seed planter, a revoluble hopper provided with pockets to receive seed, in combination with vertically reciprocating spears, a device to hold the seed in the pockets while being engaged by the spears and a seed conductor. 17th. In a seed planter, a revoluble hopper provided with pockets to receive seed, in combination with vertically reciprocating spears, a vertically movable weight to hold the seed in the pockets while being engaged by the spears and a seed conductor. 18th. In a seed planter, a revoluble hopper provided with pockets to receive the seed, a vertically adjustable guide for directing the seed outward toward said pockets, an additional guide for further directing the seed toward the pockets and removing an excess of seed therefrom, and means for raising the seed from the hopper, in combination with a seed conductor.

No. 50,583. Steam Boiler. (*Chaudière à vapeur.*)

John Bonner, Tiburon, California, U.S.A., 14th November, 1895; 6 years.

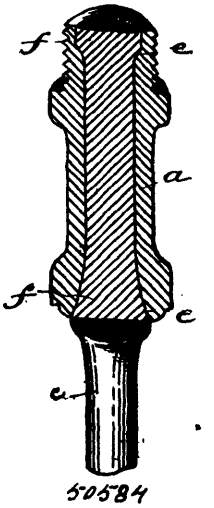
Claim.—1st. In a sectional water-tube boiler, the combination of a superheater or steam drum F, separators E, E¹, arranged on opposite sides of and connected by pipes with said superheater or steam drum F, and drums C, C¹, and upflow coils I, I¹, and downflow pipes N, N¹, connecting said separators and mud drums, the down-



flow pipes N, N¹, being smaller in diameter than the upflow coils I, I¹, substantially as and for the purpose set forth. 2nd. In a sectional water-tube-boiler, the combination of a superheater or steam drum F, separators E, E¹, arranged on opposite sides of and connected by pipes M, with said superheater or steam drum F, mud drums C, C¹, upflow coils I, I¹, and downflow pipes N, N¹, connecting said separators and mud drums, the vertical return-bend-coil J, arranged transverse of the boiler at the back thereof, and adapted to be connected with a source of water supply, and the horizontal return-bend-coil K, connected with the coil J, and arranged above the upflow coils I, I¹, and connected with the separators E, E¹, all substantially as shown and described. 3rd. A sectional water-tube boiler comprising the casing, and the boiler or boiler proper arranged entirely within the casing and comprising the superheater or steam drum F, separators E, E¹, arranged on opposite sides of and connected by pipes M, with said superheater or steam drum F, mud drums C, C¹, upflow coils I, I¹, and downflow pipes N, N¹, connecting said separators and mud drums, a vertical return-bend-coil J, arranged transverse of the boiler at the back thereof, and adapted to be connected with a source of water supply, the horizontal return-bend-coil K, connected with the coil J, and arranged above the upflow coils I, I¹, and connected with the separators E, E¹, the pipes connecting the superheater or steam drum F, and the mud drums, the grate connected to and arranged between the mud drums, and the ash pan arranged beneath the grate, all substantially as and for the purpose set forth.

No. 50,584. Pipe or Rod Coupling.

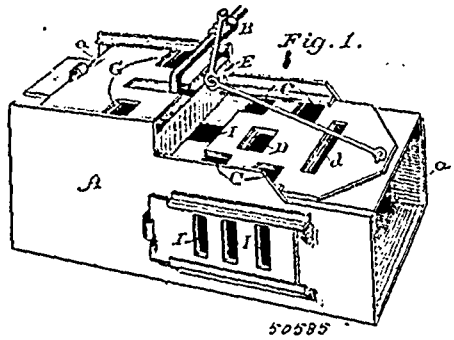
(*Joint de tuyau ou tige.*)



Samuel M. Jones, Toledo, Ohio, U.S.A., 14th November, 1895; 6 years.

Claim.—A pipe or rod-coupling, comprising a pair of screw-threaded sleeves adapted to engage each other and having axial bores, in combination with pipes or rods in said bores and expanded portions on said pipes or rods at each end of each of said sleeves, substantially as shown and described, for the purpose specified.

No. 50,585. Petroleum Burner. (*Brûleur de pétrole.*)



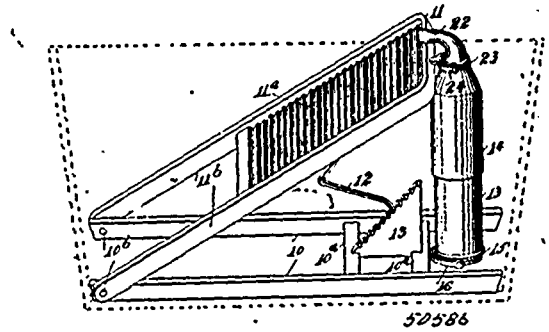
John J. Montgomery, Oakland, California, U.S.A., 14th November, 1895; 6 years.

Claim.—1st. A petroleum burner, consisting of a chamber to which the petroleum is fed and in which it is ignited, said chamber being closed behind the plane of the oil feed whereby all direct draft in the line of flame exit is cut off and said chamber having a controllable air inlet, in advance of the plane of the oil feed whereby flame rotations are formed and the flame retarded, to effect more perfect combustion of the petroleum. 2nd. A petroleum burner, consisting of a chamber to which the petroleum is fed and in which it is ignited, said chamber being closed behind the plane of the oil feed whereby all direct draft in the line of flame exit is cut off, and said chamber having a controllable air inlet in its top in advance of the plane of the oil feed whereby flame rotations are formed and the flame retarded, to effect more perfect combustion of the petroleum. 3rd. A petroleum burner, consisting of a chamber to which the petroleum is fed and in which it is ignited, said chamber being closed behind the plane of the oil feed whereby all direct draft in the line of flame exit is cut off, and said chamber having a controllable air inlet in one side of its top in advance of the plane of the oil feed whereby flame rotations are formed and the flame retarded, to effect more perfect combustion of the petroleum. 4th. A petroleum burner, consisting of a chamber to which the petroleum is fed and in which it is ignited, said chamber being closed behind the plane of the oil feed, whereby all direct draft in the line of flame exit is cut off, and said chamber having a controllable air inlet in each side of its top in advance of the plane of the oil feed whereby flame rotations are formed and the flame retarded, to effect more perfect combustion of the petroleum, said inlets being disproportioned so as to destroy the synchronous rotations in opposite directions. 5th. A petroleum burner, consisting of a chamber to which the petroleum is fed, and in which it is ignited, said chamber being closed behind the plane of the oil feed, whereby all direct draft in the line of flame exit is cut off, and said chamber having controllable air inlets on each side of its top in advance of the plane of the oil feed, whereby flame rotations are formed, and the flame retarded, to effect more perfect combustion, and having also a controllable air inlet in its top located in a plane between the air inlets in each side of the top, whereby the tendency to synchronous rotations is prevented. 6th. A petroleum burner consisting of a chamber to which the petroleum is fed and in which it is ignited, said chamber being closed behind the plane of the oil feed, whereby all direct draft in the line of flame exit is cut off, and said chamber having controllable air inlets in its sides, substantially as and for the purpose described. 7th. A petroleum burner consisting of a chamber to which the petroleum is fed and in which it is ignited, said chamber being closed behind the plane of the oil feed, whereby all direct draft in the line of flame exit is cut off, and said chamber having controllable air inlets in its top, and having also controllable air inlets in its sides, substantially as and for the purpose described. 8th. A petroleum burner consisting of a chamber having a raised portion at its back, said chamber being closed at one end, a supply pipe for the oil, a drip-pan to which the oil is fed, controllable air inlets in the top of the raised portion of the chamber, and controllable air inlets in the chamber in advance of the plane of the supply pipe, substantially as and for the purpose described.

No. 50,586. Washboard. (*Planche à laver.*)

Lewis Peterson, Madrid, Iowa, U.S.A., 14th November, 1895; 6 years.

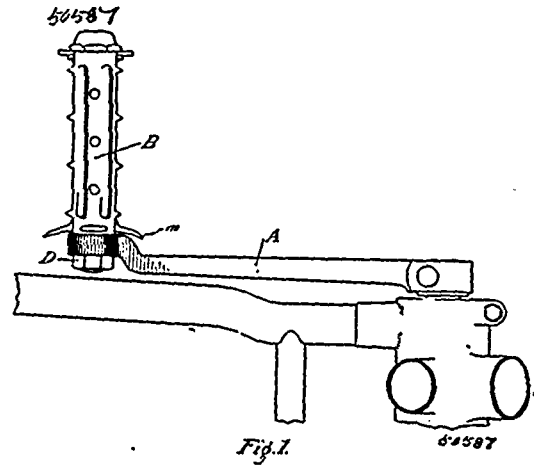
Claim.—1st. The combination with a pumping device, of a washboard having one end pivoted and its other end yieldingly supported and secured to the pumping device to operate it, whereby the pumping device will be operated to discharge water on the board by the reciprocating motion imparted to the board in the act of rubbing the goods thereon, substantially as described. 2nd. An apparatus for the renovation of fibrous material, comprising a frame, a washboard pivoted at one end on said frame, a spring support for the washboard, and a water pumping device connected to the frame and washboard, and adapted to receive motion from the rocking movement of said washboard as the said board is rocked, substantially as described. 3rd. The combination with a washboard having one



end pivoted and its other end yieldingly supported, of a pumping device, consisting of two telescoping cylindrical sections, each section having a diaphragm provided with a valve, the upper end of the washboard and provided with a nozzle projecting over the said board, substantially as described. 4th. The combination with a washboard having one end pivoted and its other end yieldingly supported, of a pumping device, consisting of two telescoping cylindrical sections, each having a diaphragm provided with a valve, the lower section having rocking connection with a fixed support and the upper section a rocking connection with the upper end of the washboard and provided with a nozzle projecting over the said board, substantially as described. 5th. The combination with a fixed frame, of a washboard having one end pivoted to the frame, a rack carried by the said frame, a spring having one end secured to the washboard and its other end engaging the rack, and a pumping device connected with the upper end of the washboard and adapted to be operated by the rocking movement of said board, substantially as herein shown and described.

No. 50,587. Bicycle Crank and Pedal.

(*Bielle et pédale de bicycle.*)



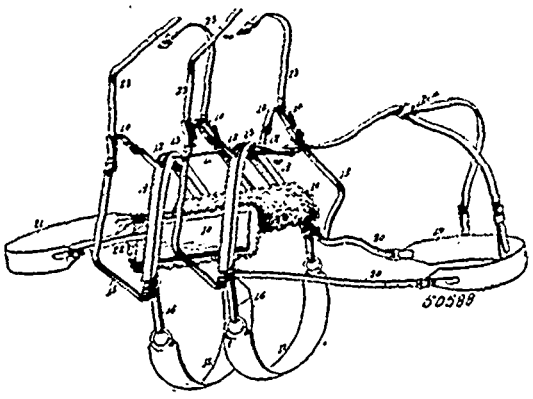
Reuben Lester, Toronto, Ontario, Canada, 14th November, 1895; 6 years.

Claim.—1st. A bicycle crank with the pedal end thereof set off or turned towards the pedal, substantially as and for the purpose set forth. 2nd. A washer with an irregular inner circumference, also having an irregular outer circumference, recessed in the socket which receives the bolt, the circumference of the receiving recess corresponding with and having the same irregularities as the outer circumference of the washer, in combination with a pin having a depression or channel in its circumference into which the irregular inner circumference of the washer will fit, substantially as and for the purpose set forth. 3rd. A washer C recessed in the eye *a*, provided with a lip or projection c^1, fitting a corresponding indentation or pocket *f* in the circumference of the recess *c*, and another lip or projection c^2 on the inner circumference of the washer, in combination with a bolt or pin *b*, having a groove or pocket *g* therein to fit the corresponding lip or projection c^2, substantially as described.

No. 50,588. Pack Saddle. (*Selle de bât.*)

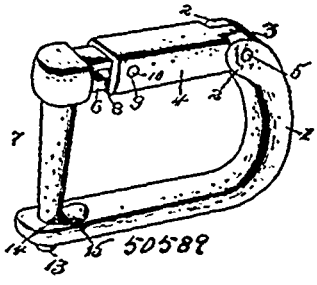
Abraham Archibald Anderson, New York, State of New York, U.S.A., 14th November, 1895; 6 years.

Claim.—1st. A pack saddle, consisting of a substantially A-shaped rame, having two arms projected respectively from opposite sides



of its centre, the said arms being rigid with a connecting piece which is arched and extends over the apex of the frame, and straps connected to the extremities of the arms, substantially as described. 2nd. A pack saddle, consisting of two substantially A-shaped frames, pads extending longitudinally and rigidly connected to the frames at each side, a longitudinal bar connected to the apex of each frame, arms respectively projected from the sides of each side, each pair of arms being rigid with a connecting piece which is arched and passes over the apex of each frame, and straps connected to the respective arms, substantially as described. 3rd. A pack saddle, consisting of two substantially A-shaped frames having at each side a pad, the same being extended longitudinally and rigid with each frame, substantially as described. 4th. A pack saddle, consisting of a substantially A-shaped frame having projected from each side an arm, and two straps secured to each arm, one of each pair of straps being extended across from one arm to the other, and the remaining straps being extended downwardly to the lower end of each frame, substantially as described. 5th. In a pack saddle, a cover having an over-all strap adapted for attachment to the cinch, and branch straps projected from the over-all strap and adapted to extend downward to the upper portions of the saddle frames, and a draw strap or rope adapted to the edges of the cover, and means, substantially as described, for connecting the draw strap or string with the branches of the over-all strap, as and for the purpose specified.

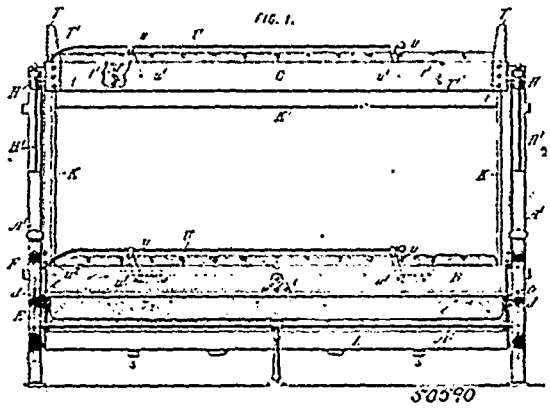
No. 50,589. Clevis. (*Croc.*)



John Louis Colbert, jr., Ogden, Kansas, U.S.A., 14th November, 1895; 6 years.

Claim.—1st. A clevis comprising a bow member, a hinged member pivoted thereto, a bolt having a sliding relation to the hinged member, and a spring for holding said bolt in engagement with the bow member, substantially as described. 2nd. A clevis comprising a bow member, a hinged member pivoted thereto and formed with a socket therein, a bolt provided with a shank mounted to slide within the socket of the hinged member, and a spring for holding said bolt in engagement with the bow member and allowing the same to be disengaged therefrom, substantially as specified. 3rd. A clevis comprising a bow member, a hinged member having a socket therein, a bolt having a slotted shank mounted to slide within the socketed hinged member, a pin or rivet carried by the hinged member and engaging the slotted shank of the bolt and a spring for holding said bolt in engagement with the bow member, substantially as described. 4th. A clevis comprising a bow member, a hinged member provided with a rectangular socket, a bolt having a rectangular slotted shank, a pin carried by the hinged member and engaging said slotted shank, and a spiral spring arranged within the socketed member and operating to hold the bolt in engagement with the bow member, substantially as specified. 5th. A clevis comprising a bow member having a keyhole slot therein, a hinged member pivoted to said bow member, a bolt having a sliding relation to the hinged member and provided with a head for engaging said keyhole slot, and a spring for holding the head of the bolt into engagement with the keyhole slot in the bow member, substantially as specified.

No. 50,590. Folding Berth. (*Couchette pliante.*)

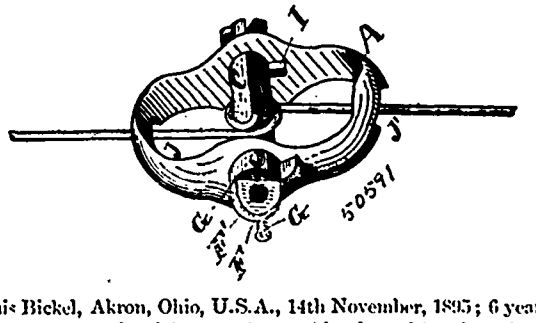


Peter Fraser, Brooklyn, New York, U.S.A., 14th November, 1895; 6 years.

Claim.—1st. In a folding berth, in combination with the framing having the upwardly and rearwardly inclined slot bearings, of the berth having pivot journals or supports resting in said slot bearings, the lever journals, forward of said first mentioned journals co-operating with the frame and forming a lever pivot for the berth, as it is turned down, whereby the first mentioned journals are caused to travel in their slot bearings and move the berth rearwardly substantially as described. 2nd. In a folding berth, the combination with the framing having the upwardly and rearwardly inclined slot bearings, of the berth having the journals working in said bearings, whereby its rear edge may be guided from a lower position to a higher and more rearward position, and the lever journals on the berth forward of said first mentioned journals with horizontal bearings on the frame for co-operation therewith, the lever journals co-operating with the horizontal bearings will cause the rear journals to traverse the slot bearings and move the berth toward the rear, substantially as described. 3rd. In a folding berth, the combination with the framing having the upwardly and rearwardly inclined slot bearings, terminating in seats at the upper end, of the folding berth, having the pivoted journal supports at the rear edge working in said inclined slot bearings and co-operating with the seats at the upper end of the same to support the rear edge of the berth with means for supporting the front edge of the berth, substantially as described. 4th. In a folding berth, end frames having each a lever-bearing slot and a pivot-bearing slot, the latter in the rear of the former and formed as an arc from a centre at the forward lower end of the former, combined with the berth having rear pivot journals in said rear arc-shaped slots, and lever-journals in said lever-bearing slots, whereby as the berth is rocked on its lever-bearings its pivot journals travel in said arc-shaped slots, and the latter guide the journals and hold the lever journals stationary. 5th. In a folding berth, the combination with the framing having bearings for the lever journals, of the lower berth, having lever journals at an intermediate point co-operating with said bearings, a movable upper berth having means for supporting its forward edge, and a link connections between its rear side and the rear side of the lower berth in rear of the lever journals, whereby the upper berth operates as a counterweight for the front of the lower berth and whereby the upper berth is elevated to the proper level as the lower berth is turned down into horizontal position, substantially as described. 6th. In a folding berth, the combination with the framing having bearings for the lever journals, the lower berth and lever journals thereon at an intermediate point co-operating with said bearings, of the upwardly extending links connected to the berth in rear of the lever journals, the upper berth pivotally connected with the upper ends of said links to swing down into vertical position and means for supporting the front edges of the berths when in horizontal position, substantially as described. 7th. In a folding berth, the combination with the framing having the bearings for the lever journals and vertical guide bearings for the rear edge of the upper berth, the lower berth and lever journals secured thereon at an intermediate point and co-operating with the bearing on the frame, of the links connected to the lower berth in rear of the lever journals, the upper berth guided in its vertical movements by the guide bearings in the frame and pivotally supported on the upper ends of the links and means for supporting the front edges of the berths in horizontal position, substantially as described. 8th. In a folding berth, the combination with the frame having the horizontal bearings for the lever journals and the upwardly and rearwardly inclined bearings, as described, the lower berth having the journals co-operating with

both sets of bearings, of the links pivotally connected to the rear portion of the berth, the upper berth pivotally connected to the upper end of said links and guided by the framing and the pivoted supports for connecting the forward portions of the berth, substantially as described. 9th. In a folding berth, the combination with the framing having the horizontal bearings for the lever journals, and the upwardly and rearwardly inclined bearings terminating in a seat at the rear end for the pivot journals, of the lower berth having the intermediate and rear journals, as described, co-operating with said bearings and seats, respectively, the upwardly extending links pivoted to the rear portion of the lower berth, the upper berth pivotally supported at the rear portion on the upper ends of said links and guided by the framing, whereby it may swing down between the links into vertical position, and the arms pivotally connected to the front portion of the lower berth and co-operating with projections on the front of the upper berth to support the latter, substantially as described. 10th. In a folding berth, the combination with the framing having the horizontal and upwardly and rearwardly inclined bearings at the bottom, as described, and the vertical guide bearings at the top, of the lower berth having the intermediate and rear journals co-operating with said bearings, the upwardly extending links, the upper berth having the journals connected with said links and extended into the vertical guide bearings, the support for the front edge of the lower berth and the folding supports for connecting the front edges of the upper and lower berths, substantially as described. 11th. In a folding berth, the combination with the framing and the lower berth pivotally connected with and bodily movable with relation to said framing, of the upper berth, guided by the framing, link connections between the rear edges of said berths and folding supports for their forward edges, substantially as described. 12th. In a folding berth, the combination with end frames and a tilting lower berth having journals F, F, at its rear side, links pivoted thereto and extending upward, and an upper berth having journals H, H, at its rear, pivoted on said links, and constructed as swivel sleeves, and upright guide rods H^1, H^1, fixed on said side frames, and receiving the sliding sleeves of said journals H, H. 13th. In a folding berth, the combination with the framing and lower berth having the lever journals at an intermediate point co-operating with horizontal bearings in the framing, of the seat and the links pivotally connecting said seat and lever journals, whereby said seat may be folded against the forward and under side of the berth as the latter is turned down to horizontal position, with means for supporting said berth in horizontal position, substantially as described. 14th. In a folding berth, end frames having each a lever-bearing slot and a hinge-bearing slot, combined with the lower berth having rear hinge journals and lever journals in said respective slots, and front supports for said berth, consisting of projections *c*, *c* from its opposite ends, and stationary ledges *d*, *d* formed on the inner side of the end frames to support said projections. 15th. In a folding berth wherein the upper and lower berths are folded flat together in such manner as to compress the springs of the mattress of either berth, the combination with said berths and a supporting frame within which they are movable between their made up and their stowed away positions, of a catch device adapted to forcibly draw together the respective berths constructed with means for fastening or locking them in place when brought together. 16th. In a folding berth wherein the upper and lower berths are folded flat together in such manner as to compress the springs of the mattress of either berth, the combination with said berths and a supporting framing within which they are movable between their made up and their stowed away positions, of a catch device consisting of toggle links connected pivotally to one berth and detachably to the other, and adapted to be swung around so as to forcibly draw the two berths together, with means for locking the toggle links in place to hold the berths together. 17th. The combination with berths B and C, of a toggle arm Q, pivoted to the berth C, a toggle link P, jointed to said arm Q, at one end, and adapted at the other end for separable connection with a stud *j*, on the berth B, whereby on turning the arm Q, the toggle is collapsed to draw the berths together, and locking means for fastening them in this position to hold the berths when drawn together. 18th. The combination with berths B and C, of a toggle arm Q, pivoted to the berth C, on a stud *g*, a toggle link P, jointed to the arm Q, by a pin *h*, at one end and constructed at its other end for separable connection with a stud *j*, on the berth B, and an operating key R, constructed to engage the arm Q, and adapted on being turned to swing this arm around to draw the berths together. 19th. The combination with berths B and C, of a toggle arm Q, pivoted to the berth C, on a stud *g*, a toggle link P, jointed to the arm Q, by a pin *h*, at one end, and constructed at its other end for separable connection with a stud *j*, on the berth B, and having a central hole *i*, a socket *m*, applied to the berth C, a socket *k*, in the arm Q, and a locking pin adapted to lock together the hole *i*, socket *k* and socket *m*, to retain the catch device in the closed position. 20th. The combination with berths B and C, of a toggle arm Q, pivoted to the berth C, on stud *g*, and having a lateral socket *k*, a toggle link P, jointed to the arm Q, at one end, and constructed at the other for separable connection with a stud on the berth B, and having a central hole *i*, a socket *o*, applied to the berth C, and a locking pin S, adapted when the device is out of use to be brought thrust the coinciding holes *i*, *k* and *o*, to lock the parts of the catch device together when out of use. 21st. In a folding berth wherein the upper and lower berths are folded together face to face so as to compress their mattresses against the tension of their mattress springs, the combination of upper suspensory pivots for the upper berth, and means for preventing the lower side of said berth from swinging away from the upper berth, consisting of a stop projection on the lower portion of said upper berth, and a stop projection co-operating therewith and arranged to the rear of said projection. 22nd. The combination of the framing, the berths B and C, the links I jointed at their lower ends to the berth B, and at their upper ends to the berth C, and means for preventing the lower side of the upper berth from swinging away from the lower berth, consisting of end projections C^1 on the upper berth, and upwardly projecting lugs I^1 on said links in the rear of said projections, as specified. 23rd. In a folding berth, the combination of a lower berth adapted to swing upwardly and backwardly to form on its lower side the back of a settee, with the seat of said settee suspended at its rear portion from said lower berth, a fastening device for attaching its front portion to said berth, and a framing constructed with supports for said settee when turned down. 24th. In a folding berth, the combination of a lower berth adapted to swing upwardly and backwardly to form on its lower side the back of a settee, with the seat of said settee suspended at its rear portion from said lower berth, filling pieces *r* on the lower berth for preventing the rearward displacement of said settee when in use, and supports for the front and rear portions of said settee. 25th. In a folding berth, the combination of a lower berth adapted to swing upwardly and backwardly to form on its lower side the back of a settee, with the seat of said settee suspended at its rear portion from said lower berth, filling pieces *r* on the lower berth for preventing the rearward displacement of said settee, projecting ledges r^1 from said filling pieces for supporting the rear of said settee; notched plates *s* under the forward portion of said settee, and a framing formed with a transverse bar A^2 adapted to be engaged by said notched plates. 26th. In a folding berth, the combination with the berth body, of a head or foot board T, having end pieces T^1 extending inside the body and pivoted thereto, combined with catches t^1 pivoted to the body and adapted to engage and hold down said board. 27th. In a folding berth, the combination with the body or frame thereof, of a side rail U, and parallel links *u*, *u* pivoted to said rail at one end, and pivoted to said berth body at the other, whereby by swinging said rail endwise it may be housed inside said berth body.

No. 50,591. Wire Tightener. (*Tendeur de fil de fer.*)

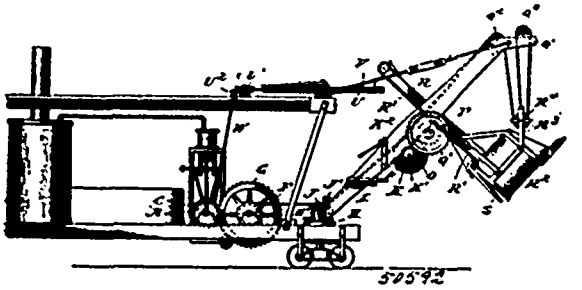


Louis Bickel, Akron, Ohio, U.S.A., 14th November, 1895; 6 years.

Claim.—In a wire tightener, the combination with a loop frame having end guides and a lug catch, and oppositely disposed windlass, bearings of different diameters, of a windlass adapted to fit said bearings, split longitudinally from said smaller end, and bearing an ear adapted to retain said windlass in place, and a sliding pin resting in a transverse orifice in said windlass, longer than the diameter thereof, and arranged to fall by gravitation and engage said lug catch, substantially as shown and described.

No. 50,592. Steam Shovel and Dredge.

(*Pelle et excavateur à vapeur.*)

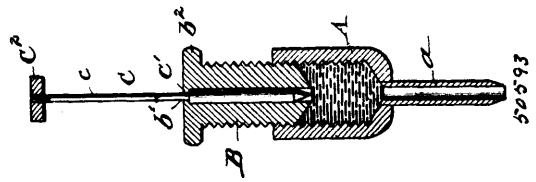


James C. Brindle, Ashland, Ohio, U.S.A., 15th November, 1895; 6 years.

Claim.—1st. In combination in a dredge, a winding drum and a friction wheel keyed to a shaft mounted in suitable boxes on the

dredge frame, a driving wheel loosely journalled on said shaft, friction shoes mounted on said driving wheel, a sliding bevelled wheel on said shaft and lever connection with said brake shoes, means for operating same, and the main crank shaft carrying a pinion designed to mesh with the peripheral teeth of said driving wheel, substantially as shown and described. 2nd. In combination with the driving mechanism as described, a swinging crane, the shaft K^1, journalled on said crane, pulley K, loosely turning thereon, the friction wheel M, keyed to said shaft, the friction shoes carried by said pulley K, and having connection with a bevelled sliding member L^2, means for operating the same, the shaft P, having keyed thereto the drum Q, pinion wheels Q and O, meshing with each other, the cables R^1, secured to a dipper handle and winding about said drums Q, and the main driving cable connecting the driving drum with the dipper, all substantially as shown and described.

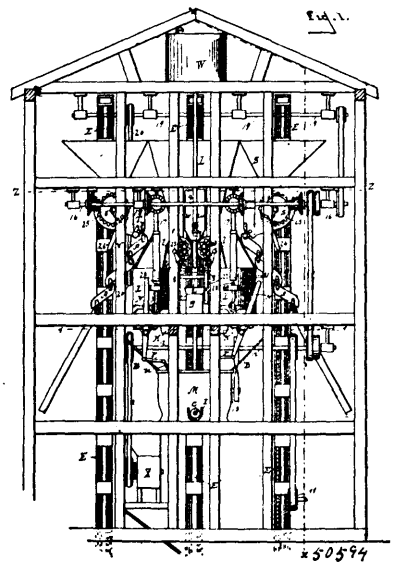
No. 50,593. Cement Injector for Repairing Pneumatic Tires. (*Injecteur de ciment pour réparer les bandages pneumatiques.*)



Charles G. Page, Chicago, Illinois, U. S. A., 15th November, 1895; 6 years.

Claim.—1st. A cement injector comprising the cement cup provided with a discharge nozzle, a plunger for ejecting the cement, and a needle for the purpose set forth arranged to work through an opening in the plunger, substantially as described. 2nd. A cement injector comprising the cement cup provided with a discharge nozzle, a plunger for ejecting the cement, a needle for the purpose set forth arranged to work through the plunger, and means for stopping the needle when drawn back relatively to the plunger, substantially as described. 3rd. A cement injector comprising the cement cup having a discharge nozzle, a plunger for ejecting the cement, and a threaded needle arranged to work within a threaded bore in the plunger, substantially as and for the purpose set forth. 4th. A cement injector comprising the cement cup A, having a nozzle *a*, the plunger provided with an enlarged end b^2, and having a bore from end to end, and the needle arranged to work within such bore of the plunger, substantially as described.

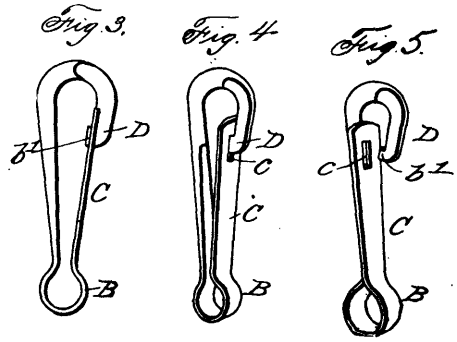
No. 50,594. Apparatus for Making Mortar.
(*Appareil pour faire du mortier.*)



Thomas D. McClary, Washington, Columbia, U.S.A., 15th November, 1895; 6 years.

Claim.—1st. In a mortar making apparatus, the combination of a lime slaker and a rotating lime meter, the latter provided with compartments, each compartment having a false bottom adapted to be adjusted, or removed, the meter arranged above the slaker so as to discharge therein, by gravity, substantially as described. 2nd. In a mortar making apparatus, the combination of a mortar mixer, a lime slaker, a rotary lime meter provided with compartments having adjustable partitions, a water meter provided with a graduated scale and automatic cut off, and a sand meter, as described, the slaker and sand meter being arranged to discharge into the mixer, by gravity, substantially as set forth. 3rd. In a mortar making apparatus, the combination of a mortar mixer and sand meter, said meter having compartments, each provided with inlet and discharge openings, as described, with the mangle-gear, lever and pawl, whereby the meter is adapted for operation, substantially as described. 4th. In a mortar mixing apparatus, the combination of a lime slaking tub or tank, having an annular depression or channel, a port leading from the channel through which lumps and waste may be discharged, and a gate for opening and closing said port, substantially as described. 5th. In a mortar making apparatus, a lime slaking tub or tank having an annular depression or channel, a port leading from the channel, and a large port in the bottom of the tub in combination with a screen to cover the large port, and a gate for closing and opening the channel port, substantially as described. 6th. In mortar making apparatus, the combination of a lime slaking tub or tank having an annular depression or channel, a screen and a gate in the channel, substantially as described. 7th. In mortar making apparatus, the combination of a lime slaking tub having an annular depression, a main port and screen in the bottom, a port and screen in the channel for discharging the contents to mixer below, and a port and gate in the channel for discharging refuse, substantially as described. 8th. In mortar making apparatus, the combination of a lime slaking tub having two ports and screens for discharging a lime paste, a perforated sliding gate for simultaneously opening and closing said ports, and means for operating said sliding gate, substantially as described. 9th. In mortar making apparatus, the combination of a lime slaking tub, a chute and port leading into said tub and a gate or cut-off for opening the port to discharge lime into the slaker and to close the same after the slaker has been charged, substantially as described. 10th. In mortar making apparatus, the combination of a lime slaker, a chute and port leading into same, and a cylindrical lime meter registering with the mouth of the chute or port for discharging lime to the slaker and closing the port, substantially as described. 11th. The combination in a mortar making apparatus, of a lime crusher, a lime meter having compartments provided with false bottoms adapted to be adjusted or removed, as desired, a lime slaker, a water meter having a graduated standard and a float-valve adjustably connected therewith, the said meters arranged to discharge into the slaker, by gravity, the bottom of the slaker provided with ports and screens, a mixing tank arranged below the slaker, a sand-meter provided with mangle-gear and operating lever and pawl, a feed regulator, and screens arranged between the said meter and mixer, the mixer provided with a discharge port and an interior swinging gate for opening and closing said port, substantially as described.

No. 50,595. Snap Hook. (*Crochet à ressort.*)



Richard A. Breul, Bridgeport, Connecticut, U.S.A., 15th November, 1895; 6 years.

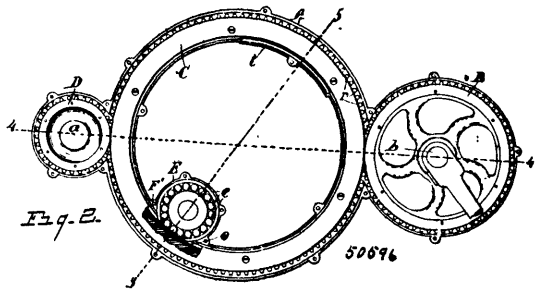
Claim.—1st. As a new article of manufacture, a snap hook made from a single piece of wire, having an increasingly broadened combined shank, spring-loop and spring end, and a flattened hook end overlapping said spring, and means for interlocking the parallel overlapping unbent ends, substantially as set forth. 2nd. A snap hook made from a single piece of wire in only one layer, bent into the well known general shape shown, and formed with the broadened elastic portion comprising part of the shank, the spring-loop and spring, and the intersecting broadened hook end, formed in a plane at right angles to that of the spring and having cut in its inner edge the tooth-forming recess, and a corresponding tooth-engaging slot formed in the spring, substantially as set forth.

No. 50,596. Driving Mechanism for Bicycles.
(*Mécanisme conducteur pour bicycles.*)

Henry L. Humphrey, Detroit, Michigan, U.S.A., 15th November, 1895; 6 years.

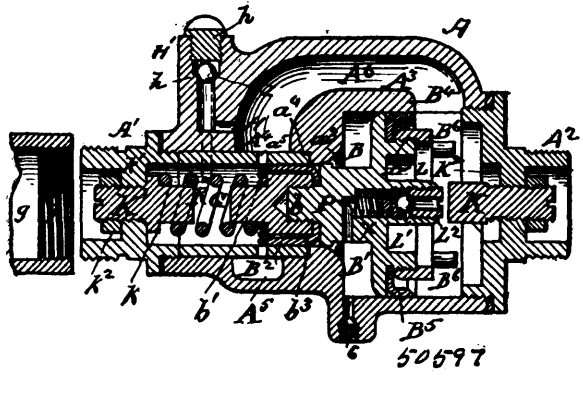
Claim.—1st. The combination of the driving and driven gears, the ring interposed between said gears and running in contact therewith, said ring having an eccentric bearing on which it turns. 2nd. The combination of the driving and driven gears, the interposed ring running in contact therewith, said ring and gears having peripherial

bearing faces on each side of their teeth. 3rd. The combination of the driving and driven gears, the interposed transmitting cogged



ring running in contact therewith, said gears and ring having a peripheral bearing on each side of their teeth in a plane with the pitch line thereof. 4th. The combination of the driving and driven gears, the interposed cogged ring adapted to run in contact therewith, and having an eccentric bearing, said ring and gears having peripheral bearing faces on each side of their teeth formed by extending flanges that terminate on a plane with the pitch-line of the teeth, and are adapted to run in frictional contact, said extending flanges forming a way between their adjacent faces, of the interdental spaces at the base of the teeth that receives the extending teeth of the opposed gear. 5th. The combination of the gears, the transmitting ring interposed between said gears and adapted to run in contact therewith, said ring having a concaved way in its inner face, the eccentric ball bearing on which said ring is adapted to turn, the balls of which extend into said way in the inner face thereof. 6th. The combination of the case, the gears journalled therein, the ring located in an annular way in said case and adapted to run in contact with said gears. 7th. The combination with a bicycle frame, of the case secured thereto, the crank shaft and rear axle passing through said case, the gears on said shaft and axle located within the case, the transmitting ring located in an annular way in said case and adapted to run in contact with said gears. 8th. The combination of the revoluble ring, of the ball case composed of opposed discs capable of lateral adjustment and having circular concavities in their adjacent faces which form a way between said discs when placed in juxtaposition, the balls in said way, said case being located adjacent to the inner face of said ring and having a segment of its edge cut away so as to expose the balls and bring them into contact with the revoluble ring. 9th. In a gear wheel, the combination of the wheel or ring having a rabbit formed in the periphery thereof, the cogged ring, the teeth of which extend below the face of said wheel, the circular plate secured to the side of the wheel, the periphery of said plate standing in line with the periphery of said wheel, substantially as specified. 10th. The combination of the case, the gears journaled therein, the ring adapted to turn freely in a way in said case and engage said gear, the cushion or brake located in said way below the upper arc of said ring.

No. 50,597. Pressure Regulator. (*Régulateur de pression.*)



William Godfrey Taafel, Newark, Ohio, U.S.A., 15th November, 1895; 6 years.

Claim.—1st. A pressure regulator comprising the casing having a cylinder in two diameters, the larger section of which is integral with the casing, and the smaller section being formed of an open ended tube inserted through the smaller end of the casing and provided between its ends with a circumferential series of small perforations, an annular channel formed in the casing, around said perforations, a longitudinal passage leading from said annular channel to the larger outlet end of the casing, an annular coupling or cap screwed into the smaller end of the casing, and abutting on the outer end of the smaller cylinder section, a larger annular coupling or cap at the outlet end of the casing, and a piston in two diameters working in the said cylinder, the smaller end of the piston facing the inlet end of the casing and its larger end facing the outlet end, substantially as described. 2nd. The combination of the casing having the cylinder in two diameters and in longitudinal alignment with the inlet and outlet ends, of a piston in two diameters, controlling the flow through the casing and having its smaller and larger ends facing the open inlet and outlet ends respectively of the casing, a longitudinal central screw mounted in a bearing in the inlet end of the casing to permit the free flow therethrough, and a spring interposed between the inner end of the screw and the smaller end of the piston, the outer end of the screw being accessible through the inlet end of the casing for adjustment, substantially as described. 3rd. A pressure regulator comprising the casing having the cylinder in two diameters and in longitudinal alignment with the inlet and outlet ends, a piston in two diameters controlling the flow through the casing with its larger end facing the outlet end of the casing and its smaller end facing the inlet end, a longitudinal central pressure-regulating screw mounted in the inlet end of the casing, a spring interposed besween the inner end of the screw and the smaller end of the piston, and a longitudinal central flow-regulating screw mounted in the larger outlet end of the casing with its inner end in the path of the larger end of the piston, the fluid being permitted to flow freely past the said two screws in entering and leaving the casing, substantially as described. 4th. The combination with the casing having a cylinder in two diameters in line with the inlet and outlet ends, of the piston in two diameters with its smaller and larger ends facing the inlet and outlet ends of the casing, respectively, a passage extending inwardly from the face of the larger piston and then laterally in rear thereof into the exhaust space at the inner end of the larger cylinder section, and an excess pressure relief valve, carried by the larger piston, and controlling said passage, the said valve being wholly within the casing, substantially as set forth. 5th. The combination with the casing, having a cylinder in two diameters in line with the inlet and outlet ends, of the piston in two diameters with its smaller and larger ends facing the inlet and outlet ends of the casing respectively, a valve chamber in the larger piston, a passage extending from the inner end of said chamber laterally into the exhaust space at the inner end of the larger cylinder section, a spring in the chamber, an excess pressure relief valve engaged by said spring, and a tubular threaded adjustable valve seat in the outer end of the valve chamber, the said excess pressure relief valve mechanism being carried by the larger piston and lying within the outlet end of the casing, substantially as set forth. 6th. The combination with the casing having a cylinder in two diameters in longitudinal alignment with the inlet and outlet ends, of a piston in two diameters controlling the flow through the casing, and having its smaller and larger ends facing the inlet and outlet ends of the casing respectively, and a central longitudinal screw mounted within the outlet end of the casing with its inner end in the path of the larger piston and its outer end exposed for adjustment through said outlet end, substantially as set forth. 7th. In a piston, the combination with the annular coupling or cap for the outlet end of the casing, provided with an apertured cross-piece, of the flow regulating screw mounted in the apertured cross-piece to limit the throw of the piston or reducing valve, substantially as set forth. 8th. The combination with the regulator having an annular coupling or cap for its inlet end provided with an apertured cross-piece and the double piston or reducing valve controlling communication between the inlet and outlet ends of the regulator, of a spring between the cross-piece and the face of the smaller piston, and a pressure regulating screw mounted in said cross-piece and bearing on the said spring, substantially as set forth. 9th. In a pressure regulator the combination with the double piston having a reduced portion on the face of its smaller piston, of an annular coupling or end cap for the inlet end of the regulator and provided with an apertured cross piece, a pressure regulating screw extending through said cross piece and having a shoulder on its inner end, and a spiral spring guided on the inner end of said screw and on said reduced portion of the smaller piston, substantially as set forth. 10th. A pressure regulator comprising the open ended casing having a cylinder in two diameters and a double piston or reducing valve aligning said open ends and controlling communication between the said open ends, of annular couplings or caps on the ends of the casing, the one at the outlet being provided with an inwardly extending central adjusting screw to limit the forward throw of the piston and regulate the flow, and the inlet coupling or cap, also having an inwardly extending central screw, and a spring bearing between the inner end of the latter screw and the face of the smaller piston, substantially as set forth.

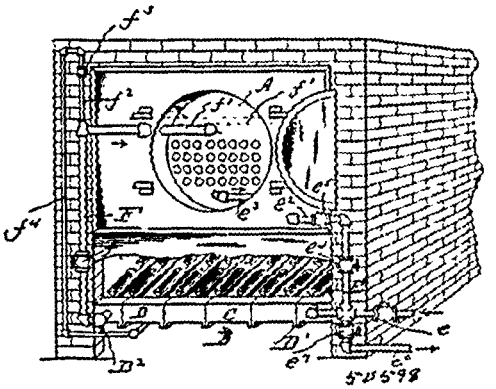
No. 50,598. Circulating Water Bar Grate.

(*Grille à circulation d'eau.*)

James Reagan, Philadelphia, Pennsylvania, U.S.A., 15th November, 1895; 6 years.

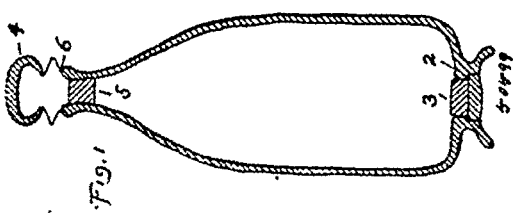
Claim.—1st. The combination, with a steam-boiler furnace, circulating-grate, pipe connections between the boiler and grate, a feed-pipe, and blow-off pipe, of valves in said pipes to admit of shutting off the grate from the boiler and of blowing off either the grate or boiler, and check-valves and air-escape, substantially as set forth.

2nd The combination, of a steam-boiler furnace, circulating-grate, pipe connections between the boiler and grate, a feed-pipe,



valves in said pipes for controlling said feed, and check-valves in the pipes between the boiler and grate, substantially as set forth. 3rd. In combination with a steam-boiler furnace, water-bar grate, pipe connections and valves for feeding the water through the grate to the boiler, and check-valves in the pipes between the boiler and grate, substantially as set forth. 4th. In combination with a water-bar grate having inlet and outlet ends, pipe connections between said inlet end and the bottom of the boiler, a normally-open cut-off and a check-valve in said pipe connection, closing against the feed and opening with the boiler-pressure, a feed-pipe connected with the boiler and said check, said feed-pipe provided with a check closing against the boiler-pressure, a pipe connection between said outlet-pipe and the water-line of the boiler, and having a cut off and a branch pipe with check normally closed, and a blow-off-pipe connection for the inlet-pipe of the grate and its pipe connection with the bottom of the boiler, substantially as set forth. 5th. The combination of the boiler A, water-bar grate C, pipe E for the inlet end of the grate, having blow-off e^6, with valve e^7, feed-water pipe e, with check e^1, check e^5, cut-off e^4, and leading to the bottom of the boiler, and pipe F for the outlet end of the grate, having cut-off f, and leading to the top of the boiler, so as to be below the water-line, and having a branch f^2, with check f^1, substantially as set forth. 6th. The combination of a boiler, a water-bar grate, pipe connections between the boiler and grate, and the feed-water pipe with cut-offs and check-valves, arranged as shown, whereby a divided feed, partly from the pump and partly from the boiler, is fed to the grate, the water from the grate being fed to the top of the boiler below its water line, the boiler being adapted to be blown off from its top to remove scum therefrom and sediment from the grate, and also being adapted to be blown off from its bottom, and when the feed is cut off having an automatic circulation between the boiler and the grate. 7th. The combination of a boiler, a water-bar grate having inlet-pipe D^1, outlet-pipe F, pipe E, coupled to said pipe D^1, having blow-off pipe e^6, feed-pipe e, with check e^1, seating with pressure from the boiler, and check e^5, seating with the pressure from the feed-water device and cut-off e^4, and leading into the boiler near its bottom, substantially as shown. 8th. The combination of a boiler, a water-bar grate having a divided feed for said grate partly from the feed device and partly from the boiler, and a feed from the grate to the boiler, which feed is conducted into the boiler near the top of its water-line, substantially as set forth. 9th. The combination of a boiler, a water-bar grate, pipe connections between the boiler and the grate, a feed-water pipe with cut-offs and check-valves arranged, as shown, and a blow-off pipe whereby the scum and other foreign matter at the top of the boiler and the sediment in the grate are blown off through the grate reversely to the line or path of its feed-water, and the sediment at the bottom of the boiler is blown off through the blow-off pipe without passing through the grate, substantially as set forth. 10th. In a grate, the combination with tubular grate bars, of hollow sectional end bearing-bars connecting said tubular bars, the sections for said end bars being bolted together, supply-pipe connections with valves, as shown, between the bottom of the boiler and the inlet-pipe of the grate, valved pipe connections between the outlet end or pipe of the grate and the top of the boiler, and a blow-pipe with valve for the grate and boiler, substantially as set forth. 11th. In a grate, the combination with tubular grate-bars, of hollow sectional end bearing-bars connecting said tubular bars, the sections for said end bars being bolted together, pipe connection with cut-off and check valves, arranged as shown, between the inlet end of the grate and the bottom of the boiler, a supply-pipe with check-valve, and a blow-pipe with cut-off connected to said pipe connection, and a pipe connection with cut-off valves between the outlet end of the grate and the top of the boiler, substantially as set forth. 12th. In a grate, the combination of side bars, hollow sectional end bearing bars secured at their ends to the side bars, water-bars joining the sections of the end bearing bars, shakers or choppers between the water bars and between the latter and the side-bars, and actuating and supporting bars for the shakers or choppers, having end bearings on said side bars, substantially as set forth. 13th. In a grate, the combination of side bars, hollow sectional end bearing-bars secured at their ends to the side-bars, water-bars joining the sections of the end bearing-bars, shakers or choppers between the water-bars and between the latter and the side bars, actuating and supporting bars for the shakers or choppers, having end bearings in said side bars, a bridge-bar having edge recesses for the reception and support for the water-bars, and interlocking end connections with the side bars, substantially as set forth. 14th. In a water-bar grate, the shakers or choppers P, hollow from end to end with open top and bottom sides, and having at the upper edges of the interior and exterior surfaces of each side, projections or ribs with intervening spaces, and actuating and supporting bars for said shakers or choppers, substantially as set forth. 15th. In a grate, the combination of water-bars, end bearing-bars, supports for the latter, hollow choppers with open tops and bottoms, and interior and exterior serrated or corrugated surfaces at the top of the sides thereof, and actuating and supporting bars for said choppers, substantially as set forth. 16th. The combination of a water-bar grate and choppers, hollow from end to end, with open tops and bottoms, and inside and outside serrations or corrugations at the top of the sides of the choppers, and said choppers projecting into the space between the water-bars and having their upper sides below the top sides of the water-bars, substantially as set forth. 17th. The combination of a water bar grate, hollow choppers with open tops and bottoms, and inside and outside serrated upper edges and having their upper surfaces below the level of the top of the water-bars, side projections p^6 on said choppers, and actuating and supporting bars for the choppers, substantially as set forth. 18th. In a water-bar grate, the choppers P, hollow from end to end, with open tops and bottoms and inside and outside serrated upper edges and curved ends, said choppers projecting into the spaces between the water-bars and placed end to end, so that their curved ends support part of the line of fire on the choppers, and actuating and supporting bars for the choppers, substantially as set forth. 19th. In a water-bar grate, the combination of sectional hollow end bearing-bars, side bars joining the end bearing bars, a bridge-bar supported on said bars, choppers projecting into the spaces between the water-bars, actuating and supporting bars for the choppers, having end bearings in said side bars, supporting-rods having end bearings on the sectional bearing, and bridge bars for the chopper actuating and supporting rods intermediate of their ends, substantially as set forth. 20th. In a grate, the combination of side bar G G, having vertical recesses g^5, with closed upper ends, legs m, having projecting legs m^2, bridge bar L, having ends fitting recesses g^5, and interlocking with lugs m^4, substantially as set forth. 21st. A bridge-bar for a grate, having in its top edge recesses l, with seats l^1, air-spaces l^2, and openings l^3 in the body of said bar, substantially as set forth. 22nd. A bridge-bar for a grate, having on each side central parallel vertical ribs or ways l^5, and knees n^4 on said bar below said ways, in combination with bars n and leg n^6, substantially as set forth. 23rd. A grate-chopper P, hollow from end to end, with open top and bottom projections with intervening spaces at the inner and outside top edges of each side of the chopper, depending lugs p^4, and a two-leaft or split key or wedge p^3, passing through openings in said lugs, substantially as set forth. 24th. A hollow grate-chopper P, having open top and bottom, and a staggered arrangement of projections with intervening recesses or spaces at the inner and outer top edges of each side of the chopper, substantially as set forth. 25th. A hollow grate-chopper P, having open top and bottom, a staggered arrangement of projections and intervening spaces at the inner and outer top edges of each side of the chopper, depending bottom lugs p^1, and side extensions or projections p^5, substantially as set forth.

No. 50,599. Bottle Seal. (*Sceau pour bouteilles.*)

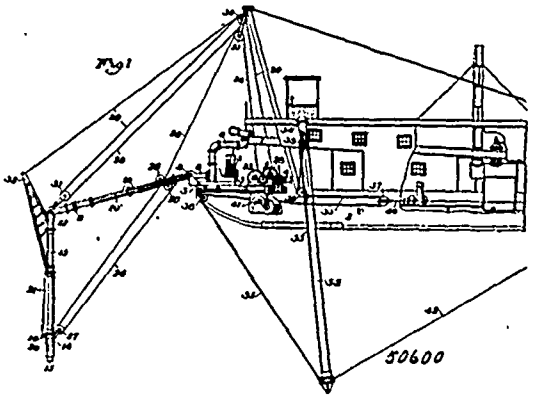


Leroy S. Buffington, Minneapolis, Minnesota, U.S.A., 15th November, 1895; 6 years.

Claim.—1st. A bottle, adapted to be filled from the bottom and sealed, and having a cover detachably connected to its neck, substantially as set forth. 2nd. A bottle adapted to be filled through the bottom and having a cap, united to the neck by connections more frangible than the neck or cap, substantially as set forth. 3rd. In a bottle, an integral neck and cap having the connections uniting them, more frangible than either the cap or neck, substantially as set forth. 4th. A bottle having a neck and a cover therefor attached by frangible connections and a tubular opening in the bottom of the bottle for filling it, substantially as set forth. 5th. A bottle provided wit

a cap formed integrally therewith but detachably connected thereto, and provided with means for filling it, substantially as set forth. 6th. A bottle-neck provided with an integral cap made more frangible than the neck itself, substantially as and for the purpose set forth.

No. 50,600. Dredging Apparatus. (*Appareil à draguer.*)



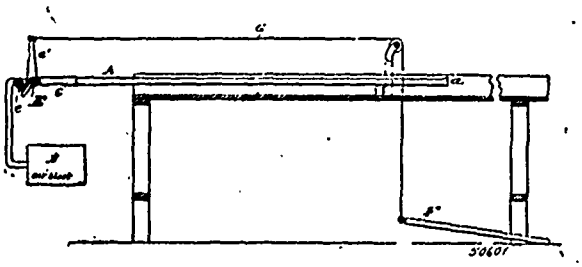
Fred. Elliott Youngs, Allegheny, Pennsylvania, U.S.A., 15th November, 1895; 6 years.

Claim.—1st. A suction dredge, having at the outer end of the suction-pipe a movable ejector for ejecting lodged obstructions, substantially as described. 2nd. A suction dredge, having at the outer end of the suction-pipe a sliding ejector for ejecting lodged obstructions, substantially as described. 3rd. A suction dredge, having at the outer end of the suction-pipe a sliding ejector for ejecting lodged obstructions, said ejector having a cross-bar extending across the pipe, substantially as described. 4th. A suction dredge, having at the end of the suction-pipe a projecting blade, which extends diametrically across the pipe, and an ejector having a cross-bar extending through a slot in the blade, substantially as described. 5th. A suction dredge, having at the end of the suction-pipe a projecting blade, which extends diametrically across the pipe, and an ejector having a cross-bar extending through a slot in the blade, said blade having several slots to permit adjustment, substantially as described. 6th. A suction dredge, having at the end a suction-pipe, and a knife blade or plow fitted within the pipe and extending across and beyond the same, substantially as described. 7th. A suction dredge, having a jointed pipe projecting outwardly from the boat, two drums and two ropes, one connected with the downwardly projecting portion of the pipe, for the purpose of swinging the same in one direction, and the other rope passing around pulleys and having two points of connection with the extended pipe and being adapted to raise, lower and swing the same, substantially as described. 8th. In a dredging apparatus, the combination of a suction-pipe, a pump, drum for raising, lowering and swinging the pipe, said pump, its engine, the drums, and the drum-engine being mounted upon a single rotatory platform, substantially as described. 9th. The combination with the boat, of a spud for anchoring the same, said spud having a stern anchor line and having a hoisting line, attached at both ends to the spud and operated by a travelling connection at a middle point, substantially as described. 10th. The combination with the boat, of anchor spuds, arranged at the sides of the boat and connected therewith solely by flexible connections, substantially as described. 11th. A pipe swivel having two parts swiveled together at their ends, each having a laterally projecting trunnion in the axial line of the swivel, each having also an arm which fits the trunnion of the other, and devices for drawing the same together, substantially as described. 12th. A pipe swivel having two parts swiveled together at their ends, the meeting ends being flanged and grooved, and having a ring in the conjoined grooves, substantially as described. 13th. A pipe swivel having two parts swiveled together at their ends, the meeting ends being flanged or grooved, and having a ring in the conjoined grooves, and a water supply entering the grooves for sealing the joint, substantially as described. 14th. A pipe swivel composed of two sections, flanged at their meeting ends, having grooves in the flanges and a separate ring fitted within the grooves, substantially as described.

No. 50,601. Apparatus for Turning Inner Air Tubes for Bicycle Tires. (*Appareil pour tourner les tubes à air pour bandages de bicycles.*)

Fred W. Morgan, Chicago, Illinois, U.S.A., 15th November, 1895; 6 years.

Claim.—1st. An apparatus for turning inner elastic air-tubes for pneumatic tires, comprising a source of supply of compressed air for producing a blast, and a blast-tube adapted to receive the air-tube and having its discharge end adapted to hold the marginal portion of the air-tube about an opening in the latter, said blast-tube being arranged to permit the air-tube to be expelled by the blast and to turn inside out during its expulsion, substantially as set forth. 2nd. A pneumatic apparatus for turning inside out, elastic air-tubes for



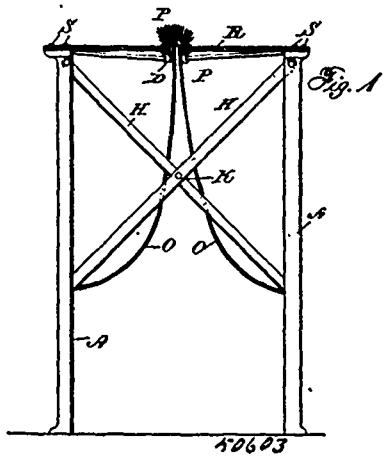
pneumatic tires, comprising a blast-tube adapted to receive the air-tube and having its discharge end formed to permit the portion of the air-tube surrounding an opening in the latter to embrace said discharge end of the blast-tube, means for supplying the blast-tube with a blast of air at a point back of its discharge end, and a valve for admitting and cutting off the air-blast, the said blast-tube being adapted to permit the tube to be expelled therefrom by the blast and to turn inside out during its expulsion from the blast-tube, substantially as set forth. 3rd. A pneumatic apparatus for turning inside out, elastic inner air-tubes for pneumatic tires, comprising a blast-tube A, arranged upon a support and adapted to receive the air-tube and having its discharge end formed to permit the portion of the air-tube surrounding an opening in the latter to embrace said discharge end of the blast-tube, means for supplying the blast-tube with a blast of air at a point back of its discharge end, and a valve for admitting and cutting off the air-blast to and from the blast-tube, said blast-tube being adapted to permit the tube to be expelled therefrom by the blast and to turn inside out during its expulsion from the blast-tube, substantially as set forth. 4th. A pneumatic apparatus for turning inside out, elastic inner air-tubes for pneumatic tires, comprising a blast-tube A adapted to receive the air-tube, and having its discharge end formed to permit the portion of the air-tube surrounding an opening in the latter to embrace said discharge end of the blast-tube, means for supplying the blast-tube with a blast of air at a point back of its discharge end, a valve for admitting and cutting off the air-blast, and a push rod I adapted for insertion within the air-tube, substantially as and for the purpose described. 5th. A pneumatic apparatus for turning inside out, elastic inner air-tubes for pneumatic tires, comprising the blast-tube A arranged upon a support and provided with a shoulder at its discharge end, means for supplying a blast of air to the blast-tube, a valve for admitting and cutting off the air-blast, and a valve operating device subject to the control of an attendant, the said blast-tube being adapted to receive the air-tube and to permit the latter to be stretched upon its discharge end, substantially as and for the purpose described.

No. 50,602. Means for Insulating Electric Conductors. (*Moyen d'isoler les conducteurs électriques.*)

Theodore Guilleaume, Mülheim-on-the-Rhine, Germany, 15th November, 1895; 6 years.

Claim.—1st. The herein described method of insulating an electric conductor on the air-space system, same consisting in inclosing a naked conductor in a twisted quadrangular, triangular or polygonal tube of non-conducting material, the conductor being entirely air-insulated, except where in contact with prominences which are presented in the internal surface of the envelope and which result from angularity of section and twisting. 2nd. An electric conductor inclosed in a twisted quadrangular, triangular or polygonal tube of non-conducting material, said conductor being entirely air-insulated except where in contact with prominences which are presented in the internal surface of the envelope and which result from angularity of section and twisting. 3rd. The combination, with a naked electric conductor c, of a tubular envelope *b* of non-conducting material, angular in cross-section and twisted so as to present in its internal surface prominences with which the conductor is alone in contact, substantially as set forth. 4th. For use in the production of air-insulated electric conductors of the kind herein referred to, a folding or forming instrument, constructed substantially as described with reference to the accompanying drawings, and comprising two parts arranged the one within the other, and having between them a space or passage which gradually contracts in diameter and changes from an annular form at the entering end to an angular at the exit end, the inner part being moreover provided with a central opening for the passage of the conductor.

No. 50,603. Folding Chair. (*Chaise pliante.*)



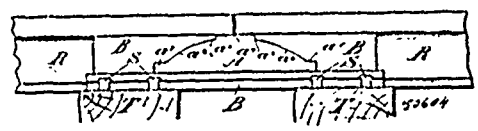
John Friederich Heinetick Evers and Hermann Woerner, both of New York, State of New York, U.S.A., 15th November, 1895; 6 years.

Claim.—1st. A folding chair, the legs of which are united by means of cross bars, which are pivotally connected with the upper ends thereof, said cross bars being pivotally connected, and also pivotally connected at their lower ends with a head or heads, adapted to slide on a vertical rod secured to the inner surfaces of said legs, substantially as shown and described. 2nd. A folding chair, comprising legs with the tops of which are pivotally connected at each side thereof, cross bars which are pivotally connected at their intersections, the lower ends of which are pivotally connected with sliding heads which are mounted on vertical rods secured to the inner sides of the legs, and a spring connected with the inner side of each of said legs and adapted to operation in connection with said heads, and the top of each leg being also provided with a flexible metal band or strap which is pivotally connected therewith, and each of which is pivotally connected with a central ring, substantially as described. 3rd. A folding chair, comprising legs with the tops of which are pivotally connected at each side thereof, cross bars which are pivotally connected at their intersections, and the lower ends of which are pivotally connected with sliding heads which are mounted on vertical rods secured to the inner sides of the legs, and a spring connected with the inner sides of the legs, and a spring connected with the inner side of each of said legs and adapted to operate in connection with said heads, and the top of each leg being also provided with a flexible metal band or strap which is pivotally connected therewith, and each of which is pivotally connected with a central ring, substantially as shown and described. 4th. A folding chair, comprising legs with the tops of which are pivotally connected at each side thereof, cross bars which are pivotally connected with sliding heads which are mounted on vertical rods secured to the inner sides of the legs, and a spring connected with the inner side of each of said lugs, and adapted to operate in connection with said heads, and the top of each leg being also provided with a flexible metal band or strap which is pivotally connected therewith, and each of which is pivotally connected with a central ring, and cords or similar devices connected with the lower ends of said springs and passed upwardly and through said central ring and through the bottom or seat of the chair, substantially as shown and described. 5th. A folding chair, comprising legs with the tops of which are pivotally connected at each side thereof, cross bars which are pivotally connected at their intersections, and the lower ends of which are pivotally connected with sliding heads which are mounted on vertical rods secured to the inner sides of the legs, and a spring connected with the inner side of each of said legs, and adapted to operate in connection with said heads, and the top of each leg also provided with a flexible metal band or strap which is pivotally connected therewith, and each of which is pivotally connected with a central ring, and cords or similar devices connected with the lower end of said springs and passed upwardly through said central ring and through the bottom or seat of the chair, said bottom or seat being composed of flexible material secured to the legs, substantially as shown and described.

No. 50,604. Railway Rail Joint. (*Joint de rail.*)

William Morrison, Toronto, Ontario, Canada, 15th November, 1895; 6 years.

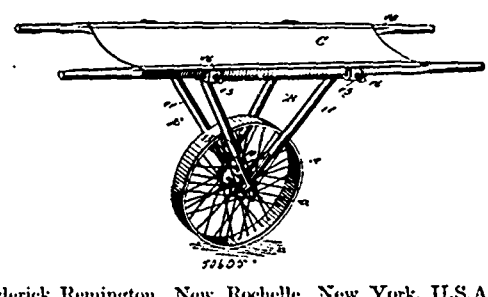
Claim.—1st. In a railway rail joint, the combination of a key-piece consisting of two sides each extending along the web of the two rails and fitting close against the web head and foot and having its lower edge rebated and provided near the ends with pins engaging perforations in the feet of the rails and its upper edge shortened by a shoulder and sloped off convexly and said sides connected by a central rigid connection of angular longitudinal section adapted to



pass through a corresponding perforation in the rail web and a pair of fish plates fitting the rails close and each extending in cross-section from the underside of the head around the edge of the foot and having a central recess or perforation which is the exact counterpart of the side of the key-piece and making close butt joints therewith, and the ends of the rail webs notched to form an angular perforation when the two rail ends are brought together and adapted to receive the transverse connection of the key-piece, substantially as set forth. 2nd. In a railway rail joint, the combination with the web of the rail ends of notches forming when the two rail ends are brought together an angular perforation, and a key-piece consisting of two sides rigidly connected transversely by a central part fitting the perforation in the rail web ends and fitting close against the webs and the underside of the heads and the upper faces of the feet of the rails and having on its lower edges at each end a pin engaging the corresponding perforation in the feet of the rails, substantially as set forth. 3rd. In a key-piece for a railway rail joint, the combination of two sides each fitting against the web and the underside of the head and the foot of the rail, a transverse centre of angular section rigidly connecting said sides, a rebate at the lower edge of each side, a central segmental recess in the lower edge of each side, and an upper edge shortened by off-sets and convexly sloping ends, substantially as set forth. 4th. In a fish-plate for a railway rail joint, the combination of a plate extending from the underside of the head of the rail down the web and over and around the edge of the foot and fitting close upon the same, and a central recess the exact counterpart of the side of a key-piece which it is adapted to receive, substantially as set forth. 5th. In a railway rail joint, the combination of a pair of rail ends having the ends of their webs notched to form when brought together an angular perforation, a key-piece A having two sides transversely connected by a centre adapted to pass through the perforation in the web of the rails and having in its lower edges pins engaging the rails, and the upper edges of the sides shortened by off-sets, a pair of fish-plates B, each having a recess which is the exact counterpart of the side of the key-piece adapted to pass over and receive and interlock with the same, and spikes S driven close against the edges of said fish-plates, substantially as set forth.

No. 50,605. Stretcher and Ammunition Carrier.

(*Brancard et porte-munitions.*)



Frederick Remington, New Rochelle, New York, U.S.A., 15th November, 1895; 6 years.

Claim.—1st. A stretcher or ammunition carrier, the same consisting of a wheel, an axle upon which said wheel revolves, and telescopic cushioned arms pivoted upon the said axle at opposite sides of the wheel and extending upwardly in pairs in opposite directions from said axle, each arm being provided with a socket, and a locking device connected with the socket, the sockets being adapted for the reception of a stretcher or ammunition carrying frame, as and for the purpose set forth. 2nd. A stretcher or ammunition carrier, the same consisting of a wheel, an axle upon which the wheel is loosely mounted, arms pivoted in pairs on the said axle, the pairs of arms extending upwardly therefrom in opposite directions, presenting in general arrangement substantially the form of the letter V, each arm being made in two sections, an upper receiving section and a lower entering section, the movement of one within the other being limited and the two sections being separated by a spring contained within the receiving section and having bearing upon the entering section, a socket secured to the upper portion of each arm, provided with set screws, and connecting bars uniting the sockets at the sides of the vehicle, as and for the purpose specified.

No. 50,606. Device for Repairing Pneumatic Tires.
(Appareil pour réparer les bandages pneumatiques)

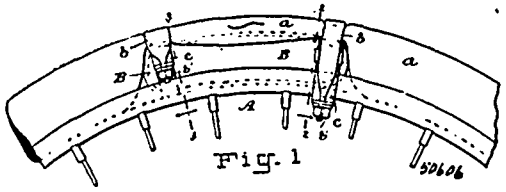
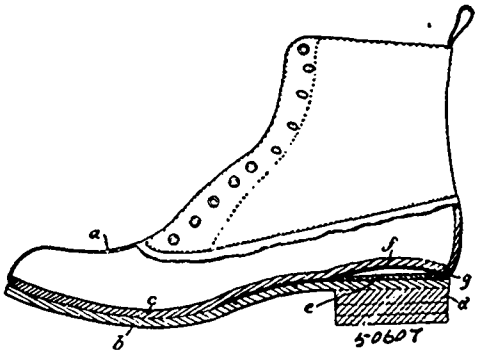


Fig. 1

Frederick Harold Nies, Brooklyn, New York, U.S.A., 15th November, 1895; 6 years.

Claim.—1st. A device for clamping a torn or punctured hollow tire, comprising a clamp for compressing the tire on each side of the puncture therein, and means for holding that portion of the tire between the clamps approximately in line with the outer peripheral surface of the inflated portion, for the purpose set forth. 2nd. A device for clamping a torn or punctured hollow tire, comprising an outer yoke section and an inner clamp section, said sections being adapted to receive and clamp a tire therebetween, and a support adapted to be inserted between the tire and the rim of the wheel for holding the clamped portion of the tire approximately in line with the outer peripheral surface of the inflated portion thereof, substantially as described. 3rd. A device for clamping a torn or punctured hollow tire, comprising an outer yoke section and an inner clamp section, said sections being adapted to receive and clamp a tire therebetween, and an elastic support adapted to be inserted between the tire and the rim of the wheel for holding the clamped portion of the tire approximately in line with the outer peripheral surface of the inflated portion thereof, substantially as described. 4th. A device for clamping a torn or punctured hollow tire comprising an outer yoke section and an inner clamp section, said sections being adapted to receive and clamp a tire therebetween, and said clamp section uniting the legs of the outer yoke section to prevent spreading thereof, substantially as described. 5th. A device for clamping a torn or punctured hollow tire, comprising an outer yoke section and an inner elastic clamp section, said sections being adapted to receive and clamp a tire therebetween, and said elastic tire serving to unite the legs of the outer yoke section to prevent spreading thereof, substantially as described. 6th. A device for clamping a torn or punctured hollow tire, comprising an outer arched yoke section and an inner arched clamped section, said sections being adapted to receive and clamp a tire therebetween, and the arching form of the sections serving, when the device is applied, to maintain the clamped portion of the tire approximately in line with the outer peripheral surface of the inflated portion, substantially as described. 7th. A clamp for repairing a torn or punctured tire, comprising inner and outer arched sections, the inner section uniting the legs of the outer sections to prevent spreading thereof, and the arched formation of the clamped sections when applied, serving to maintain the clamped portion of the tire approximately in line with the outer peripheral surface of the inflated portion, substantially as described. 8th. A device for clamping a torn or punctured hollow tire, comprising two arched shaped sections, said sections being adapted to receive and clamp a tire therebetween, and the outer section having its ends screw-threaded, and a cross bar so formed as to adapt itself to the contour of the convex surface to the outer rim, substantially as and for the purpose set forth. 9th. A device for clamping a torn or punctured hollow tire, comprising inner and outer arched sections, said sections being adapted to receive and clamp a tire therebetween, and means for preventing the inside clamp section from being tilted or wrenched from its position with respect to the outer section, substantially as described.

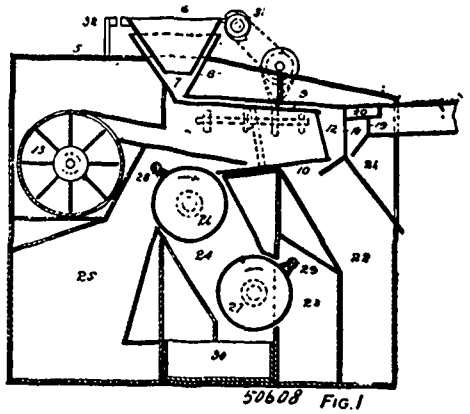
No. 50,607. Boot and Shoe. *(Chaussure.)*



Edward Roche, Providence, Rhode Island, U.S.A., 15th November, 1895; 6 years.

Claim.—1st. A boot or shoe comprising in its construction an insole, the heel portion of which is loose or disconnected from the other parts, a heel foundation piece *e*, to which the heel part of the upper is attached, and a bowed steel plate interposed between the said loose portion of the insole and the heel foundation piece, the rear portion of said bowed plate being disconnected from the other parts, as set forth. 2nd. A boot or shoe comprising in its construction an insole, the heel portion of which is loose or disconnected from the other parts, a heel foundation piece *e*, to which the heel part of the upper is attached, and a bowed steel plate forming an extension and an integral part of the steel shank piece interposed between the heel portion of the insole and the foundation piece, the rear portion of said bowed plate being disconnected from the other parts, as set forth.

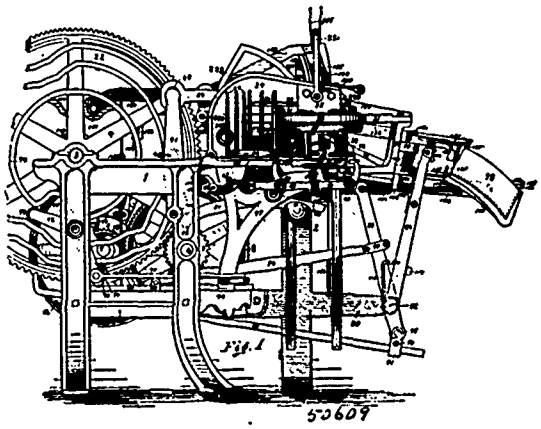
No. 50,608. Ore Separator. *(Séparateur de minerai.)*



George Hutton Patterson, Denver, Colorado, U.S.A., 15th November, 1895; 6 years.

Claim.—1st. In a dry ore separator, the combination with a suitable casing, of a feed hopper, vibrating trays located below the hopper, air blast mechanism adapted to drive a current of air between the trays, whereby the ore falling from one to the other is subjected thereto, and screens of varying mesh located in the path of the air current, substantially as described. 2nd. In a dry ore separator, the combination with the casing and a suitable hopper, of one or more vibratory trays located below the hopper, and one or more magnetic rolls so located as to bring the material in suitable proximity thereto, as and for the purpose set forth. 3rd. In a dry ore separator, the combination with a suitable casing having a hopper mounted thereon, of one or more vibratory trays, suitable air blast mechanism, and one or more magnetic rolls, the parts being constructed and arranged, substantially as shown and described. 4th. In a dry ore separator, the combination with a suitable casing, of a movable hopper, vibratory trays, air blast mechanism for passing a current of air between the trays, and magnetic rolls located below the trays and at different elevations, substantially as described. 5th. In a dry ore separator, the combination with a suitable casing, of the vibratory trays, suitable air blast mechanism, the magnetic rolls, and brushes suitably arranged or located for cleaning the rolls, substantially as described.

No. 50,609. Basket Making Machine.
(Machine à faire les paniers.)

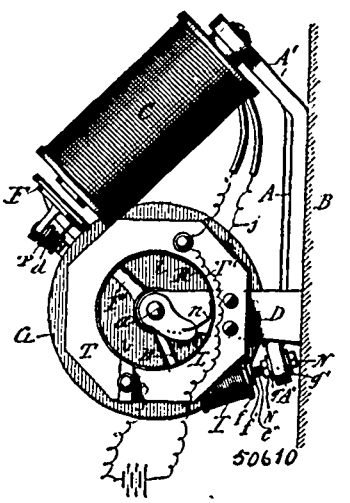


Emmet Horton, Dundee, New York, U.S.A., 15th November, 1895; 6 years.

Claim.—1st. In a basket making machine, a form provided with mechanism for giving it an intermittent movement and rotating it alternately on two separate centres. 2nd. In a basket or receptacle making machine, a form in combination with a bottom feeding and a band feeding mechanism, and mechanism for assembling and uniting the sides and bands at the top and bottom of the receptacle, substantially as described. 3rd. In a basket machine, a form which revolves successively on two separate centres, in combination with mechanism for assembling and uniting the parts composing the basket, substantially as described. 4th. In a basket machine, a rotatable form and mechanism for giving it a step by step movement, in combination with guide bars or plates between which the centres of the form move, and are rotated during the operation of uniting the assembled parts of the basket, substantially as described. 5th. In a basket or receptacle making machine, a form in combination with a bottom feeding and band feeding mechanism, and mechanism for assembling and uniting the sides and bands of the receptacle, substantially as described. 6th. In a machine for making baskets with bottom, sides and bands complete, the combination with a form, a mechamsm for feeding the bottom and sides to the form, a band feeding mechanism arranged and adapted to automatically and separately pass the bands to the inner and outer edges of the basket sides, and mechanism for uniting the bands and side pieces, substantially as described. 7th. In a basket making machine, the form and its operating mechanism, in combination with a semi-circular plate and a straight surface plate forming part of the machine, said plate having a passage between them to receive the centres of the form, as set forth. 8th. The combination of the form having two centres, with a semi-circular plate and a straight edged bar plate for guiding said form in its rotary and rectilinear movement, substantially as described. 9th. In a machine for making baskets, the combination of a cage or hopper for holding the basket bottoms, a form having an alternate rotary and rectilinear movement, and means, substantially as described, for transferring the bottoms from the cage into coincidence with the form. 10th. In a basket making machine, the combination of a form and hopper, a crane carrying a table and provided with bottom gripping jaws, one of which has an extended arm, and a spring cam or arm for actuating the jaws through the medium of said arm, substantially as described. 11th. In a basket making machine, the combination of a rotatable form, and mechanism for assembling blanks about the form, a bottom delivcrer provided with a support for the bottom grippers which automatically grasp and adjust the bottom on the support, as and for the purpose set forth. 12th. In a basket making machine, the combination of a form revolving successively on two centres, an ejector over the form, a movable table below the form, and mechanism connecting the table and the ejector, whereby on completion of a basket the moving of the table causes the ejector to pass through the form and eject the basket therefrom, substantially as described. 13th. The herein described bottom delivering crane having a laterally projecting arm in combination with a pitman connected to the arm, a lever fulcrumed on the frame and connected to the pitman, and a cam wheel provided with cams for rocking the lever, whereby the crane is oscillated, in the manner and for the purpose set forth. 14th. A bottom delivcrer comprising the combination of a crane having a vertical axis, a rotary bottom supported by the crane, the grippers being adapted to grippe the opposite ends of the bottom, the lower arms of the levers being provided with intermeshing teeth, a laterally extending arm upon one of the levers, and a cam upon the machine frame adapted to engage the arm during the backward and forward oscillation of the crane, whereby the grippers are opened and closed, in the manner and for the purpose set forth. 15th. In a basket machine, and in combination with a form, a band feeder and separator, mechanism for feeding the basket sides to the form, said separator being arranged to automatically pass the bands upon the opposite edges of the basket sides, and uniting mechanism, substantially as described. 16th. In a basket making machine, the combination with a form of a band feeding chute, and a separating device adapted to separate and pass the bands upon the opposite edges of the parts composing the basket sides, substantially as described. 17th. In combination with the rotary form, and mechanism for assembling and uniting the stock, of a guide or way for holding the ends of the bands, a resisting plate across the guide, a follower to press the bands against said resisting plate, and a plunger operating across the guide to deliver the bands therefrom to the form, substantially as described. 18th. In a basket making machine, the combination with a rotary form, of a guide or way for holding the bands, a follower operating therein, a plunger travelling before the mouth of the guide to deliver the bands therefrom, a movable separating chute at the mouth of the guide to receive a single band, and adapted to separate and direct said band as it is delivered to the form by the plunger, substantially as described. 19th. In a basket making machine, the combination of a form, a guide or way for holding the bands, a chute and plunger at the mouth of the guide, said chute having an inclined plane to receive the end of a band and move the band in an endwise direction as it is forced downward by the plunger to the form, substantially as described. 20th. In a basket making machine, a band feeding mechanism consisting of a guide or way for holding the bands, in combination with a plunger and an oscillating chute located at the mouth of the way for separating the bands, substantially as described. 21st. In combination with the straight bar plate 21, the vertical flange extending upwardly from the bar plate to form a wall, the chute for separating and conducting the bands, and being located alongside the wall, so as to leave a passage alongside the wall and chute for conducting the bands to the form, substantially as described. 22nd. In combination with a bottom deliverer provided with a rotary support for the bottom, a form having feet provided with points, and an automatic lifting device so timed that when the rotary support has passed beneath the feet, it will force the bottom against the feet and cause the points to enter the bottom and hold it during the nailing operation, substantially as described. 23rd. In a basket making machine, in combination with a pivoted bender, a hammer rod, a nailing block provided with a longitudinal hole having communicating grooves, and a bender receiving slot, and having reciprocation in a line passing through the pivot of the bender, in combination with a knife adapted to move in unison with the block during a part of the stroke, as set forth. 24th. The combination in a basket machine, of a nailing block having a partially grooved hole extending longitudinally through it, a hammer rod extending through the block, and having flanges plying in the groove of the hole, and a coil spring upon the hammer rod for actuating the nailing block, substantially as described. 25th. The combination in a basket machine, of a bender, a nailing block having a longitudinally grooved hole, and a bender receiving slot, and a hammer rod extending through the nailing block and provided with flanges plying in the grooves of the hole, a spring on the hammer rod for actuating the nailing block while setting and driving the staple, a reciprocating lever carrying the pawl for actuating the nailing block when not actuated by the spring, and a knife adapted to move in unison with the block while cutting and bending the staples, substantially as described. 26th. In a basket making machine, a nail or staple applying mechanism, having a lever adapted to actuate the nailing hammer and having a pawl adapted to engage the nail making mechanism, in combination with a yielding secondary lever fulcrumed on and carried by the main lever, and adapted to directly engage the nailing hammer, in the manner and for the purpose substantially as described. 27th. The combination in a basket making machine, of a nail making mechanism provided with a lever carrying pawl, a reciprocating knife bar and nailing block moving in unison therewith, the knife bar being engaged and actuated by the pawl, the nailing block being engaged and actuated by the knife bar, and a cam adapted to come in contact with the pawl and release it from the knife bar upon the cutting and forming of the nails, substantially as described. 28th. In a basket making machine, a nailing mechanism comprising a reciprocating block provided with a longitudinal hole having grooves in the inner walls of the hole, a spring retracted nailing hammer movable within the hole, a frame normally across the path of said block, a wire feeder adapted to introduce the wire across the chamber in which the block operates, and at a point between it and the bender, a side slot communicating with the longitudinal hole and adapted to receive the bender when the block is advanced, a knife bar adapted to cut the wire, and means, substantially as described, for withdrawing the bender from the side slot as the nailing hammer advances, all arranged and adapted to operate in the manner and for the purpose substantially as described. 29th. In a basket making machine, the combination with a cam wheel, a lever actuated thereby, a pair of yielding secondary levers fulcrumed on and carried by said levers, and a pair of nailing hammers actuated by the secondary levers through the medium of the main lever, whereby the top and bottom bands of the basket are simultaneously nailed, in the manner and for the purpose substantially as described. 30th. In a basket making machine, the combination with a feeding chute leading to the basket form, of a lever fulcrumed in the frame of the machine, below the chute, a rod connected to the upper end of the lever, a pair of gripping levers attached to said rod and actuated thereby, said jaws being adapted to pass astride the stock in the chute, and to engage and advance it to the form, substantially as described. 31st. In a feeding mechanism for a basket making machine, the combination with a form and the reciprocating pinchers arranged to carry and adjust the side pieces of the basket, of an adjuster located near the path of the advancing side pieces, and adapted to automatically engage and justify the pieces as they pass to the form, in the manner and for the purpose set forth. 32nd. In a basket making machine and in combination with the assembling mechanism, a hopper having a passage way in one side, in combination with an oscillating lifting arm having its free end movable in said way to engage and lift the stock from the hopper, in the manner and for the purpose set forth. 33rd. In a basket making machine and in combination with the form, a hopper for holding the sides of the basket, in combination with the guide way or chute, an oscillating arm having needles in its free end which enter and lift the stock out of the hopper and present it to the guide-way, as and for the purpose set forth. 34th. In a basket making machine, a hopper for holding the sides and a movable arm provided with needle points which enter the hopper and engage and lift the sides, one by one therefrom, in combination with a form, and assembling and uniting mechanism, substantially as described. 35th. In a basket machine a rotatable form having larger diametrical dimensions than the basket bottoms to be operated upon, in combination with a bottom feeding and a band feeding mechanism, and mechanism for assembling and uniting the sides and bands at the top and bottom of the basket, substantially as described. 36th. A basket machine comprising the combination of a

form, mechanism substantially as described, for feeding the sides to the form, a bottom feeding device, a band feeding mechanism, a nailing mechanism, a cam wheel, and intermediate mechanism, substantially as described, for actuating all of said mechanisms, in the manner and for the purpose substantially as described. 37th. In a basket making machine, and in combination with the form, a needle arm adapted to separately engage and feed the blanks, a retracting spring which gives the arm its initial movement backward, and mechanism for completing the backward stroke of the arm after the spring has spent its force, substantially as described. 38th. In a basket making machine, the combination of a form revolving successively on two centres, an ejector over the form, a movable table below the form, and mechanism connecting the table and the ejecter, whereby on completion of a basket the moving of the table causes the ejector to pass through the form and eject the basket therefrom, substantially as described.

No. 50,610. Electric Motor. (*Moteur électrique.*)

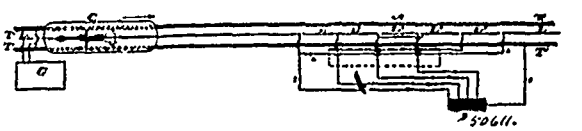


Frank Hastings Williams, Greene, New York, U.S.A., 15th November, 1895; 6 years.

Claim.—1st. In an electric motor, the combination with the electro-magnets and their armature, of a circuit breaker actuated by the attraction of said armature, as set forth. 2nd. In combination with the motor-magnets and their armature, a circuit-breaker consisting of an inferior supplementary magnet having its helix connected with the core and with the aforesaid motor-magnets, and an electric contact-finger carried to and from the core of the supplementary magnet by the aforesaid armature, as set forth. 3rd. In combination with the motor-magnets and oscillatory armature, an inferior supplementary magnet having its helix connected with the core and with the motor-magnets, an arm oscillated toward and from said core by the oscillations of the armature a spring supported on said arm, and an electric contact-point on said spring and lifted thereby from the core of the supplementary magnet and pressed into contact with the core by the oscillations of the supporting arm of said spring as set forth. 4th. In combination with the motor-magnets, armature and circuit-breaker actuated by said armature, a revoluble shaft, a wheel fixed to said shaft, and a pawl connected to the armature and actuating said wheel, as set forth. 5th. In combination with the motor-magnets, oscillatory armature and circuit breaker actuated by said armature, a revoluble shaft, a wheel fixed to said shaft and provided with a circumferential groove, a pawl pivoted to the armature and having a tooth with reversely bevelled sides engaging opposite sides of the groove of the wheel to transmit motion to the wheel during the movement of the armature to the magnets, as set forth. 6th. In combination with the motor-magnets, oscillatory armature and circuit-breaker actuated by said armature, a revoluble shaft, a wheel fixed to said shaft, a pawl connected to the armature and transmitting motion to said wheel, and a commutator having its brush attached to the aforesaid shaft and in circuit with the circuit-breaker, as set forth. 7th. In combination with the commutator shaft, a plate disposed in a plane at right angles to said shaft and provided with a circular opening concentric to the shaft, commutator segments lining the interior of said opening, and the commutator-brush attached to said shaft, as set forth. 8th. In combination with the motor-magnets, a revoluble shaft, the armature mounted on said shaft and rocking independently thereof to and from the magnets, an arm extending from the heel of the armature, a supplementary magnet under the free end of said arm and having its helix connected with the core and with the motor-magnets, a spring secured to said arm, an electric contact-screw passing through the spring and arm directly over the core of the supplementary magnet, nuts on the screw directly under and over the spring to adjustably support the screw, a head on the screw beneath the arm with a vertical play between said head and arm and held normally in contact with the arm by the aforesaid spring, commutator-segments in the plane at right angles to the aforesaid shaft and concentric thereto, the commutator-brush attached to said shaft and in electric connection with the aforesaid contact-screw, a wheel fixed to the aforesaid shaft, and a pawl connected to the armature and transmitting motion to said wheel, all combined to operate, substantially as set forth.

No. 50,611. Electric Railway System.

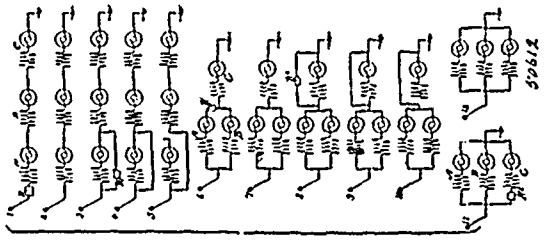
(*Système de chemin de fer électrique.*)



The Canadian General Electric Company, Toronto, Ontario, Canada, assignee of Elihu Thompson, Swampscott, Massachusetts, U.S.A., 18th November, 1895; 6 years.

Claim.—1st. The combination with the vehicle electrically propelled along a line of way, and having definite stopping and starting points thereon, of one or more conductors at such points making connection with the electric motor on said vehicle, and an energy storing device in connection with said conductors. 2nd. In an electric railway system, the combination with a vehicle electrically propelled along a line of way, of means for stopping and starting said vehicle at definite points on said line of way, consisting of a series of conductor sections located near such points and making connection with the vehicle, and a storage battery, having connections from points of different effective potential to the various sections, the potential decreasing from each end section toward the middle. 3rd. In an electric railway system, the combination of the line or supply and return conductors, an electrically propelled vehicle making connection therewith, a storage battery connected at its opposite terminals to the aforesaid supply and return conductors respectively, and one or more conductor sections making connection with the vehicle, and connected to the battery at a point or points intermediate the terminals in position or potential. 4th. In an electric railway system the combination of the line or supply and return conductors, an electrically propelled vehicle making connection therewith, a storage battery connected at its opposite terminals to the aforesaid conductors respectively and a series of conductor sections located near such points and making connection with the vehicle, and respectively connected to points of the battery intermediate, the terminals in position or potential decreasing from each end section toward the middle. 5th. In an electric railway system, the combination of the line or supply and return conductors, the electrically propelled vehicle having a moving contact therewith, and means for applying a graduated or increasing electro-motive force to said vehicle at certain points of the line of way, consisting of a series of sectional conductors separate from the line conductor, but connected thereto through a series of counter-electro-motive force generators, and making connection successively with the moving vehicle. 6th. In an electric railway system, the combination of the line or supply conductor and a section conductor supplied with current of lower electro-motive force than the line conductor, with an electrically propelled vehicle making successive connection with said conductors, for the purpose set forth. 7th. In an electric railway system, the line or supply conductor, a series of section conductors connected to said line conductor through resistant or equivalent devices for lowering the effective electro-motive force of said sections from that of the line in a successive and graduated manner, in combination with an electrically propelled vehicle making successive connection with such conductors. 8th. In an electric railway system, the combination of the line or supply conductor, and a section conductor connected thereto through a resistant or current opposing device, and an electrically propelled vehicle making successive connection with said conductors. 9th. An electric railway system carrying a line conductor, a conductor branching therefrom, and having a section supplied with current of lower electro-motive force than that of the line conductor, and an electrically propelled vehicle having a shiftable contact for connection with either of said conductors. 10th. The combination of the continuous line conductor, the branch conductor connected at both ends thereto, and having one or more sections supplied with a current of lower electro-motive force than that of the line, and a vehicle having a contact adapted for connection with either of such conductors, substantially as and for the purpose set forth. 11th. In an electric railway system, the combination of the electrically propelled vehicle having one or more definite starting places, with the supply and return conductors, and a series of counter electric potential devices connected between said conductors and having intermediate connections of progressively increasing potential to sections of the line at the said starting places.

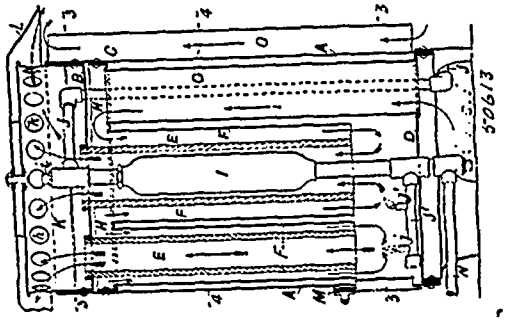
No. 50,612. Series Parallel Controller for Electric Motors. (*Serie de contrôleurs parallèles pour moteurs électriques.*)



The Canadian General Electric Company, Toronto, Ontario, Canada, assignee of Edward D. Priest, Schenectady, New York, U.S.A., 18th November, 1895; 6 years.

Claim.—1st. The method of changing three or more motors from series to parallel connection, which consists in shunting one motor, disconnecting it from the series and connecting it in parallel with another, but in series with the remaining motors, and afterward successively shunting the remaining motors, respectively disconnecting them from the series and bringing them into parallel with those already in parallel, substantially as described. 2nd. The method of controlling or governing the speed of a vehicle driven by a plurality of electric motors, which consists in permanently connecting said motors in series, pairs, or groups, and varying the connections between said pairs or groups by means of a switch or similar device whereby said groups are first connected in series with a resistance, the resistance then cut out, a pair or group as a unit then shunted through a resistance, said resistance cut out and said group open-circuited and then connected in parallel with another group but in series with the remaining groups, and afterward by similar steps successively disconnecting the remaining groups from the series circuit and connecting them in parallel with those already in parallel until all of said pairs or groups are in parallel with one another, as set forth.

No. 50,613. Gas Stove. (*Poêle à gaz.*)



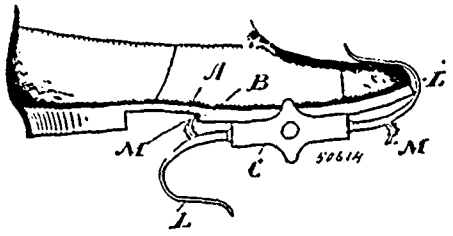
Robert Pringle, assignee of Robert Morton, both of London, England, 18th November, 1895; 6 years.

Claim.—1st. The herein described gas stove constructed and arranged for operation substantially as specified. 2nd. A gas stove constructed of a casing inclosing a series of upcast flues of refractory material suspended in a tube plate forming the top of an air heating chamber, said flues being surrounded by annular downcast air tubes suspended in a second tube plate forming the bottom of the air heating chamber, upcast air tubes fixed in and opening through the bottom of said chamber and the bottom of the stove casing, burners arranged as described in the space within the casing below the suspended downcast and upcast flues and connected with a gas heating chamber contained in one of the upcast flues, substantially as specified.

No. 50,614. Pedal Grip for Bicycles.
(*Serre de pédale de bicycles*)

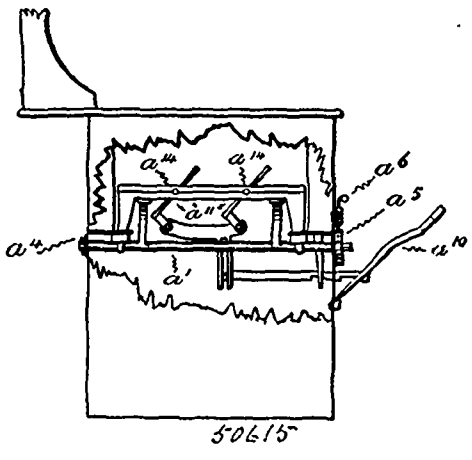
Marmaduke Matthews and Agnes Jardine, both of Bracondale, Ontario, Canada, 18th November, 1895; 6 years.

Claim.—1st. A shoe having a transverse shoulder formed in or on its sole adapted to engage with one of the cross pieces of a pedal, substantially as and for the purpose specified. 2nd. A shoe having a notched or shouldered plate connected to its sole, the shoulders being so shaped as to engage with one of the cross pieces of a pedal, substantially as and for the purpose specified. 3rd. As a pedal grip, a metal plate having one or more shoulders stamped therein and fitted to the sole of a shoe cut or formed to correspond with the shape of the metal plate, substantially as and for the purpose specified. 4th. As a pedal grip, a metal plate having one or more shoulders stamped therein and fitted to the sole of a shoe, cut or formed to correspond with the shape of the metal plate, in combination



with a pedal having one of its crossed bars hooked to engage with a notch in the plate, substantially as and for the purpose specified. 5th. As a pedal grip, a metal plate having one more shoulders formed thereon and fitted to the sole of the shoe, in combination with a pedal having a gripping piece extending rearwardly from the rear cross piece to engage with the shoulder in the plate, substantially as and for the purpose specified. 6th. A shoe having two notched or shouldered plates connected to its sole, the rear plate having its shoulder or shoulders adapted to engage with the rear cross piece of a pedal so as to draw thereon, and the front plate having its shoulder or shoulders adapted to engage with the front cross piece of a pedal so as to push thereon, substantially as and for the purpose specified. 7th. As a pedal grip, a metal plate having one or more shoulders formed thereon and fitted to the sole of a shoe, in combination with a pedal having a toe clip rigidly connected to the front thereof, and a gripping piece extending rearwardly from the rear cross piece to engage with the shoulder in the plate, substantially as and for the purpose specified. 8th. As a pedal grip, the plate A connected to the sole of the shoe, and having a shoulder B formed thereon, in combination with the pedal C, having toe-clips L, formed on opposite sides thereof, and two gripping pieces M connected one to the back of each toe-clip L, substantially as and for the purpose specified.

No. 50,615. Fire Grate. (*Grille de foyer.*)



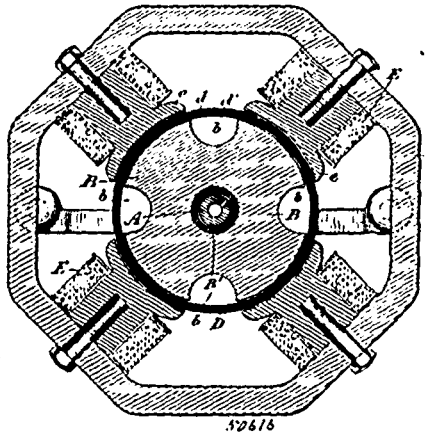
John Burns, assignee of Frederick J. Gilman, both of Montreal, Quebec, Canada, 18th November, 1895; 6 years.

Claim.—1st. In a cooking range, stove, or heating furnace, a vertical shifting and dumping fire grate, with the grate support a^{11}, operated substantially as described. 2nd. In combination with a vertical shifting and dumping fire grate, a bar a^1, with two or more cams a^2, a^3, to raise or lower the said grate, and a disc, or washer a^4, with holes in it to receive the pin a^6, substantially as described. 3rd. In combination with a vertical shifting and dumping fire grate, the grate support a^{11}, with angular guide rods at each corner, attached to the grate a^{12} by the screw a^{15}, substantially as described. 4th. In combination with a vertical shifting and dumping fire grate the revoluble castings b^1, pivoted between the grate and the grate support, and operated by the lever a^{10}, and the bar and attachments b^4, substantially as described. 5th. In combination with a vertical shifting and dumping fire grate, the cast iron lever, or stove lid lifter a^{10}, substantially as described. 6th. In combination with a vertical shifting and dumping fire grate, the cast iron grate frame a^9, substantially as described. 7th. In combination with a vertical shifting and dumping fire grate, the catch b^3, operating substantially as described, and for the purposes hereinbefore set forth.

No. 50,616. Electric Motor. (*Moteur électrique.*)

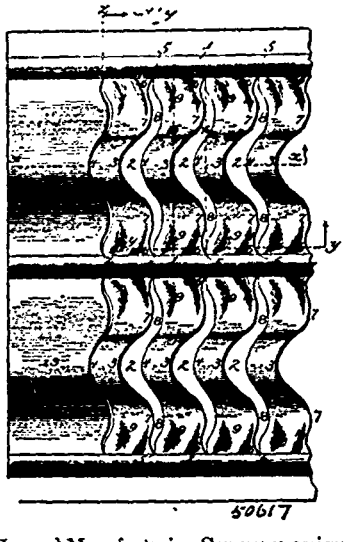
Charles Riordan, assignee of William Joseph Still, both of Toronto, Ontario, Canada, 18th November, 1895; 6 years.

Claim.—1st. In an electric motor the combination with the exterior field magnets, of a hollow cylindrical armature comprised of



wire loops suitably supported and secured to the main shaft of the motor and a solid core located within the armature magnetically insulated from and loose on the shaft and provided with recesses in its periphery between the ends of the cores of the field magnets whereby the lines of force maintain such core from rotating on the shaft, as and for the purpose specified. 2nd. The combination with the exterior field magnets of a hollow cylindrical armature supported on discs and comprised of a series of loops substantially rectangular, arranged in sets abutting each other, the sides of the loops of each set being arc-shaped, and each side being arranged to fit beneath the side of the adjacent loop of the set, so as to form a complete cylinder of double layer arc-shaped wire sides, the ends of the wire of each loop being connected to corresponding sections in the commutator, and a solid core loose on the shaft and magnetically insulated from it by a suitable sleeve and provided with recesses located between the cores of the field magnets, as and for the purpose specified. 3rd. In a motor of the class described, a hollow cylindrical armature comprised of a series of substantially rectangular wire loops arranged in sets, the side of each loop of each set fitting under the corresponding side of the next adjacent loop of the set, so as to form a complete cylinder of double layer arc shaped sides, the ends of the loops being arranged to overtop each other, and the ends of the wires of each loop being connected to a corresponding section of the commutator, as and for the purpose specified.

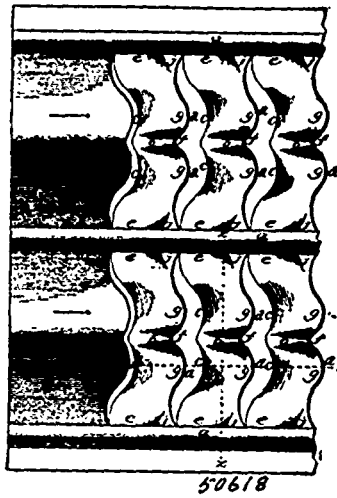
No. 50,617. Grain Separating Screen for Threshing Machines. (*Tamis à séparer le grain pour Machine à battre.*)



The Closz and Howard Manufacturing Company, assignee of Charles Closz, both of Webster City, Iowa, U.S.A., 18th November, 1895; 6 years.

Claim.—1st. A sheet metal screen for separating grain, having corrugations and between them transverse openings, the strips providing said openings, each having its upper edge set back of the transverse line 16 at a point mediately of the length of said strip, so that the greatest depth of such set-back will intersect a line drawn about mediately the width of said strip, the surface at said set-back being convex and of greater pitch than the surface at the ends of the strip, whereby the openings have their greatest width mediately of their length, for the purpose stated. 2nd. A sheet metal grain separating screen having corrugations and between them transverse openings, the strips providing said openings having steep convex pitch mediately of their length and which merges into less pitch toward each end, the surface depressions 9, 9, and the ridges 14, 14, extending from the flat surfaces 6, 6, about parallel with the top edge to the parts 7, the said top edge being set back of a line connecting the ends of the openings, to about half the width of the strip, substantially as described. 3rd. A sheet metal grain separating screen, having parallel corrugations and between them openings, the said corrugations having their upper edges notched and the metal displaced by said notching turning down as laps against the vertical wall of said corrugations and forming thereby saw-tooth shaped notches, for the purpose stated. 4th. A sheet metal grain separating screen having openings separated by parallel corrugations which have their upper edges of saw-tooth form, the metal displaced to form such teeth being turned down alternately on opposite sides of the said corrugations to equalize the bracing and strengthening effect of such laps upon the corrugations and the screen.

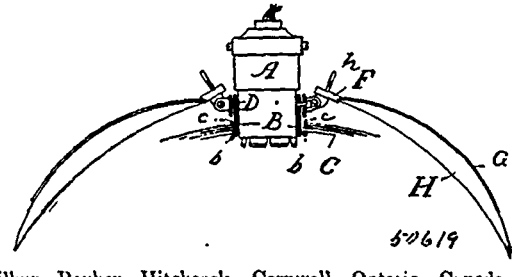
No. 50,618. Screen for Separating Grain for Threshing Machines. (*Tamis.*)



The Closz and Howard Manufacturing Company, assignee of Charles Closz, both of Webster City, Iowa, U.S.A., 18th November, 1895; 6 years.

Claim.—1st. A sheet metal screen for separating grain having longitudinal corrugations and transverse openings between them, the strips providing said openings each being formed with a transverse convex ridge mediately of its length and with scoop-like hollows on each side of said ridge extending in continuous and unbroken curves to the base of the corrugations and to the flat surfaces at the upper edges and ends of said strips, and medium ridge merging into the lower flat surface strips, for the purpose stated. 2nd. A sheet metal grain separating screen having longitudinal corrugations and transverse openings between them, the strips providing said openings each being formed with a convex ridge mediately of its length, and having its greatest convexity at the upper edge and merging into a flat surface at the lower edge, the surface on each side of said ridge formed scoop-like with continuous and unbroken curves extending to the corrugations, for the purpose stated.

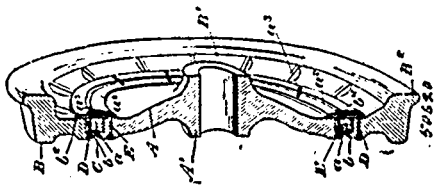
No. 50,619. Mica Lamp Shade.
(*Abat-jour en mica pour lampes.*)



Wilbur Reuben Hitchcock, Cornwall, Ontario, Canada, 18th November 1895 ears.

Claim.—1st. In a lamp shade, the combination with the sleeve B, adapted to be fitted on the socket of an electric or other lamp having leaves or other ornaments C, secured near its lower edge of the ring D, having hinged thereto a series of concavo-convex leaves H, substantially as set forth. 2nd. In a lamp shade, the combination with the ring D, having lugs E, formed in pairs around its outer surfaced blocks F, hinged by screws e to the said lugs, leaves H secured to the said blocks by the wires g, of the rib G, of the said leaves and binding screws h, substantially as set forth. 3rd. In a lamp shade, a sleeve adapted to be secured to the socket of an electric (incandescent) light bulb, and having a series of ornaments on its lower edge, a ring placed on the said sleeve and secured thereto on to the said socket by screws, a series of overlapping concavo convex leaves hinged to the said ring, substantially as set forth.

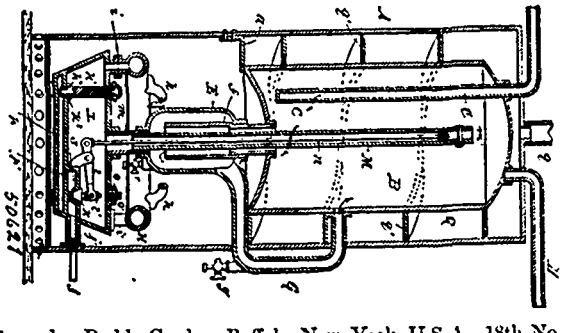
No. 50,620. Car Wheel. (*Roue de chars.*)



Francis Daniel Taylor, Toronto, Ontario, Canada, 18th November, 1895; 6 years.

Claim.—1st. In a car-wheel, the combination with the hub portion and web, of the rim and web and yielding means for securing the exterior of the hub web to the interior of the rim web, as and for the purpose specified. 2nd. In a car wheel, the combination with the hub portion and web, of the rim and web, and a yielding rubber ring fitting between the exterior periphery of the hub web and the interior periphery of the rim web, and means for securing the parts together, as and for the purpose specified. 3rd. In a car wheel, the combination with the hub portion and web and outwardly extending flanges formed on the periphery of such hub web, of a rim portion and web and an inwardly extending flange formed on the interior periphery of the rim web, and a yielding rubber ring and means for securing such ring to the outwardly and inwardly extending flanges, as and for the purpose specified. 4th. In a car-wheel, the combination with the hub portion and web, and outwardly extending flange formed on the periphery of such hub web, of a rim portion and web and an inwardly extending flange formed on the interior periphery of the rim web and a yielding rubber ring, retaining rings on the opposite side of the yielding ring upon the hub portion and ring portion and bolts extending through the webs, yielding rings and retaining rings, as and for the purpose specified. 5th. The combination with the hub portion and web and a series of projections on the exterior periphery of the hub web portion, of the rim portion and web and projections formed on the interior periphery of the web, and the yielding rubber ring provided with corresponding recesses both on the interior and exterior to fit the interior and exterior recesses of the hub and rim web portions respectively and means for securing the portions together, as and for the purpose specified. 6th. The combination with the hub and web, of the rim and web, yielding means for securing them together and electrical means for connecting the rim to the hub, as and for the purpose specified. 7th. The combination with the hub and web, of the rim and web, yielding means for securing them together and wires a^3, extending between the hub web and rim portions, as and for the purpose specified. 8th. In a car-wheel, the combination with the hub portion and web, of the rim and web formed separately therefrom and suitably connected thereto, and means for permitting an angular planary deviation of the face of the rim portion from the face of the web portion, as and for the purpose specified.

No. 50,621. Water Heater. (*Calorifère.*)



Alexander Dodds Gordon, Buffalo, New York, U.S.A., 18th November, 1895; 6 years.

Claim. 1st. The combination with the main water heating chamber provided with an inlet for the cold water, of an auxiliary water heating chamber of less capacity arranged below the same, and communicating with the main chamber by a descending cold water passage and by an ascending cold water passage, a gas burner arranged adjacent to said auxiliary chamber, a valve controlling the gas supply to said burner, and a thermostatic member exposed with its upper portion to the water in said main chamber and with its lower portion to the water in said auxiliary chamber, substantially as set forth. 2nd. The combination with the main water heating chamber, provided with an inlet for the cold water, of an auxiliary water heating chamber arranged below the same, a descending passage for cold water extending from the bottom of said main chamber to the lower portion of said auxiliary chamber, an ascending passage for the heated water extending from the upper portion of said auxiliary chamber, outside of said cold water passage, to the main chamber, a gas burner arranged adjacent to said auxiliary chamber, a valve controlling the gas supply to said burner and a thermostatic member controlling said valve and arranged in both the chambers, substantially as set forth. 3rd. The combination with the main water heating chamber, provided with an inlet for the cold water, of an auxiliary water heating chamber of less capacity arranged below the same and communicating therewith, a gas burner arranged adjacent to said auxiliary chamber, a valve controlling the gas supply to said burner, a thermostatic tube secured with its lower portion to said auxiliary chamber and extending upwardly through the same and into said main chamber, and a valve rod secured with its upper end to the upper end of said tube and extending downwardly through the same and connecting at its lower end with said valve, substantially as set forth. 4th. The combination with the main boiler or heating chamber and an auxiliary heating chamber, of a tube connecting the bottom of the main heating chamber with the top of the auxiliary heating chamber and terminating near the bottom of the latter, a circulating pipe connecting the top of the auxiliary heating chamber with the lower portion of the main heating chamber, a thermostatic tube or member extending through said connecting tube and into the main heating chamber, and separated from said connecting tube by a water passage, a gas burner arranged adjacent to the auxiliary heating chamber and having a gas supply, and a valve controlling the passage of the gas to the burner and connected with the thermostatic tube or member, substantially as set forth. 5th. The combination with a main boiler or heating chamber and an auxiliary heating chamber arranged below the same and connected therewith, of a circulating pipe connecting the auxiliary chamber with the main chamber, a gas burner arranged adjacent to the auxiliary chamber and having a gas supply, a regulating valve controlling the passage of gas to the burner, and a thermostatic tube arranged in said heating chamber and connected with said regulating valve, substantially as set forth. 6th. The combination with a heating chamber, of a gas delivery chamber arranged underneath said heating chamber and provided with a gas inlet and in its top with an opening, a gas burner connected with said delivery chamber, a regulating valve applied to said gas inlet and arranged within the gas delivery chamber, a thermostatic tube arranged in said heating chamber and fixed at its lower end, whereby the tube is caused to expand upward, and a connecting rod extending through said thermostatic tube and the opening in the top of the gas delivery chamber and secured at its upper end to the thermostatic tube, and having its lower end connected with said regulating valve, substantially as set forth. 7th. The combination with a water heating chamber, of a gas delivery chamber arranged underneath said chamber, connected therewith by a tube or passage, and provided with a gas inlet, a burner connected with said delivery chamber, a regulating valve applied to said gas inlet, a thermostatic tube arranged in said heating chamber and having its lower end secured within said connecting tube or passage, whereby the thermostatic tube shuts off communication between the water heating chamber and the gas delivery chamber, and a connecting rod secured at its upper end to the thermostatic tube, extending through the latter and said connecting tube or passage, and having its lower end connected with said gas regulating valve, substantially as set forth.

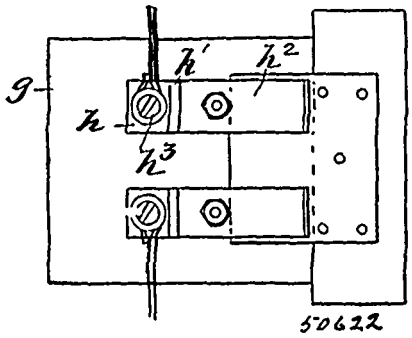
No. 50,622. Safety Controller for Elevators.

(*Contrôleur de sûeté pour élévateurs.*)

John James Ness, and The Firm of Ness, McLaren and Bate, both of Montreal, Quebec, Canada, 18th November, 1895; 6 years.

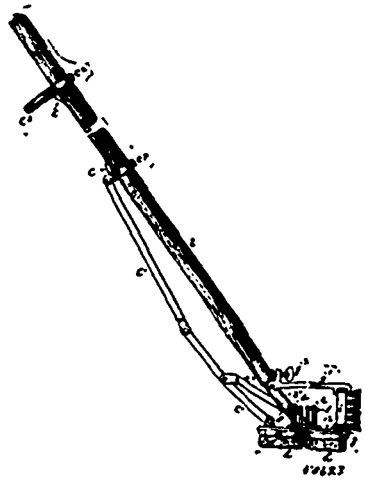
Claim.—1st. In combination with an elevator, the shaft framing thereof, the doors guarding the openings in such shaft framing, and the means for operating such elevator, of an arrester actuated through the movement of such doors to arrest the action of such elevator operating mechanism. 2nd. In combination with an elevator, the shaft framing thereof, the doors guarding the openings in such shaft, the means for operating such elevator and an electrical circuit connected therewith, of an arrester consisting of a break in such electrical circuit in close proximity to each door and a contact device carried by each of such doors and adapted upon the opening and closing of such doors to open and close such electrical circuit, for the purpose set forth. 3rd. In combination with an elevator, the shaft framing thereof, the doors guarding the openings in such shaft framing, the means for operating such elevator, and an electrical circuit connected therewith, of an arrester consisting of a make

and break connection between such electric circuit and each of such doors, for the purpose set forth. 4th. In combination with an eleva-



tor, the shaft framing thereof, the doors guarding the openings in such shaft framing, the means for operating such elevator including an electrical circuit, one of the conducting wires of which is located in close proximity to such doors and has an opening or break corresponding with each door, the ends formed by such openings or breaks terminating in jacks or contact pieces, of a contact piece carried by each of such doors and adapted upon the opening and closing of such doors to open, or break, and make the electrical circuit, for the purpose set forth. 5th. In combination with an elevator, the shaft framing thereof, the doors guarding the openings in such shaft framing, the means for operating such elevator including an electrical circuit, one of the conducting wires of which is located in close proximity to such doors and has an opening or break corresponding with each door, the ends formed by such openings or breaks terminating in jacks or contact pieces, consisting of plates h, h^1, h^2, suitably connected together and mounted upon such elevator shaft framing, of a contact piece consisting of a plate k carried by each of such doors and adapted upon the opening and closing of such doors to open, or break, and make the electrical circuit, for the purpose set forth. 6th. In combination with an elevator, the shaft framing thereof, the doors guarding the openings in such shaft framing, the means for operating such elevator including an electrical circuit one of the conducting wires of which is located in close proximity to such doors and has an opening or break corresponding with each door the ends formed by such openings or breaks terminating in jacks or contact pieces consisting of plates h, h^1, h^2, suitably connected together and mounted upon and insulated from such elevator shaft framing, of a contact piece consisting of a plate k carried by and insulated from each of such doors and adapted upon the opening and closing of such doors to open, or break, and make the electrical circuit, for the purpose set forth.

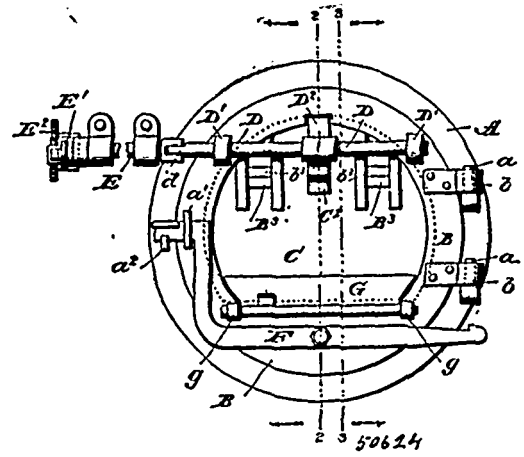
No. 50,623. Mop. (*Guipon.*)



Patrick James Grace, assignee of De Lacy Evans Ballam, both of Brooklyn, New York, U.S.A., 18th November, 1895; 6 years.

Claim.—1st. A mop provided with a sectional folding head, a handle secured to one head section, and a slide secured to the other head section, substantially as specified. 2nd. A mop provided with a sectional folding head and with a clamp for securing a brush to the mop, substantially as specified.

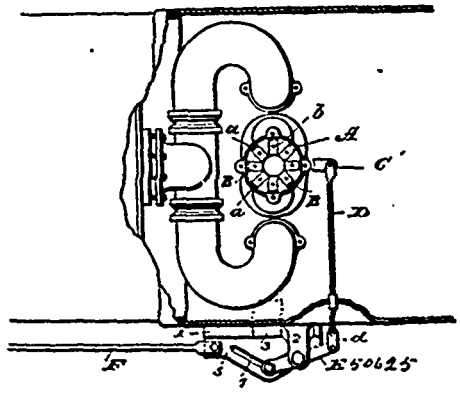
No. 50,624. Furnace Door. (*Porte de fournaise.*)



Erwin W. Harris, Palisade, Nevada, U.S.A., 18th November, 1895; 6 years.

Claim.—1st. In combination with the ring or door frame A, a door B connected thereto, a section C hinged to the upper part of the door B, so as to cover an opening therein, said section having a toothed segment, and a shaft D supported by the door B and carrying a toothed segment in engagement with the toothed segment on the section C, together with a shaft E having an operating lever and provided with means for engaging the shaft D when the door B is closed, substantially as shown. 2nd. In a furnace door, the combination with the ring A, of a door B hinged to the ring and provided with an opening, a section C hinged to the door at the upper part of the opening, said section having a toothed segment C^2, a shaft D supported by the door and having a toothed segment attached thereto and in mesh with the toothed segment on the section C, together with a shaft E supported by the furnace and having means for engagement with the shaft D when the door is closed, the shaft E carrying an operating lever E^1, having a sliding dog for engagement with a toothed plate attached to the furnace, substantially as shown and for the purpose set forth. 3rd. In combination with the ring or door frame A, a door B hinged thereto and provided with an opening, a section C hinged to the upper part of the door and provided with a toothed segment, a shaft D supported by the door, and carrying a toothed segment in engagement with the toothed segment on the section C, the shaft D having a flattened end, together with a shaft E having an operating lever and provided with a bifurcated end for engagement with the flattened end of the shaft D when the door B is closed, substantially as shown and for the purpose set forth. 4th. In a furnace door, the combination with the ring or frame A, of a door B hinged thereto and having an opening, a depending section C hinged to the door so as to swing inwardly, of a damper G hinged to the lower part of the door so as to swing outwardly, substantially as shown and for the purpose set forth.

No. 50,625. Exhaust Nozzle and Operating Mechanism Therefor. (*Tuyeau d'évacuation et mécanisme d'operation.*)

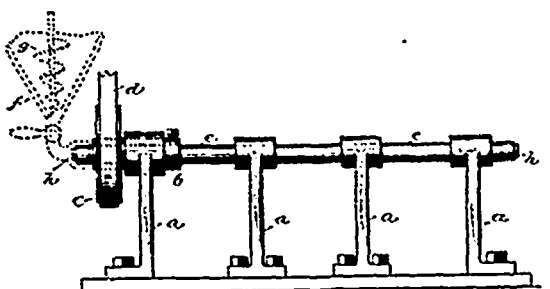


Erwin William Harris, Palisade, Nevada, U.S.A., 18th November 1895; 6 years.

Claim.—1st. In a variable exhaust for engines, the combination of a casing having a series of radial recesses, blocks located in said recesses, said blocks having upwardly-projecting pins which engage

with an operating ring having inclined slots, so that when said ring is turned the blocks will be retracted or projected to increase or diminish the size of the exhaust nozzle, substantially as shown and for the purpose set forth. 2nd. In a variable exhaust, the combination, of a casing having a series of radial recesses, blocks adapted to lie within said recesses and provided with upwardly-projecting pins, a ring having tangential slots with which the pins engage, and an arm which projects from said ring and engages with a connecting-rod which passes through the shell of the locomotive, substantially as shown and for the purpose set forth. 3rd. In a variable exhaust-nozzle, the combination, of a casing which is adapted to be secured to the exhaust pipe, said casing having a series of recesses the side walls of which project so as to intersect the exhaust opening, the projecting walls being bevelled on their undersides, together with a series of blocks B, bevelled on their undersides and provided with upwardly-projecting portions which engage with inclined slots formed in an operating ring, substantially as shown and for the purpose set forth. 4th. In a variable exhaust nozzle, the combination, of a casing having radial recesses the dividing walls of which project so as to intersect the exhaust passage, a series of movable blocks located in said recesses and having projecting pins, an operating ring having an outwardly-projecting arm and inclined slots which engage the projections on the movable blocks, a plate c^2, secured to the casing above the operating ring, and means for connecting the operating ring to a lever, for the purpose set forth. 5th. In combination with an exhaust-nozzle for locomotives constructed substantially as shown, of a fixture suitably supported and provided with a longitudinal T-shaped groove and a projecting arm, a rock-lever pivoted to the projecting arm and connected at one end to the exhaust-nozzle, a slide in engagement with the longitudinal groove in the fixture, said slide having a slot or groove with which the other end of the rock-lever engages, the slot or groove extending in two directions from its centre, as shown, and means substantially as shown for manipulating the slide so as to actuate the variable exhaust from the reverse lever of the locomotive. 6th. In combination with the reverse lever of a locomotive and means for connecting the same with a slide, of the slide having a slot or groove extending in two directions from its centre, a fixture carried by the locomotive and provided with a T-shaped groove with which the slide engages, and an oscillating lever which engages with the slot or groove in the slide and with connections which extend to the exhaust-nozzle, the parts being organized substantially as shown and for the purpose set forth. 7th. The combination with the exhaust-nozzle of a locomotive constructed substantially as shown and provided with a projecting arm C^1, a fixture or casting having a longitudinal T-shaped groove and outwardly-projecting arm, a bell-crank lever pivotally attached to the arm, one member of said lever being connected to the projecting arm of the exhaust-nozzle and the other member having a depending pin which engages with a slot extending in two directions, the slot being formed in a slide which is carried by the stationary grooved fixture, and a rod F, reciprocating the slide, substantially as set forth. 8th. In combination with the exhaust-nozzle of a locomotive, a fixture adapted to be rigidly secured to the frame of the locomotive at a point substantially on a line with the exhaust-nozzle, said fixture having a lug with bolt-holes, a longitudinal portion with a T-shaped groove and an arm which extends outwardly beyond the groove and has an opening for the reception of a pin, a slide having a V-shaped slot, a rod connected to said slide, and a rock-lever E, pivoted to the arm, one member of the rock-lever having a depending pin which engages with the V-shaped slot, the other member engaging with the rod which leads to a projecting arm for operating the slides of the exhaust-nozzle, the parts being organized substantially as shown and for the purpose set forth.

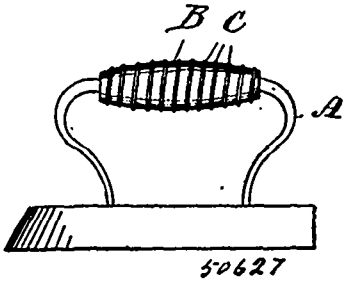
No. 50,626. Method of Lining Tubes, etc.
(Méthode de garnir les tubes, etc.)



Charles A. Noll, New York, State of New York, and John Howe Robinson Ward, of Stoughton, Massachusetts, both in the U.S.A., 18th November, 1895; 6 years.

Claim.—1st. The method described of lining tubes and cylinders, consisting in placing in the tube or cylinder, a liquid holding solid matter in suspension, then rotating the tube. 2nd. The method described of lining tubes and cylinders, consisting in completely filling the tube or cylinder with a liquid holding solid matter in suspension, then rotating the tube. 3rd. The method described of lining tubes and cylinders, consisting in placing the tube or cylinder, a liquid holding solid matter in suspension, then rotating the tube to deposit the lining, then removing the liquid and drying the lining. 4th. The method described of lining tubes and cylinders with insulating material, consisting in placing in the tube or cylinder a liquid holding solid matter in suspension then rotating the tube to deposit the lining, then removing the liquid and frying the lining and finally filling the pores of the lining with an insulating compound such as asphaltum.

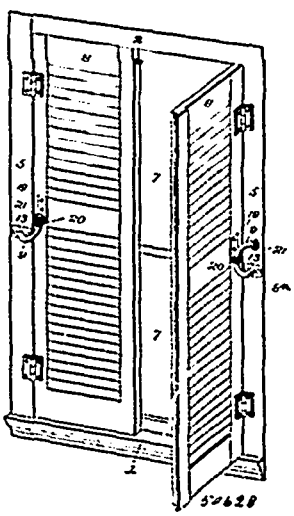
No. 50,627. Handle for Culinary and other Heated Utensils. *(Manche pour ustensiles de cuisine et fer à repasser.)*



Jean Albert Choquette, Ottawa, Ontario, Canada, 18th November, 1895; 6 years.

Claim.—1st. A handle for culinary and other utensils liable to be heated, having an external covering of cork B, bound, cemented or otherwise permanently fixed thereto or thereon, to be grasped by the hand. 2nd. A culinary utensil, said iron or other device subjected to heat, having its handle A, surrounded by a covering or wrapping of cork B, bound, cemented or otherwise permanently fixed thereto, for avoidance of heat in handling, as set forth.

No. 50,628. Device for Opening and Closing Window Shutters. *(Fermeture pour volets de fenêtre.)*



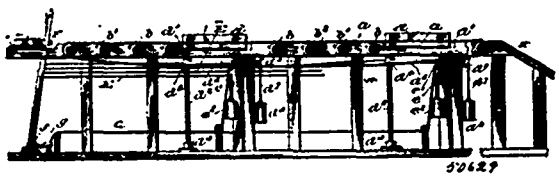
Heinrich Sommerfeld, Canton, and Abraham Quiring, Newton both of Kansas, U.S.A., 18th November, 1895; 6 years.

Claim.—1st. A shutter opening and closing device, comprising a push and pull rod mounted slidingly and rotatably in the window-casing, and provided at its front or outer end with a curved arm which extends at right angles to the body-portion, and is operatively connected to the shutter, substantially as described. 2nd. A shutter opening and closing device, consisting of a rod slidingly and rotatably mounted in the window-casing at one side of the shutter, and provided with a curved arm projecting at an angle to said body-portion at its outer end, and with a handle at its inner end, and a bracket secured to the shutter and provided with an aperture through which said curved arm projects, substantially as shown and described. 3rd. A shutter opening and closing device, comprising a rod mounted slidingly and rotatably in the window-casing at one side of the shutter, and provided at its front or outer end with a curved arm and at its opposite end with a handle, and also with a series of holes or recesses, a bracket secured to the shutter at a suitable point, and provided with an aperture through which said curved arm projects, and a catch provided with a tooth or pin engaging one of the apertures of said rod, substantially as and for the purpose set

forth. 4th. A shutter opening and closing device, comprising a rod mounted slidingly and rotatably in the window-casing at one side of the shutter, and provided at its front or outer end with a curved arm, and at its opposite end with a handle, and also with a series of holes or recesses, a bracket secured to the shutter at a suitable point, and provided with an aperture through which said curved arm projects, and a catch pivoted at the inner side of the casing and provided with a pin which engages one another of the holes or recesses of said rod, substantially as set forth. 5th. A shutter opening and closing device, comprising a rod mounted slidingly and rotatably in the widow-casing at one side of the shutter, and provided at its front or outer end with a curved arm, and at its opposite end with a handle, and also with a series of holes or recesses, a bracket secured to the shutter at a suitable point, and provided with an apertune through which said curved arm projects, a gravity-catch pivoted above the plane of said rod and provided with a depending tooth or pin to engage one of the holes or recesses of the same, and a shoulder overhanging said catch, to limit its upward movement, substantially as set forth. 6th. A shutter opening and closing device, comprising a rod slidingly and rotatably journalled in the inner jamb and the outer and inner casings of the counterbalance-weight box of a window-casing, having its front or outer end bent at right angles and curved upwardly, and provided with a series of spirally-arranged holes or recesses, and with a handle at its inner end, a bracket secured to the shutter and provided with an aperture through which said curved arm projects, a nut engaging the projecting end of said arm, a gravity-catch pivotally mounted to a plate at the inner side of the window-casing and adapted to engage one or another of said holes or recesses, and a shoulder or lug overhanging said gravity catch, substantially as shown and described.

No. 30,629. Conveyer and Assorter for Lumber, etc.

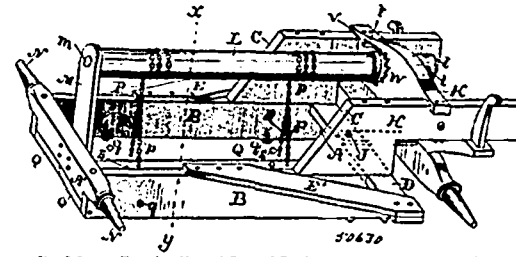
(*Appareil à transporter et assortir le bois, etc.*)



William A. Leary, Norfolk, and John F. Hostetter, Suffolk, both in Virginia, U.S.A., 19th November, 1895; 6 years.

Claim.—1st. A conveyer and assorter having a passage-way, conveying means in said passage-way, one or more deflectors capable of being thrown across said passage-way, and operating means connected thereto and extended to one end of said passage-way, substantially as set forth. 2nd. A conveyer and assorter having a continuous passage-way, conveying means in said passage-way, a series of shunts capable of being extended across said passage-way, and means for operating each of said shunts independently from one end of the conveyer, substantially as set forth. 3rd. A conveyer and assorter having a single continuous passage-way, conveying means in said passage-way, a series of shunts capable of being extended across said passage-way, means for operating said shunts and means for locking the same when so positioned, both said means being under the control of the operator, substantially as set forth. 4th. A conveyer and assorter having a passage-way, conveying means in said passage-way, a shunt capable of being extended across said passage-way, operating means connected to said shunt, and a trip therefor designed to be operated by the discharge effected by said shunt, whereby the latter is automatically released and returned to its normal position, substantially as set forth. 5th. A conveyer and assorter having a passage-way, conveying means in said passage way, a series of periodically arranged shunts normally in line with one side of said passage-way, means for positioning said shunts across said passage-way, means for locking the same, and means for tripping said locking means, both said tripping means and means for operating said shunts being under the control of a single operator at one end of the conveyer, substantially as set forth. 6th. A conveyer and assorter having a passage-way, a series of rollers therein, means for rotating all of said rollers, a series of shunts normally in line with one side of said passage-way, means connected to said shunts for positioning the same across said passage-way, means for locking said shunts, and a series of levers with which said means for positioning said shunts are connected, substantially as set forth, each of said locking means being capable of being operated or unlocked by the discharge effected by the respective shunts, as stated. 7th. A conveyer and assorter having a passage-way, a series of rollers therein, means for rotating all of said rollers, a series of shunts consisting of arms normally in line with one side of said passage-way, a shaft to which each of said shunt-arms is connected, an arm extending from said shaft, a locking lever for holding said arm when the shunt-arm is positioned across said passage-way, and an operating rope and lever for each of said shunts, whereby the shafts of the latter may be turned and the shunt-arms positioned across said passage-way, substantially as set forth. 8th. A conveyer and assorter having a passage-way, a series of rollers therein, means for rotating all of said rollers, a series of shunt-arm pivoted each at one end, a shaft therefor, a bell-crank lever on said shaft, a pivoted locking lever, means for returning said shunt-arms to their normal positions when unlocked, and means for operating each of said shunt-arms independently from a single point, substantially as set forth. 9th. A conveyer having a single continuous passage-way, a series of rollers therein, means for rotating all of said rollers, and an incline at one end of said passage-way, substantially as and for the purpose set forth. 10th. The combination with the frame having a series of revolving rollers, of a series of independent shunts, shafts carrying said shunts, and a series of independent operating ropes and levers connected to said shafts, whereby each of said shunts may be operated independently of the others, all of said levers being at one end of said frame, substantially as set forth. 11th. The combination with the frame having a series of revolving rollers, of a series of independent shunts, shafts carrying said shunts, bell-crank levers also carried by said shafts, locking levers provided with upper shoulders having each one end extended beyond one side of the frame in the line of discharge, operating ropes connected to said bell-crank levers, operating levers to which said ropes are connected, and means for normally holding said shunt-arms in line with one side of said frame, substantially as set forth, said locking levers being designed to be disengaged from said bell-crank levers by the discharge effected by the respective shunt-arms, as stated. 12th. The combination with the frame having an upper passage-way, and a series of revolving rollers, of a series of independent arms pivoted each at one end and normally on a line with one side of said passage-way, means for locking each of said arms across said passage way, a rope and lever for operating each of said arms independently of the other, and means connected to each of said locking means for freeing said arms, said means comprising ropes and treadles arranged at one end of the frame adjacent to said operating levers, said arms and said treadles being in corresponding series, substantially as set forth.

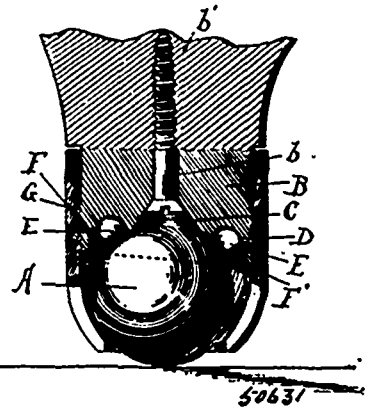
No. 30,630. Dumping Wagon. (*Wagon à bascule.*)



Henry S. Hoy, Louisville, New York, U.S.A., 19th November, 1895; 6 years.

Claim.—1st. In a dumping wagon, the combination of two or more longitudinal bottom-boards, each of which is attached to the wagon box by holding chains secured at or near the middle of the bottom-board, and also by lifting chains which are attached at or near one edge of said board, and side pieces having a vertical off set near the forward end of each adapted to fit over the bolster of an ordinary farm wagon. 2nd. In a dumping wagon, the combination comprising a wagon box with open bottom, and bottom-boards, each of which is attached thereto by holding chains secured at or near the middle of the bottom-boards, and also by a lifting chain which is attached at or near one edge thereof, with means for tightening and holding said lifting chain. 3rd. In a dumping wagon, a wagon box the bottom of which consists of two or more boards, each of which is attached to the upper work of said box by a holding chain secured at or near the middle of the bottom-board, and also by a lifting chain which is attached at or near one edge of said bottom-board.

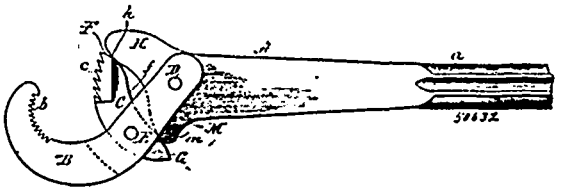
No. 30,631. Furniture Castor. (*Roulette de meuble.*)



Jacob Benjamin Offerle, Warren, Pennsylvania, U. S. A., 19th November, 1895; 6 years.

Claim.—The combination with the casing G, having its lower edges slit and turned inward, of the large roller seated in the lower portion of the said casing, the block B, held in the upper portion of the said casing and having screw-threaded engagement therewith, the lower end of the said block being concaved and the side walls of the concaved portion formed with an annular recess F, a series of small balls located in said recess and bearing on the large roller, the said recess being formed at an angle to the horizontal, so that the small balls will have a bearing on the large roller at a higher plane upon one side than at the other, and the ring F', screw threaded and engaging screw threads formed in the block B, having rounded upper face.

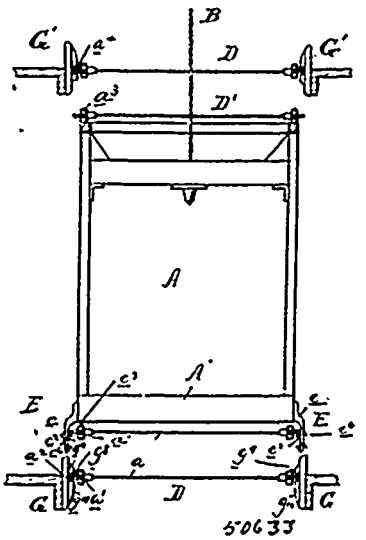
No. 50,632. Pipe Wrench. (*Clé à tuyau.*)



Jay K. Sheffy, Chicago, Illinois, U.S.A., 19th November, 1895; 6 years.

Claim. 1st. In a pipe wrench, the combination with a hook shaped jaw, of a jaw C, pivoted to the stem of the hook so as to close across its mouth and having a backwardly extending heel, of a hand lever pivoted to the stem of the hooked jaw and having a toe adapted to bear upon the back of the forward end of the jaw C, and a heel adapted to bear upon the back of the rearward end of the said jaw whereby the angular movement in either direction of the handle with reference to the hooked jaw positively actuates the jaw C, substantially as described and for the purpose specified. 2nd. In a pipe wrench, the combination with a J shaped jaw C, pivoted to the stem of such jaw and adapted to extend across the mouth of the curved portion, and a lever A, pivotally attached to the stem of the J shaped jaw and adapted to bear upon the back of the jaw C, and to thereby close the two jaws forcibly together, substantially as described and for the purpose specified. 3rd. In a pipe wrench, the combination with a hooked jaw B, of a jaw C, pivoted to the stem of the jaw B, and adapted to extend across its mouth and having a backwardly extending heel, the jaw C, having its back convex at each end and intermediately concave, and a hand lever pivoted to the stem of the jaw B, and having a toe piece for contact with the forward end of the jaw C, and a heel piece for contact with the rearward end of such jaw, such hand lever having a recess between its toe and heel to receive the rearward end of the jaw C, when its forward end is depressed, substantially as described and for the purpose specified. 4th. In a pipe wrench, the combination of a hooked jaw, a clamping jaw pivoted to the hooked jaw so as to extend across its mouth, a lever of the first class pivoted to the hooked jaw above and adapted to bear upon the back of the clamping jaw, substantially as described and for the purpose specified.

No. 50,633. Elevator Hatchway Cover.
(*Couvercle d'écoutille d'élévateur.*)



The Anderson Safety Elevator Company, assignee of Horace B. Murdock, both of Detroit, Michigan, U.S.A., 19th November, 1895; 6 years.

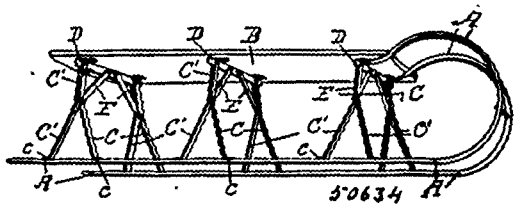
Claim. 1st. The combination, with the elevator, of a hatch cover as D, and carrying latches E, provided with the shouldered latch bars e^2 adapted to automatically engage with and support the cover beneath the platform of the cab, substantially as described. 2nd. The combination, with the elevator, of a hatch cover as D, provided with the rollers d, and carrying latches E, secured to opposite sides of the platform of the cab near the corners thereof, each latch being composed of the frame e, and the shouldered latch bar e^2, adapted to automatically engage with a roller d to support the hatch cover beneath the platform, substantially as described. 3rd. The combination, with the elevator, of a hatch cover as D, carrying latches E, provided with the shoulder latch bars e^2, and the tripping levers e^5, all substantially as described. 4th. The combination, with the elevator, of a hatch cover, carrying latches depending from the platform of the cab and having shouldered latch bars adapted to automatically engage with and support the cover, a trip lever on each latch having an automatically projecting arm, fixed stops in the path of the tripping lever and supporting latches in the hatch opening having latch bars adapted to automatically engage with and support the cover in the hatch opening, substantially as described. 5th. The combination, with the elevator, of a hatch cover, carrying latches depending from the platform of the cab and having latch bars adapted to automatically engage with and support the cover beneath the platform, supporting latches in the hatch openings having latch bars for supporting the cover in the hatch opening and projections or rollers on the sides of the platform in line with and co-operating with said supporting latches to disengage them latch bars from the cover by the downward movement of the cab, substantially as described. 6th. The combination, with the elevator, of a hatch cover carrying latches adapted to automatically engage with and support the same below the platform of the cab, and trip levers to disengage the same from said carrying latches, stops in the hatch openings to operate said trip levers, supporting latches in the hatch opening adapted to automatically engage with and support the cover in the hatch opening and projections or rollers on the cab co-operating with said supporting latches to disengage the same from the cover in the downward movement of the cab, substantially as described. 7th. The combination, with the elevator, of a hatch cover such as D, provided with the supporting rollers d and a^2, the carrying latches E adapted to automatically engage with the rollers d of said cover to support the same and provided with the trip levers e^5 to disengage said latch from the cover, the stops F in the hatch openings adapted to trip the carrying latches, the supporting latches G in the hatch openings provided with the recessed latch bars adapted to automatically engage with the rollers a^2 to support the cover on the hatch opening, and the rollers a^2 on the platform of the cab, adapted to disengage the cover from the supporting latches in the downward movement of the cab, substantially as described. 8th. The combination, with the elevator, of a hatch cover and supporting latches therefor in the openings of the hatch way, each supporting latch being provided with a latch bar having a recess g^4, adapted to automatically engage with and support the latch cover upon either the upper or lower shoulder of the recess g^4, substantially as described. 9th. The combination, with the elevator, of a supporting latch for hatch cover composed of the frame g, the jointed latch bars g^2, g^3, the recess g^4 at the joint of the latch bar, and the guide faces g^{10}, g^7, the latter having the shoulder g^{11}, substantially as described. 10th. The combination with the elevator and two sets of hatch covers, one adapted to be carried beneath the platform of the cab and the other on top thereof, of rollers or projections on each cover at or near the corners thereof, and with the corresponding rollers or projections on each set of covers in the same vertical line, but different in the two sets, and a set of supporting latches in each hatch way for each set of covers, the supporting latches of one set being in line with the corresponding rollers on one set of hatch covers and those of the other set in line with the corresponding rollers or projections of the other set of hatch covers, said hatch covers having recessed latch bars adapted to automatically engage with and support the hatch covers, said hatch covers having recessed latch bars adapted to automatically engage with and support the hatch covers, substantially as described. 11th. The combination with the elevator, of carrying latches dependent from the platform of the cab, a lower set of hatch covers with which said carrying latches are adapted to automatically engage to support said covers below the cab, means for tripping the carrying latches in the hatch openings, supporting latches in the hatch openings adapted to automatically engage with and support the lower set of covers in the hatch openings, an upper independent set of hatch covers supported on the top of the cab, supporting latches therefor adapted to automatically engage with and support the covers of the upper set in the hatch openings independently of the lower set, and rollers or projections on the hatch covers and the cab adapted to co-operate with the supporting latches to operate the same in the movement of the cab, substantially as described.

No. 50, 34. Sled or Sleigh. (*Traineau.*)

Fred P. Brooks, assignee of Randall W. Walker, both of Oxford, New York, U.S.A., 19th November, 1895; 6 years.

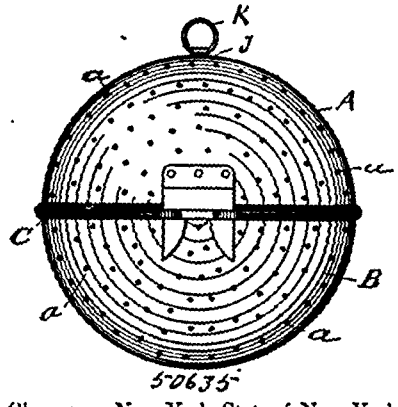
Claim.—1st. As an improvement in sleds, sleighs, etc., the combination with the runners and the part to be carried thereby, of a support consisting of two bars rising from corresponding points upon the runners, a transverse bar extending from the bars upon one run-

ner to those upon the other and having each of its ends placed edgewise between and fastened to each pair of said bars, and a brace bar



attached to and extending from the transverse bar to each of said pairs of bars and having its end suitably fastened to them, substantially as and for the purpose specified. 2nd. As an improvement in sleds, sleighs, etc., the combination with the runners and the seat or platform, of a support consisting of two bars that are attached at their lower ends to each runner and converge therefrom, and then extend parallel with each other, and one of which is bent horizontally for its attachment to the seat or platform, a transverse bar engaging the under side of the latter and extending across from one pair of bars to the other, and having each end passed edgewise between and riveted to the same, and a brace bar riveted at one end to said transverse bar, and having its other end passed between and riveted to one set of such pairs of bars, substantially as and for the purpose specified.

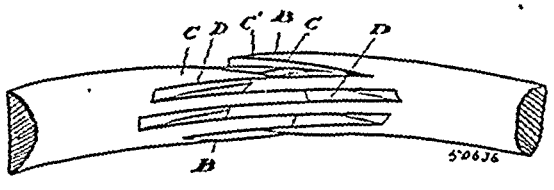
No. 50,635. Culinary Vessel. (*Ustensile de cuisine.*)



August W. Obermann, New York, State of New York, U.S.A., 19th November, 1895; 6 years.

Claim.—1st. In a cooking vessel, the combination of two perforated sections the lower one having a slot and an annular groove, and the upper one being provided with a clamp having a slot and inclines leading thereto, a spring seated in the annular groove and provided with a hinge to which the sections are secured, the ends of said springs adapted to fit in the slot of the clamp to lock the parts together. 2nd. A cooking vessel consisting of two sections attached to a spring, said spring co-acting with a clamp to secure the sections in a closed position, substantially as described. 3rd. A cooking vessel, consisting of two sections attached to a spring, a clamp to secure the sections in a closed position, and adjustable supports for raising and lowering the vessel, substantially as shown and described.

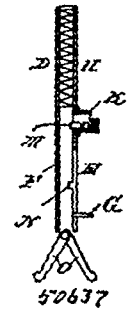
No. 50,636. Wood Rim for Wheels.
(*Jante de bois pour roues.*)



Clement William Hurndall, Toronto, Ontario, Canada, 19th November, 1895; 6 years.

Claim.—1st. A wood rim for a wheel consisting of a solid strip of wood, bent to a circular form, channelled on its outer periphery to receive the tire, and having each of its adjacent meeting edges provided with a series of long, narrow, interlocking tongues glued together, and extending longitudinally of the rim in the plane of the wheel, substantially as specified. 2nd. A wood rim for a wheel consisting of a solid strip of wood, bent to a circular form, a channel on its outer periphery to receive the tire, having each of its adjacent meeting edges provided with a double series of long, narrow tongues, and grooves interplaced between each adjacent pair of tongues, extending longitudinally of the rim in the plane of the wheel, one series of tongues and grooves arranged diametrically outside of the other series of grooves and tongues, the tongues and grooves of one of the adjacent meeting edges adapted to receive the grooves and tongues of the other adjacent meeting edge, the whole being securely glued together, substantially as specified.

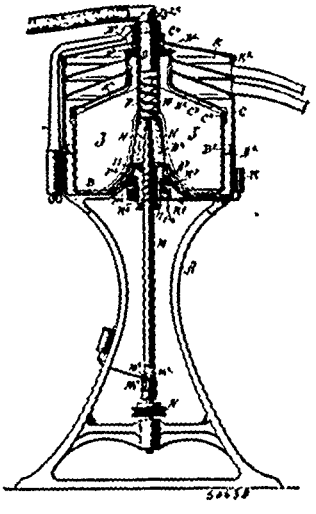
No. 50,637. Bicycle Stand and Lock.
(*Support et serrure de bicycle.*)



Clarence Sidney Tremper, Brooklyn, New York, U.S.A., 19th November, 1895; 6 years.

Claim.—1st. The combination with one of the rods of a bicycle frame, of a casing in which is placed a spring operated bar which is adapted to be projected downwardly through the open lower end of the casing, of legs pivotally connected with the lower end of said bar, and a lock for holding said bar in a raised position, substantially as shown and described. 2nd. The combination with one of the rods of a bicycle frame, of a casing in which is placed a spring operated bar, which is adapted to be projected downwardly through the open lower end of the casing, of legs pivotally connected with the lower end of said bar and a lock for holding said bar in either the raised or the lowered position, said lock being provided with a bolt adapted to enter notches or recesses formed in said bar, substantially as shown and described. 3rd. A lock for bicycles, comprising a casing which is adapted to be secured to one of the rods of the bicycle frame, said casing being provided with a spring operated bar which is located therein, and said rod with legs which are pivotally connected with the lower end thereof, said casing to operate as a support for the machine and a lock operating in connection with said bar, substantially as shown and described. 4th. A lock for bicycles, comprising a casing which is adapted to be secured to one of the rods of the bicycle frame, said casing being provided with a spring operated bar which is located therein, and said rod with legs which are pivotally connected with the lower end thereof, said bar being adapted to be projected through the lower end of said casing and to operate as a support for the machine and a lock operating in connection with said bar, said casing being provided at its lower end on one side thereof with a vertical slot, and said bar with a pin which projects through said slot, substantially as shown and described.

No. 50,638. Cream Separator. (*Séparateur pour la creme.*)

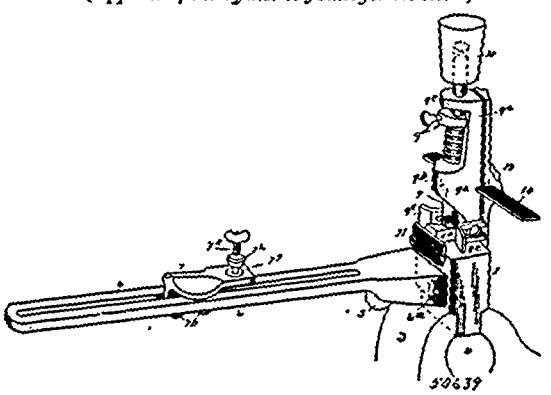


Claus Holmsbehn, Waverly, Iowa, U.S.A., 19th November, 1895; 6 years.

Claim.—1st. The combination in a centrifugal cream separator, comprising a suitable bowl, a pipe leading downwardly into its central portion, means for admitting milk into said pipe, a screw in said pipe to rotate the milk contained therein in unison with the bowl, and pipes leading downwardly from the interior of said central pipe to the outer bottom portion of the bowl, substantially as and for the purposes stated. 2nd. As an improved article of manufacture, a cylindrical bearing box for a centrifugal cream separator, having a central opening to admit a shaft, an annular outwardly projecting shoulder near its top, and screw-threaded on its exterior lower portion, a slot in the interior of the block extending parallel with the central opening and in communication therewith leading from the top to a point near its lower end, and a tube section leading outwardly from the bottom of said slot, substantially as and for the purposes stated. 3rd. In a centrifugal separator, the combination of a suitable frame having a bowl-shaped top portion, with an opening in its under side having an annular shoulder therein, a vertical shaft extended through said opening, a yielding washer having a central opening placed in said opening in engagement with said shoulder, a cylindrical bearing box having a central bore and an outwardly extending annular shoulder adapted to engage the said yielding washer, and screw-threaded on its lower end, a washer having an integral screw thread adapted to engage the screw-threaded portion of the bearing box, and having its upper surface in engagement with the yielding washer, a slot leading from the inner top portion of the bearing box forwardly to a point near the lower end of same and in communication with the interior of the bearing box, and a tube leading from an oil supply tank to the bottom of said slot, substantially as and for the purposes stated. 4th. In a centrifugal cream separator, the combination of a rotated supply pipe, and a screw mounted in said supply pipe and rotated conjunctively therewith, whereby the supply of milk through said pipe is forced and sustained equal to the capacity of the bowl. 5th. In a cream separator, a vertical shaft, a bearing for said shaft, means for lubricating said bearing, and a packing ring 11 mounted in the lower portion of said bearing and engaging said shaft to retain the oil in the bearing, as set forth.

No. 50,639. Saw Set and Jointer.

(*Appareil pour affuter et jointoyer les scies.*)



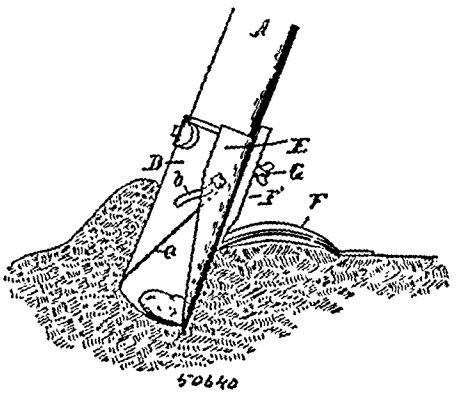
William I. Simmons, Northville, Michigan, U.S.A., 19th November, 1895; 6 years.

Claim.—1st. In a saw setting machine, the combination of an anvil and its support, with an upright arm adapted to carry a vertically moving setting punch, a track arm hinged to the anvil support and adjustable through a vertical angle with respect thereto, a saddle adjustable along the track arm and adjustable with respect thereto through an angle in the same plane with that of the angular adjustment of the track arm, a reversible setting punch provided with facets on each end, and a collar on said punch having one side flattened and adapted to bear against the upright to prevent the punch from turning in its bearings, substantially as described. 2nd. In a saw set and jointer, the combination of a main support, a jointing file secured thereto, an arm hinged to the main support, a lug projecting from the main support, a bearing screw adapted to adjust the angularity of the hinged arm, a centreing device comprising a saddle adapted to slide along the hinged arm and adjustable with respect thereto, and means for securing the saw to the tabular piece, substantially as described. 3rd. In a saw jointer, a centreing and holding device comprising a saddle convex on its under side, an overhang projecting therefrom and provided with a socket and a conical fillet plug and means for clamping the fillet plug in the socket, substantially as described.

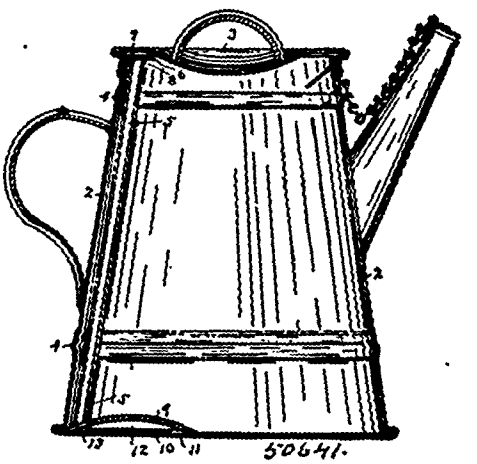
No. 50,640. Potato Planter. (*Semoir à patates.*)

Charles W. Choate and Elonso J. Gordon, both of Greenville, Michigan, U.S.A., 19th November, 1895; 6 years.

Claim.—1st. In a planter, a beak having a fixed jaw, and a movable jaw pivoted to said fixed jaw, and also longitudinally movable relative thereto, substantially as described. 2nd. In a planter, the combination of a tube, a fixed jaw secured to the same, having parallel sides, and slots in the said sides, a movable jaw engaging said fixed jaw, and having pivot bolts engaging and transversing said slots, substantially as described. 3rd. In a planter, a beak consisting of a fixed jaw, having parallel sides, having curved slotted openings, a movable jaw having parallel sides embracing the parallel sides of said fixed jaw, and angles engaging the sides thereof, and pivoted bolts connecting said fixed and movable jaws and traversing said bolts, substantially as described. 4th. In a planter, the combination of a tube, a fixed jaw attached to the same having parallel sides, having slots, a movable jaw, having parallel sides and angles engaging the sides and edges of said fixed jaw, and pivot bolts connecting said fixed and movable jaws and traversing said slots, and an adjustable arm attached to said movable jaw and projecting therefrom, substantially as described. 5th. In a planter, a beak having a fixed and a movable jaw, said movable jaw being movable outward from and longitudinally with respect to said fixed jaw, and an arm attached to said movable jaw and engaging the ground, substantially as described. 6th. In a planter, the combination of the fixed and movable jaw, of a lock for the movable jaw in its closed position to hold it against opening by interior pressure, but free to release it upon insertion of the beak into the ground. 7th. In a planter, the combination of the fixed and the movable jaw hinged together, of a lock for the hinge joint of the movable jaw, and means for releasing said lock as the beak is inserted into the ground. 8th. In a planter, the combination of the tube of sheet metal, a reinforcing flange B, at the lower edge thereof, and the beak secured to the reinforced portion of the tube, substantially as described. 9th. In a planter, the combination of the sheet metal tube, the flange B turned back upon the lower edge of the tube to form a reinforcement thereon, the bead C in the reinforced portion, and the beak secured to the reinforced portion, substantially as described.



No. 50,641. Cooking Vessel. (*Ustensile de cuisine.*)

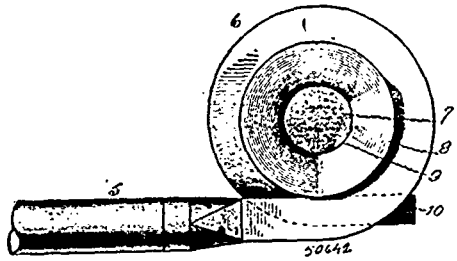


Richard C. Andersen, Dallas, Texas, U.S.A, 19th November, 1895; 6 years.

Claim.—1st. In a coffee-pot or like vessel, two conduits 4 and 5 formed by the piece of V-shape in cross-section having a partition plate secured thereto, and itself secured to the vessel, the plate 6 having an opening 7, and the conduit 5 an opening 8 beneath the plate, the chamber 12 formed by a raised portion 9 of the bottom, and a covering plate 10 situated in the plane of said bottom, substantially as set forth. 2nd. In a coffee-pot or like vessel, two conduits 4 and 5 formed by the piece of V-shape in cross-section having a partition plate secured thereto, and itself secured to the vessel, the plate 6 having *an opening 7, and the conduit* 5 an opening 8 beneath the plate, the chamber 12 formed by a raised portion 9 of the bottom, a covering plate 10 situated in the plane of said bottom, and the downward extension 13 of the wall separating said conduits, substantially as set forth. 3rd. In a coffee-pot or like vessel, the conduit 4 for the descent of vapour, a re-heating chamber formed in the bottom of the vessel, and a conduit 5 for the ascent of the steam, both conduits connecting with the re-heating chamber and with the upper part of the vessel, the former having a transverse area about three times that of the latter, as set forth. 4th. In a coffee-pot or like vessel, the conduit 4 for the descent of vapour, a re-heating chamber formed in the bottom of the vessel, and a conduit 5, for the ascent of steam, both conduits connecting with the re-heating chamber and with the upper part of the vessel, a plate such as 6 to obstruct entrance to the top of flue 5 and a guard such as 13 to direct the descending vapour below the ascending steam, substantially as set forth.

No. 50,642. Air Relief for Fan Discharge Pipes.

(*Soupape pour tuyaux de décharge d'éventail.*)



Arthur C. Lynch, New York, State of New York, and George W. Christoph, Hartford, Connecticut, both in the U.S.A., 19th November, 1895; 6 years.

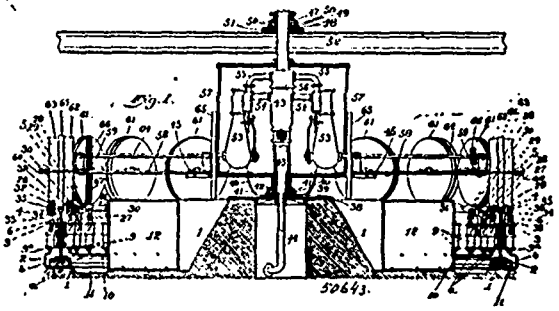
Claim.—1st. In combination with a fan, a discharge pipe for such fan having an inlet end and a discharge end that is smaller in cross-sectional area than the inlet end, said pipe being formed into a coil between the inlet end and the discharge end with a cylindrical drum located within the coiled portion, and a part of the inner wall of the coiled portion of the discharge pipe being open into the drum, substantially as specified. 2nd. In combination with a fan, a discharge pipe for such fan having an inlet end and a discharge end, said pipe being formed into a coil between the inlet end and the discharge end and said coil being gradually reduced in cross-sectional area as it extends toward the discharge end, with a cylindrical drum located within the coiled portion, and a part of the inner wall of the coiled portion of the discharge pipe being open into the drum, substantially as specified. 3rd. In combination with a fan, a discharge pipe for such fan having an inlet end and a discharge end that is smaller in cross-sectional area than the inlet end, said pipe being formed into a single coil between the inlet end and the discharge end, with a cylindrical drum having an opening through one end only, located within the coiled portion, and a part of the inner wall of the coiled portion of the discharge pipe being open into the drum, substantially as specified. 4th. In combination with a fan, a discharge pipe for such fan having an inlet end and a discharge end that is smaller in cross-sectional area than the inlet end, said pipe being formed into a coil between the inlet end and the discharge end, with a cylindrical drum having a re-entrant perforated top and a closed bottom located within the coiled portion, and a part of the inner wall of the coiled portion of the discharge pipe being open into the drum, substantially as specified.

No. 50,643. Apparatus for Compressing Air.

(*Appareil de compression d'air.*)

Ephraiem Chaquette, Bridgeport, Connecticut, U.S.A., 19th November, 1895; 6 years.

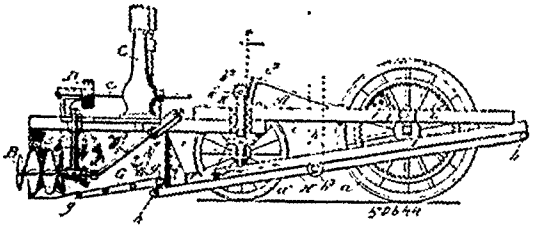
Claim.—1st. In an apparatus for compressing air, the combination of a series of cylinders which communicate with the external atmosphere and which are connected with a storage reservoir, and the pistons within said cylinders, of rollers capable of travelling on a fixed track, the upper extremities of said pistons being within the field of travel of said rollers, and means for operating said rollers to alternately depress said pistons by the combined leverage, gravity and momentum of the rollers, substantially as set forth. 2nd. In an apparatus for compressing air, the combination of a series of cylinders which communicate with the external atmosphere and which are connected with an air-tight storage reservoir, piston heads within said cylinders, piston rods which carry said piston heads, rollers capable of travelling on a fixed track, the upper extremities



of said piston rods being within the field of travel of said rollers whereby the latter will depress said rods, and means for returning said rods to their normally elevated position, substantially as set forth. 3rd. In an apparatus for compressing air, the combination of the bed having thereon a track, an air-tight reservoir, rollers on said track, means for propelling said rollers, a series of cylinders having communication with the external atmosphere and whose lower ends are connected with said reservoir, piston rods which carry heads operating within said cylinders, the upper extremities of said rods projecting in normal position in close proximity to said rollers, and means for returning said rods to elevated position, substantially as set forth. 4th. In an apparatus for compressing air, the combination of the bed which supports an air-tight reservoir and a circular track, a series of rollers on said track, means for propelling said rollers, a series of cylinders whose lower extremities are in communication with said reservoir and which have communication with the external atmosphere, piston rods adapted to operate within said cylinders, and the pivotally supported rocker bars within the field of travel of said rollers and having their extremities at either end connected with said piston rods in couplets, whereby the depression of one rod of a couplet will effect the elevation of the other rod, substantially as set forth. 5th. In an apparatus for compressing air, the combination of the bed which supports a circular track, an air-tight reservoir and a rotary platform, the frame extending radially from said platform and having journalled therein rollers which rest upon said track, engines mounted upon said platform, operative connections between the driving shafts of said engines and said rollers whereby the latter will be caused to travel around said track, a series of cylinders arranged in couplets and which are connected respectively with said reservoir and the external atmosphere, a series of piston rods which carry piston heads adapted to operate within said cylinders, and the pivotally supported rocker bars within the field of travel of said rollers, the extreme ends of said bars being pivotally connected to the two piston rods of a couplet, substantially as set forth. 6th. The combination of the bed which supports an outer circular track, an air-tight reservoir, and a rotatory platform and having journalled therein rollers which rest upon said track and are provided with laterally extending hubs, engines mounted upon said platform, operative connections between the driving shafts of said engines and said rollers whereby the latter will be caused to travel around said track, cylinders arranged in pairs, each pair having connection with said reservoir and with the external atmosphere, a pair of piston rods carrying piston heads which operate within said cylinders, and the pivotally supported rocker bars within the field of travel of said hubs and whose extremities are pivotally connected with each one of a pair of piston rods whereby the depression of one of said rods will effect the elevation of the other, substantially as set forth. 7th. In combination with the track and the rollers travelling thereon, the cylinders arranged in pairs in proximity to said track, pistons within the cylinders having piston rods extending into the path of travel of the rollers, and rocker bars connecting the piston rods in pairs as described, each piston having a resiliently acting valve, and each cylinder having communication with the external atmosphere, all combined substantially as described. 8th. In an organised machine for compressing air, the circular track and the rollers travelling thereon, the air compressing cylinders in proximity to said track, each cylinder having a piston in position to be operated by the travelling rollers and having connection to a storage reservoir, and the centrally pivoted engine having a central steam supply and having connection to the rollers running on the circular track, all combined substantially as described. 9th. In an organized machine for compressing air, the circular track and air compressing cylinders in proximity thereto, the rollers moving on said track, the pistons and connections in the path of movement of said rollers, the centrally pivoted engine having a central steam supply pipe, and a shaft extending from said engine and having geared engagement with the travelling rollers, all combined and arranged substantially as described. 10th. In a machine for compressing air, the circular track and rollers travelling thereon, the air compressing cylinders having pistons in position to be operated by said rollers, the centrally pivoted engine having a frame in which the rollers have their bearings and having a central steam supply,

and geared connections from the engine to the rollers whereby the rollers are driven and the engine carried around its centre, all combined substantially as described. 11th. In an organized structure for compressing air, a circular track, a roller or wheel travelling on said track and drawn by a motor deriving its power from the centre of the circular track, a series of air compressing cylinders in proximity to said track having pistons with their rods connected in pairs by levers pivoted in proximity to the track, so that the depression of one piston by the roller lifts the other piston of the pair by means of its lever, and pipe connections from the cylinders to a reservoir, all combined substantially as described. 12th. In an organized machine for compressing air, the circular track, and the roller travelling thereon and overlapping the sides thereof, the series of cylinders arranged in pairs alternately inside and outside the track and having pistons in proximity to the track, the pistons of each pair connected by a pivoted lever so that one is raised as the other is depressed, the cylinder of an outside pair being opposite the interval between the cylinders of an inside pair and vice versa, all combined substantially as described.

No. 50,644. Excavator. (*Excavateur.*)



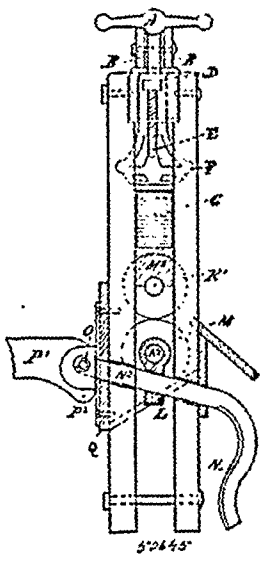
James Madison Barr, Spokane, Washington, U.S.A., 19th November, 1895; 6 years.

Claim.—1st. A portable excavator, comprising a supporting and propelling truck, wheels upon which such truck is moved and mounted, a plurality of rotating cutting shovels mounted in a horizontal plane at the forward end of the truck, means for operating the shovels and propelling the truck forward continuously, and an inclosing case provided with a horizontal portion arranged to deflect and guide the material towards the cutting shovels and in combination therewith to excavate a substantially level cut of the full width of the machine, substantially as described. 2nd. A portable excavator, comprising a supporting and propelling truck, wheels upon which such truck is moved and mounted, at least three helical shovels rotatably mounted in a horizontal plane at the forward end of the truck, an inclosing case provided with a horizontal cutting edge to deflect and guide the material towards the helical shovels and in combination therewith to excavate a substantially level cut the full width of the machine, belt conveying mechanism located on the truck to receive the material excavated by the shovels and to deliver it to a point of discharge, and a motor arranged on the truck for propelling the same forward, and operating shovels and conveyers in a continuous manner, substantially as described. 3rd. A portable excavator, comprising a truck provided with wheels pivotally mounted upon one pair of the supporting wheels and adapted to support and move the operating mechanism, a rack and pinion for raising and lowering the truck with its operative mechanism upon the pivotal axle, one or more rotatable, helical shovels mounted on such truck in a horizontal, longitudinal position, a casing secured to the truck and partially surrounding the shovels for deflecting and guiding the material to be excavated into contact with the rotatable shovels, belt conveyers secured to the truck for taking and delivering the waste material to a point of deposit, and a motor upon such truck for operating the rotatable excavators and conveyers, substantially as described. 4th. A portable excavator comprising a supporting truck provided with wheels upon which the operative mechanism is supported and mounted, and pivoted to the rear pair of wheels so that the front end of the truck may be raised or lowered, rack and pinion mechanism secured to the frame and front pair of wheels for raising and lowering the free end of the truck, one or more rotatable, helical shovels mounted at the free vibrating end of the truck in a horizontal, longitudinal plane, a casing secured to the truck and partially inclosing the shovels for deflecting and guiding the earth to be excavated and keeping it in contact with the shovels during the rotation, belt conveying mechanism on the truck for receiving and conveying the waste material to a point of deposit, gear mechanism secured to one of the wheels and the frame of the truck to move the excavator forward or backward, as desired, and a motor mounted on such truck and arranged to rotate the excavators, belt conveying mechanism and to move the truck forward or backward, substantially as described.

No. 50,645. Clothes Wringer. (*Tordoir.*)

Michael Henry Griffin, Burlington, and Walter Beattie Webber, Hamilton, both of Ontario, Canada, 22nd November, 1895; 6 years.

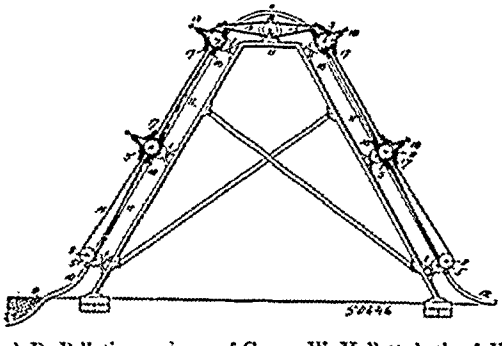
Claim.—1st. In a wooden frame clothes wringer, the combination of the top bar of the frame having a central vertical slot down through it in which a sliding bolt head is arranged to work up and down freely, a regulating hollow nut turning on the lower end of



said bolt and resting at its seat on the horizontal arched spring between the sides of the frame, of an eccentric plate fitted in the centre of the top bar of frame having a raised side piece on each side of the slot in said plate, a pin bearing at each end in said pieces and on which an eccentric works by means of an extension handle to bear down on the head of said sliding bolt, thus pressing the hollow regulating nut down on the horizontal spring to give pressure on the top roller, as set forth. 2nd. In a wooden frame clothes wringer, the combination with the pressure device as before described, of the shafts of the bottom roller working in hollow metal bearings, said bearings having lower extensions in which are formed transverse bearings through which the arms of the clamp extend, the upper end of said clamp arms and also the inner ends of the metal drop table sides being hinged between projections on each side of a slot in the pedestals filled at each end of the front of the frame on a pintle or bolt passed through said projection forming a fulcrum for the clamp arms in connection with the adjustable lower roller, its shaft and the hollow and transverse bearing in which the clamp arms work in a slot framed in the centre of the body of the frame, and by automatic action clamping the wringer on the tub, as set forth. 3rd. In a wooden frame clothes wringer as described, the combination of the pedestals fitted on each side of the front of the frame, of the drop table sides hinged between projections on the same on a bolt or pintle in an elongated slot in the inner end of the metal arms of the drop table, arranged so that the arms settle over said bolt or pintle automatically in raising or lowering the table, of the inner ends or jaws of said sides adapted to bear against the face of the said pedestals and thereby supporting the table in a horizontal position, and locking the sides in a vertical position, as described and for the purposes herein set forth.

No. 50,646. Pumping Apparatus.

(*Appareil pour pomper.*)

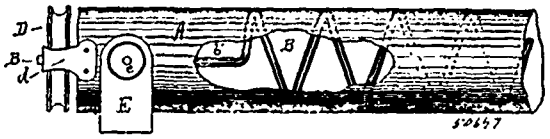


Frank D. Pelletier, assignee of George W. Hallett, both of Kansas City, Missouri, U.S.A., 22nd November, 1895; 6 years.

Claim.—1st. An apparatus for acting either as a suction or as a force pump, and consisting of a casing formed with two communicating cylinders provided with an induction-passage and with an

eduction-passage, shafts journalled axially in this casing and provided with spirally-intermeshing flanges and ribs, and means to rotate one of said shafts to cause the same to impart motion to the other, substantially as described. 2nd. A pumping-apparatus, comprising a series of pumps in the form of two communicating cylinders, shafts rotatably mounted therein, and provided with intermeshing spiral flanges or ribs, an induction-passage at one side and end of the said spirals, and an eduction-passage at the opposite side and end of said spirals, a grooved-wheel upon one of said shafts, a suitable scaffolding or supporting-framework, also having a grooved-wheel, an endless cable connecting the grooved-wheel of the motor with the grooved-wheels of the system of pumps, means to tension said cable, and pipes connecting said pipes in series and having one end of the same communicating with a source of water-supply, and the opposite end arranged to deliver the water at the required point, substantially as described.

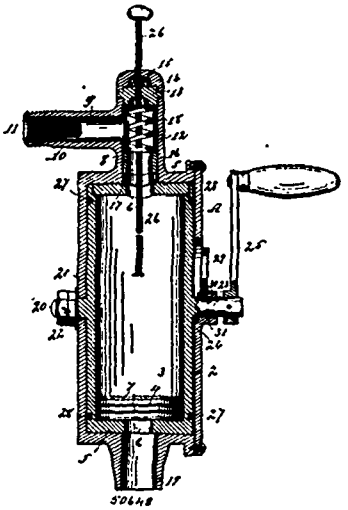
No. 50,647. Curtain Pole. *(Bâton de rideau.)*



Alexander Sabiston and William E. Deeks, assignees of Howard Peard Walker, all of Montreal, Quebec, Canada, 22nd November, 1895; 6 years.

Claim.—The combination, with the hollow curtain pole A, having the slot C, of the spirally or helically bent wire B, having the hangers F, and an operating mechanism, substantially as set forth.

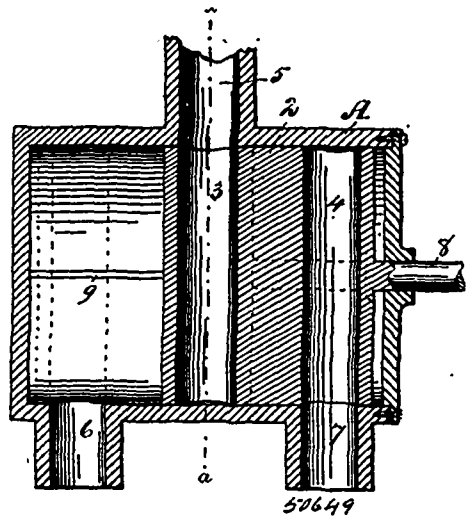
No. 50,648. Measuring Device. (*Appareil à mesurer.*)



Samuel Otis Jones and George Henry Atwood, both of Stillwater, Minnesota, U.S.A., 22nd November 1895; 6 years.

Claim.—1st. In a device of the class described, the combination with the inclosing case having oppositely arranged inlet and outlet ports, the measuring device arranged intermediate of said ports, having a continuous open ended passage or chamber adapted to alternately register with said ports, and the partition movable in said passage. 2nd. In a measuring device, the combination of the inclosing case having oppositely arranged inlet and outlet ports, the plug or core fitted to and adjustable in said case and having a passage therethrough adapted to be brought into registering position with either of said ports and the partition movable in said passage. 3rd. In a device of the class described, the combination with the inclosing case having oppositely arranged inlet and outlet ports, of the measuring device arranged intermediate of said ports and having a measuring chamber or passage therethrough adapted to be brought into alternately registering position with said ports and means for closing the measuring passage or chamber at the end opposite the inlet port so as to temporarily retain the contents thereof. 4th. In a device of the class described, the combination with the fixed and oppositely arranged inlet and outlet ports, of the measuring device arranged intermediate of said ports having a diametric open ended chamber or passage adapted to be set to register alternately oppositely with said ports, and the partition in said passage movable between fixed limits. 5th. In a device of the class described, the combination with the outer case having oppositely arranged inlet and outlet ports, of the rotatable plug fitted to said case and having a diametric passage therethrough adapted in the rotation of the plug to be brought into registering position with said ports in alternating position with each half revolution, and a piston slidable in said passage between determined limits. 6th. In a liquid measuring device, the combination with the outer case having oppositely arranged inlet and outlet ports, of the plug fitted to said case and rotatable therein and having a diametric passage therethrough of larger diameter than said ports, adapted in the rotation of the plug to be brought into alternately opposite registering positions with said ports, and the piston working in said passage. 7th. In a liquid measuring device, the combination with the inclosing case having oppositely arranged inlet and outlet ports, of the rotatable plug in the form of a conical frustrum fitted to said case and having a diametric passage therethrough of greater diameter than said ports adapted to be brought into registering positions with said ports by the rotating of the plug, the piston working in said passage, means for longitudinal adjustment of said plug in said case and means for rotating said plug. 8th. In a device of the class described, the combination of the inclosing case having oppositely arranged inlet and outlet ports, the measuring device arranged in said case having a diametric measuring chamber or passage, the partition arranged in said passage and movable between fixed limits and means for shifting the position of said measuring device so as to register said passage in reversed position with said ports. 9th. In an apparatus of the class described, the combination with the inclosing case having oppositely arranged inlet and outlet ports, the plug or core rotatable in said case and having a diametric chamber or passage adapted to register with said ports in alternately opposite positions, the partition movable in said passage between fixed limits and means for automatically turning said plug to reverse the port connections of said chamber when the same shall have been filled from the inlet port, so as to discharge the contents of said chamber and refill the same at the opposite end. 10th. In a measuring device of the class described, the combination with the inclosing case and the rotatable plug or core fitted therein, of the packing rings interposed between said core and case. 11th. In a measuring device of the class described, the combination with the rotatable core and its piston, of the plunger for mechanically actuating said piston.

No. 50,649. Measuring Device. (*Appareil à mesurer.*)

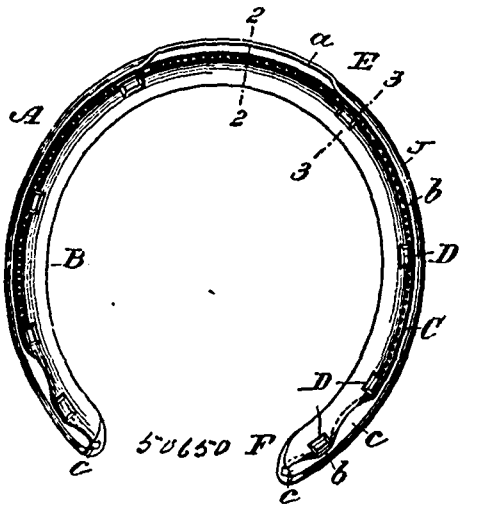


Samuel Otis Jones and George Henry Atwood, both of Stillwater, Minnesota, U.S.A., 22nd November, 1895; 6 years.

Claim.—1st. In a liquid measuring device, the combination with the tight inclosing case having fixed and oppositely arranged inlet and outlet ports, of the measuring device fitted to said case and adjustable longitudinally thereof, and adapted each time it is reciprocated to register with said ports to receive a predetermined quantity through an inlet port and simultaneously discharge another and similar quantity through an outlet port. 2nd. In a liquid measuring device, the combination with the tight inclosing case provided with oppositely arranged inlet an outlet ports, of the reciprocating plug or core fitted to said case, and being so chambered and partitioned as to receive a predetermined quantity through an inlet port and simultaneously discharge a similar quantity through an outlet port as reciprocated in said case. 3rd. In a device of the class described, the combination with the inclosing case provided with inlet and outlet ports, of the plug movable in said case, the passage

through said plug and the movable partition in said passage constituting of the same a pair of similar measuring chambers adapted to register with the ports in the reciprocating of the core so that one chamber will receive a predetermined measure through an inlet port and the other chamber simultaneously discharge its contents through an outlet port. 4th. In a measuring device, the combination with the cylindrical inclosing case provided with inlet and outlet ports, of the plug or core movable in said case, the passage therethrough adapted to be brought into alternately registering position with said ports, and the partition working in said passage. 5th. In a measuring device, the combination with the cylindrical inclosing case provided with the series of oppositely arranged inlet and outlet ports, of the reciprocating plug or core arranged in said case, the passage therethrough adapted in each reciprocation of said core to register with an inlet and outlet port, and the piston working in said passage allowing the passage to be filled through an inlet port and simultaneously emptied through an opposite outlet port.

No. 50,650. Horse Shoe. (*Fer à cheval.*)



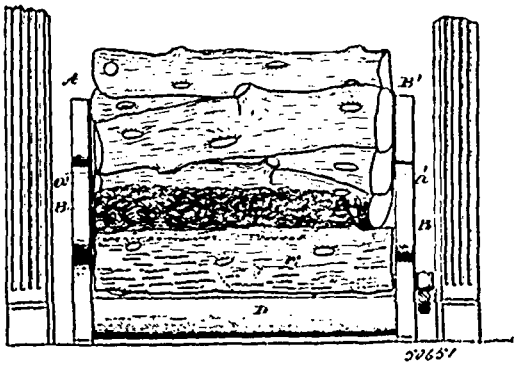
William Joseph Kent, Brooklyn, New York, U.S.A., 22nd November, 1895; 6 years.

Claim.—1st. A horse shoe having a body of relatively soft metal and a wearing strip of relatively hard metal carried by said body, which strip when in position on the shoe inclines downwardly and outwardly, and is exposed at the bottom face of the shoe where it constitutes the wearing portion thereof, whereby the strain due to the toe of the shoe striking the ground is received in substantially the direction of the inclination of the strip. 2nd. A horse shoe having a body of relatively soft metal and a wearing strip of relatively hard metal carried by said body near the outer part thereof and exposed at the bottom face of the shoe and constituting the wearing portion thereof, whereby the strain when the shoe strikes the ground is received by said strip, said body having nail holes through its soft metal portion at the inner side of said strip, whereby the nails when driven in said holes strengthen the retention of the wearing strip in place in the body of the shoe. 3rd. A horse shoe having a body of relatively soft metal having a top face furnishing a seat for the shoe, a downwardly and outwardly inclining bottom face, and an inwardly inclining front face meeting the bottom face at an acute angle at the sole of the shoe, said shoe having a hard metal wearing strip exposed at said angle at its lower edge and enclosed in the soft metal of the body at its upper edge, receiving in its lower edge the wear and concussion due to the use of the shoe, and transmitting such concussion through its inclosed upper edge to the interior of said body below said seat, whereby said angle constitutes the striking portion of the shoe and has a hard metal point. 4th. A horse shoe having a body of relatively soft metal, and a toe calk therefor, consisting of a strip of relatively hard metal of greater width than thickness, embedded at its upper edge in the metal of said shoe at the toe thereof, and projecting at its lower edge beyond the bottom edge of said shoe.

No. 50,651. Steam Radiator for Fireplaces.
(*Distributeur de vapeur pour foyers*)

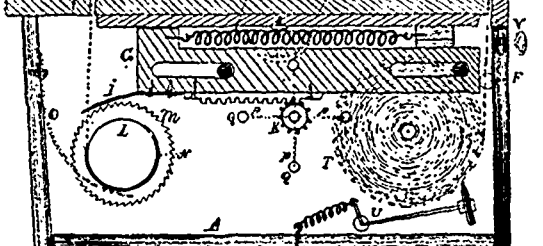
Frederick Ellsworth Backus, Williamsport, Pennsylvania, U.S.A., 22nd November, 1895; 6 years.

Claim.—1st. The combination with the supported water-log, of the burner, a water receptacle beneath the burner, and a part extending from a point adjacent to the burner to said water receptacle, whereby the heat from the burner causes a slow evaporation of the water in said receptacle, substantially as described. 2nd. The combination with a water reservoir having the exterior configuration of a log of wood, and a steam radiator connected with said reservoir, of a burner for heating said reservoir and a coating of



asbestus on said reservoir exposed to said burner, substantially as described. 3rd. The combination with a water reservoir having the exterior configuration of a log of wood, and a steam radiating chamber communicating with said reservoir, a burner, a water receptacle beneath the burner, and a concealing plate having the exterior configuration of a log of wood extending from the burner to the said water receptacle to conceal the burner and cause a slow evaporation of the water in said receptacle, substantially as described. 4th. The combination with a water reservoir, having the exterior configuration of a log of wood, one or more connected steam radiating chambers having the exterior configuration of a log of wood, a burner for said water receptacle, and a supporting frame adapted to enter a fireplace for supporting said devices, substantially as described. 5th. The combination with the water-log and one or more steam chambers connected therewith, of a burner located beneath the water-log, a water receptacle beneath said burner, a supporting frame for said parts adapted to enter a fireplace niche, and a covering plate extending from said burner to said water receptacle, substantially as described. 6th. The combination with the supporting frame adapted to enter a fireplace niche, of a water-log supported thereby, having its exterior formed to represent a log, a steam chamber communicating with said log, a burner supported by said log, a water receptacle below the burner and a covering plate formed to represent a log having a part engaging the burner, and a part extending into said water receptacle, substantially as described.

No. 50,652. Cash Register. (*Registre de monnaie.*)



Joseph L. Howard, Brantford, Ontario, Canada, 22nd November, 1895; 6 years.

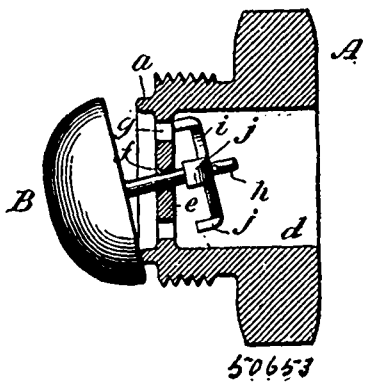
Claim.—In a cash register comprising a box A, under counter B, cash drawer D, rid E, pin F, sliding bar G, coil spring H, flat spring I, gear-wheel K, wooden roller L, ratchet-wheel M, spring N, spring O, wires P, balls Q, bell R, wire S, roll T, ruling attachment U all formed, arranged and combined, substantially as and for the purpose hereinbefore set forth.

No. 50,653. Drainage Trap for Steam Pipes or Vessels. (*Trappe de desséchement pour tuyaux ou vasseaux à vapeur.*)

Edward Ethel Gold, New York, State of New York, U.S.A., 22nd November, 1895; 6 years.

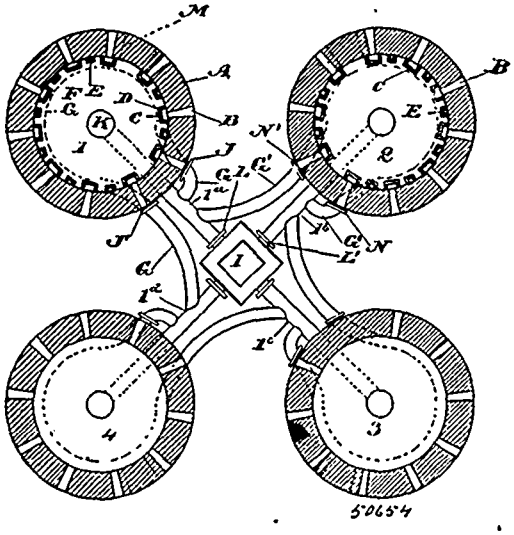
Claim.—1st. The described improvement in gravity steam-traps having a fixed body or shell formed with a discharge opening through it, and a valve seat on its inner side, consisting in the construction of the valve with its centre of gravity inwardly of its support, so that it opens by its own weight and closes against said seat by the steam pressure, and with a stem connected to said valve and projecting through said seat, and a baffle-disc fixed on said stem in said opening to assist in closing the valve. 2nd. The described improvement in gravity steam-traps consisting in forming the fixed

body with a central opening within said seat, and constructing the valve to open by its own weight, and supporting it by means of a



stem projecting rigidly from it and passing through said opening. 3rd. The described improvement in gravity steam-traps which consists in constructing the fixed body or shell with a perforated diaphragm within its seat, having a central opening for the passage of the valve stem, and constructing the valve to open by its own weight, with a stem rigidly projecting from it through said central opening, and a baffle-disc fixed on the stem on the opposite side of the diaphragm and adapted to strike the diaphragm when the valve opens to serve as a stop. 4th. The described improvement in gravity steam-traps consisting in constructing the fixed body or shell with a discharge opening through it, a valve seat on its inner side, and a transverse partition in said opening formed with a central opening for the passage of the valve stem, and with perforations around it for the passage of steam.

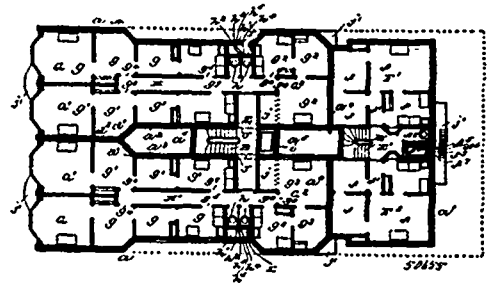
No. 50,654. Continuous Brick Kiln. (*Four à briques.*)



Charles James Lewis, Grimsby, Ontario, Canada, 22nd November, 1895; 6 years.

Claim.—1st. A continuous brick kiln consisting of a series of independent kilns, each kiln consisting of an outer wall, a series of vertical fire chambers arranged around the inner side of the outer wall having their upper ends opening into the body of the kiln, the chimney, a main flue from the kiln to the chimney, a draft wall centrally through the floor of the kiln to the main flue, substantially as specified. 2nd. A continuous brick kiln consisting of a series of independent kilns, each kiln consisting of an outer wall, a series of vertical fire chambers arranged around the inner side of the outer wall having their upper ends opening into the body of the kiln, the chimney, a main flue from the kiln to the chimney, a draft well centrally through the floor of the kiln to the main flue, and a damper for the main flue, substantially as specified. 3rd. A brick kiln consisting of an outer wall, a series of vertical fire chambers on the inner side of the outer wall the upper end of each of the vertical fire chambers opening into the body of the kiln, a series of vertical hot air flues arranged around the inner side of the outer wall and extending through the floor of the kiln, a flue connecting together the lower ends of each of the hot air flues, and means for conveying the heated air and gases from the connecting flue to the chimney, substantially as specified. 4th. A brick kiln consisting of an outer wall, a series of vertical fire chambers on the inner side of the outer wall, the upper end of each of the vertical fire chambers opening into the body of the kiln, a series of vertical hot air flues arranged around the inner side of the outer wall and extending through the floor of the kiln, a flue connecting together the lower ends of each of the hot air flues, a main flue to the chimney into which the connecting flue discharges, and a draft well formed centrally through the floor of the kiln, into the main flue, substantially as specified. 5th. A brick kiln consisting of an outer wall, a series of vertical fire chambers on the inner side of the outer wall, the upper end of each of the vertical fire chambers opening into the body of the kiln, a series of vertical hot air flues arranged around the inner side of the outer wall and extending through the floor of the kiln, a flue connecting together the lower ends of each of the hot air flues, a main flue to the chimney into which the connecting flue discharges, and a draft well formed centrally through the floor of the kiln, into the main flue, substantially as specified. 6th. A brick kiln consisting of an outer wall, a series of vertical fire chambers on the inner side of the outer wall, the upper end of each of the vertical fire chambers opening into the body of the kiln, a series of vertical hot air flues arranged around the inner side of the outer wall and extending through the floor of the kiln, a flue connecting together the lower ends of each of the hot air flues, means for conveying the heated air and gases from the connecting flue to the chimney, a damper for each of the hot air flues, and means for conveying the gases from the connecting flue to the next adjacent kiln of the series, substantially as specified. 7th. A brick kiln consisting of an outer wall, a series of vertical fire chambers on the inner side of the outer wall, the upper end of each of the vertical fire chambers opening into the body of the kiln, a series of vertical hot air flues arranged around the inner side of the outer wall and extending through the floor of the kiln, a flue connecting together the lower ends of each of the hot air flues, means for conveying the heated air and gases from the connecting flue to the chimney, a damper for each of the hot air flues, and means for conveying the gases from the connecting flue to the next adjacent kiln of the series, substantially as specified. 8th. A brick kiln consisting of an outer wall, a series of vertical fire chambers on the inner side of the outer wall, the upper end of each of the vertical fire chambers opening into the body of the kiln, a series of vertical hot air flues arranged around the inner side of the outer wall and extending through the floor of the kiln, a flue connecting together the lower ends of each of the hot air flues, a main flue to the chimney into which the connecting flue discharges, a draft well formed centrally through the floor of the kiln into the main flue, and means for conveying the gases from the connecting flue to the next adjacent kiln of the series, substantially as specified. 9th. A brick kiln consisting of an outer wall, a series of vertical fire chambers on the inner side of the outer wall, the upper end of each of the vertical fire chambers opening into the body of the kiln, a series of vertical hot air flues arranged around the inner side of the outer wall and extending through the floor of the kiln, a flue connecting together the lower ends of each of the hot air flues, a main flue to the chimney into which the connecting flue discharges, a draft well formed centrally through the floor of the kiln into the main flue, and dampers for the main flue and connecting flue, substantially as specified.

No. 50,655. Apartment House. (*Maison-appartement.*)



Martin Louis Ungrich, New York, State of New York, U.S.A., 22nd November, 1895; 6 years.

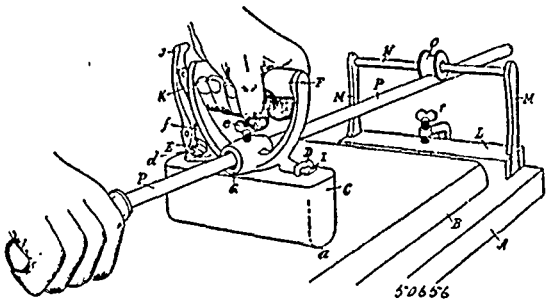
Claim.—An apartment house, comprising shops *b*, b^1, central hallway D, having a rear side extension C, and transverse hallways E, E^1, two courts a^3, stairways B, following said courts, apartments F F^1, at rear apartments G, G^1, G^2, at front and sides, hallways H, H^1, elevator wells h^1, f^3, at rear and sides and water closets *h*, f^2, at said wells, the whole arranged as set forth.

No. 50,656. Linen Polisher. (*Machine à polir le linge*)

Samuel M. Douglas, Ingersoll, Ontario, Canada, 22nd November, 1895; 6 years.

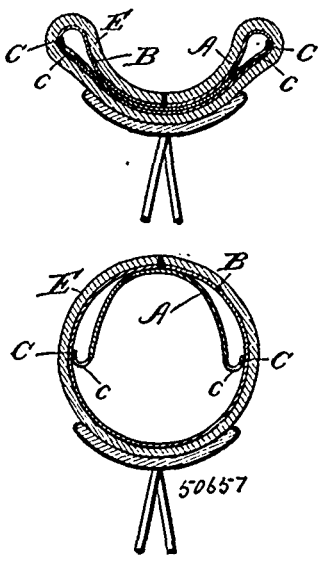
Claim.—1st. The combination of the iron C, with the lever P, and the bearing O, substantially as and for the purpose set forth. 2nd. The combination of the iron C, the handle F, the lever P, and the

baring O, substantially as and for the purpose set forth. 3rd. The combination of the iron C, the handle F, the lever P, the anti-friction



bearing or roller O, spindle N, and standards M, M, substantially as and for the purpose set forth. 4th. The handle F, provided with the openings G, H, and hook I, the lever J, provided with the flange *d*, and the spring K, in combination with iron C, formed with the tapered or curved face *a*, and provided with the loop D, and stud E, in which the recess *b*, is formed, substantially as and for the purpose set forth. 5th. The iron C, formed with the tapered or curved face *a*, and provided with the loop D, and stud E, in which the recess *b*, is formed, in combination with the handle F, provided with the openings, G, H, and hook I, and lever J, provided with the flange *d*, the spring K, lever P, anti-friction bearing or roller O, spindle N, bearing M, M, and bed plate L, substantially as and for the purpose set forth.

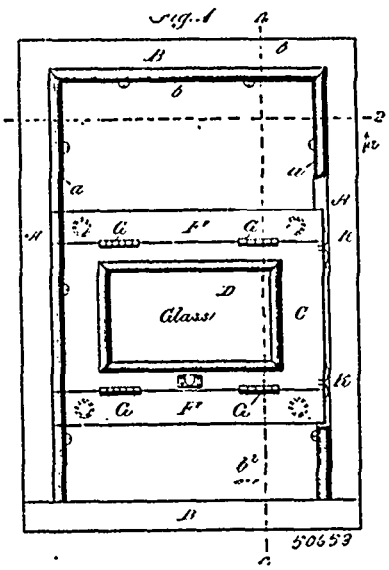
No. 50,657. Air Tube for Pneumatic Tires, and Mode of Preparing the Same. (*Tube à air pour bandages pneumatiques et méthode de préparation.*)



Ernest W. Young, Chicago, Illinois, U.S.A., 22nd November, 1895; 6 years.

Claim.—1st. A pneumatic tire containing a slack patching-ply which normally lies away from the tread portion of the tire so as to escape injury when the latter is punctured, said patching-ply being arranged whereby it can be picked up at different points and cemented to a punctured portion of the tire as a means for repairing the same, and perforations or apertures being also provided to establish air-passages between opposite sides of the patching-ply so as to permit an equilibrium of air-pressure to exist when the patching-ply is thus picked up and cemented to the tread portion of the tire, substantially as set forth. 2nd. A pneumatic tire comprising a sheath, an inclosed air-tube, and a slack patching-ply for the purpose described arranged within the air-tube and normally away from the side of the air-tube which is next to the tread portion of the tire, perforations or apertures being provided to establish an equilibrium of air-pressure at opposite sides of the patching-ply when the latter is picked up and cemented to the inner wall of the tread side of the air-tube so as to close a puncture made through the sheath and air-tube, substantially as set forth. 3rd. The within described improvement in the art of preparing repairable pneumatic tires, consisting in distending the inner air-tube for a pneumatic tire sheath, arranging upon such tube a patching-ply laterally stretching the patching-ply at points along its edge portions and cementing it at such points to the air-tube, turning the air-tube so as to bring the patching-ply within the same, and arranging the air-tube within the sheath so that the patching-ply shall normally lie at or near the base of the tire. 4th. The within described improvement in the art of repairing punctures in pneumatic tires, consisting in arranging within the tire formed with or without an inner air-tube, a slack patching-ply normally away from the base of the tire, introducing cement through a puncture in the tire, picking up and cementing a portion of the packing-ply to the punctured portion of the tire, and causing an equilibrium of air-pressure to exist at opposite sides of the portion of the patching-ply thus raised from the base of the tire and adjacent to its portion cemented to the punctured portion of the tire.

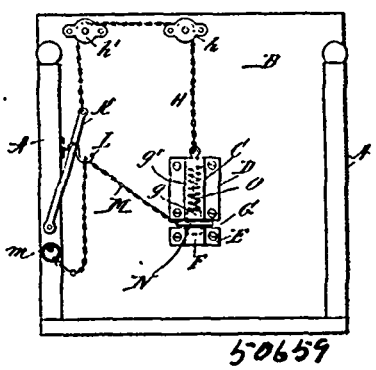
No. 50,658. Window Sash. (*Cadre de châssis.*)



Oscar Maher, Durango, Colorado, U.S.A., 22nd November, 1895; 6 years.

Claim.—The combination, with a window frame, provided with the usual beads or strips and between which is placed the window sash, one of said beads or strips being provided with notches or recesses adjacent to the window sash, of a window sash the top portions of which are provided with spring operated hinged strips the lower one of which is adapted to be thrown out and operate in connection with said notches or recesses to hold the window open, and the upper end of which is adapted to be thrown out against the head or strip, the end of the sash being also provided with springs adapted to press against the side frame of a window, substantially as shown and described.

No. 50,659. Hitching Device for Horses. (*Enrênoire.*)

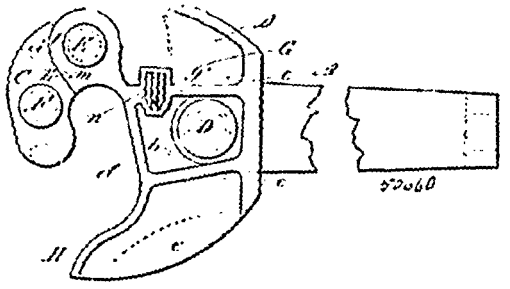


Samuel Lawson Wilson, New York, State of New York, U.S.A., 22nd November, 1895; 6 years.

Claim.—The combination, with a stall provided with a head board and sides, of plates secured to the head board so as to form a narrow space between the same, each of said plates being provided with a tubular bearing in which is placed a spring operated bolt, said bolt being provided with a rod with which is connected a chain which

passes over a pulley or pulleys, at the top of the head board, and is connected with a vertical arm, a horizontal rod which is mounted at the side of the stall, and extends backward, to the end thereof, and a ring adapted to be secured in place between said plates by said spring operated bolt, said ring being provided with a chain which is also carried backward, to the end of the stall, and is supported at the side thereof, by means of hooks connected with said rod, substantially as shown and described.

No. 50,660. Car Coupling. (*Attelage de chars.*)

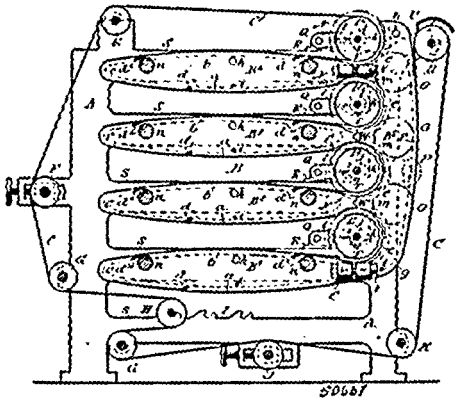


John Coup, Cleveland, Ohio, U.S.A., 22nd November, 1895; 6 years.

Claim.—1st. A car coupler-head having a recess or seat provided with curved and angular walls on the rear end of the head, the angular walls limiting the lateral movement of the head and a solid wall in front of said recess, in combination with a draw-bar provided with a solid head on its front end to engage the curved walls of said recess. 2nd. A car coupler-head having a recess or seat provided with curved and angular walls in the centre of the rear end of the head, the angular walls limiting the lateral movement of the head and a solid wall in front of said recess, in combination with a draw-bar having a solid head in the centre on its front end constructed to engage the curved wall of said recess. 3rd. A car coupler-head having a recess or seat provided with curved and angular walls in the rear end of the solid head, the angular walls limiting the lateral movement of the head and a solid wall in front of said recess, in combination with a draw-bar provided with a solid head constructed to engage the curved wall of said recess and shoulders in rear of the head against which the coupler-head bears. 4th. A car coupler-head having a recess or seat in the rear end of the head provided with curved and angular vertical walls which angular walls limit the lateral movement of the head and a solid wall in front of said recess, in combination with a draw-bar provided with a head having a rounded end and parallel sides and shoulders in rear of the head on the upper and lower sides of the bar. 5th. A car coupler-head having a recess or seat provided with curved and angular walls in its rear end, which angular walls limit the lateral movement of the head, a solid contour face or wall in front of said recess and extending from the guard-arm to or beyond the transverse centre of the head, in combination with a draw-bar having a solid head on its front end, constructed to engage the curved wall of said recess. 6th. A car coupler-head having a recess or seat in its rear end, a solid contour-face or wall in front of said recess and extending from the outer end of the guard-arm to or beyond the transverse centre of the head, and provided with a recess in the knuckle jaw and in the head, in combination with a draw-bar and a hook. 7th. A car coupler-head having a recess or seat in its rear end, a solid contour face or wall in front of said recess and extending from the guard-arm to or beyond the transverse centre of the head and provided with a recess in the knuckle jaw and in the head, and a solid body of metal in rear of said latter recess, in combination with a draw-bar and a hook. 8th. A car coupler-head having a recess or seat provided with curved and angular walls in the rear end, which angular walls limit the lateral movement of the head and a recess in the front end on one side of the transverse centre of the head, and a hook pivoted to the knuckle-jaw of the head and provided with a rearward extension or tongue to swing in the latter recess, in combination with a draw-bar having a solid head on the front end constructed to engage the curved wall of said recess, and a pin to lock the hook. 9th. A car coupler-head having a recess on one side of the transverse centre of the head to receive the tongue of the hook, and a solid body of metal in rear of said recess, in combination with a hook pivoted on the knuckle-jaw with the rear end of the tongue abutting the rear wall of said recess. 10th. A car coupler-head having a recess on one side of the transverse centre of the head, a hook pivoted to the knuckle-jaw of the head and provided with a tongue extending into said recess, a vertical recess in the contour-wall, in combination with a pin adapted to said recess and supported upon said tongue when the hook is unlocked and in position for coupling. 11th. A car coupler-head having a solid contour face or wall extending from the outer end of the solid guard-arm to or beyond the transverse centre of the head and from its upper to its lower side, in combination with a hook. 12th. A car coupler-head having a solid contour-face or wall extending from the outer end of the guard-arm to or beyond the transverse centre of the head and from its upper to its lower side, and provided with a recess in the opposite side of the head to receive the tongue of a hook. 13th. A car coupler-head, a hook pivotally secured to the head and provided with a rearwardly extending tongue, and a vertical recess in the contour-wall of the head, in combination with a pin having an inclined edge to automatically take up wear and lost motion. 14th. A car coupler-head having a recess in the upper surface of the upper lug of the knuckle jaw, and an inclined seat on the inner surface of the lower lug of the jaw, in combination with a pivot-pin connecting the hook to the knuckle jaw, and provided with a transverse pin to rest upon said seat, and said hook secured to said pivot-pin.

No. 50,661. Ironing Machine, etc.

(*Machine à repasser, etc.*)

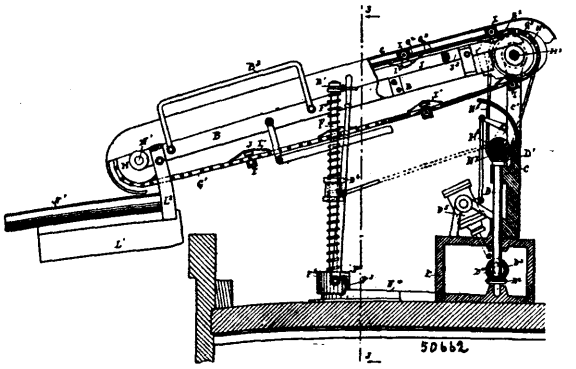


Fred Clow Wendall, Brooklyn, New York, U.S.A., 22nd November, 1895; 6 years.

Claim.—1st. In machines for ironing and similar purposes, an oblong drum having frictional polishing ironing faces on its opposite sides against and across which the goods to be treated are successively passed, and means for pressing the goods against and rubbing them over the ironing faces of said drum successively and in opposite directions, on the different faces, substantially as and for the purpose set forth. 2nd. In machines for ironing and similar purposes, an oblong drum having ironing faces on its opposite sides, and an intervening ironing face on its end connecting said faces on its sides, over which faces the fabric to be treated are successively passed, and means for pressing the goods against and rubbing them over said ironing faces, substantially as and for the purpose set forth. 3rd. In machines for ironing and similar purposes, an oblong drum having long convex ironing faces *a* and *b*, on its opposite sides, and an intermediate rounded end face *c*, connecting said faces *a* and *b*, substantially as and for the purpose set forth. 4th. In machines for ironing and similar purposes, an oblong drum having ironing faces on its opposite sides, in combination with an apron embracing both sides of said drum, a feed roller carrying said apron to the entrance and of one face of said drum, and a transfer roller over which said apron passes at the delivery end of the other face of said drum, whereby the fabric to be treated can be fed on to said apron, and will be drawn by the latter across the one face of the drum and then back across the other face of the drum, substantially as and for the purpose set forth. In machines for ironing and similar purposes, a drum having an ironing face, in combination with an apron for carrying the fabric to be ironed against said face, a yielding transfer roller over which said apron passes at the end of said face, and a concave ironing face fixed relatively to said drum, and opposite said roller, and embracing the fabric while passing thereover on said apron, whereby the fabric is ironed while traversing said roller, and the latter can yield to prevent jamming of the fabric against said curved face, substantially as and for the purposes set forth. 6th. In machines for ironing and similar purposes, a plurality of stationary drums disposed in proximity, and each of said drums having an ironing face on its side adjacent to the ironing face of the next drum, in combination with means for carrying the goods to be ironed in contact with and rubbing them against said faces successively, substantially as and for the purpose set forth. 7th. In machines for ironing and similar purposes, a plurality of oblong drums disposed in proximity, and having ironing faces on the opposite sides in combination with a drum opposite the end of said drums and having a curved ironing face at one side communicating between the adjacent ironing faces of said oblong drums, and an outer ironing face on its opposite side communicating with the opposite ironing face of one of said drums, a transfer roller between said oblong drums within said curved ironing face, and an apron traversing successively said outer ironing face, the ironing face of the drum with which said outer ironing face connects, said transfer roller, and the curved ironing face opposite it and the ironing face of the succeeding drum, substantially as and for the purpose set forth. 8th. In machines for ironing and similar purposes, a plurality of horizontally disposed oblong drums having ironing faces on their outer sides and arranged in proximity, in com-

bination with a vertical drum, curved faces on its inner side communicating respectively between the adjacent ironing faces of the adjacent horizontal drums, and having a substantially vertical outer ironing face communicating with the ironing face of the end drum of said horizontal series, transfer rollers between the adjacent faces of said horizontal drums, a feeding roller opposite the outer face of said vertical drum, a delivery roller beyond the last drum of the horizontal series, and an apron passing over said feeding roller and traversing successively the outer face of said vertical drum, the opposite face of the horizontal drum in connection therewith, the curved ironing face between said drum and that adjacent to it, the transfer roller between said drums, the corresponding ironing faces and rollers of the succeeding drums, and said delivery roller, whereby said apron traverses the opposite sides of said drums, substantially as and for the purpose set forth. 9th. In machines for ironing and similar purposes, a sinuous frictional polishing ironing surface, in combination with an endless apron for carrying the goods to be ironed in contact with said surface, traversing the latter throughout all its sinuosity, substantially as and for the purpose set forth. 10th. In machines for ironing and similar purposes, the drums B^1 and B^2, having opposite ironing faces, the curved ironing face *e*, communicating between said faces and having the recess *m* at top, in combination with a transfer roller yieldingly mounted within said face *e*, opposite said recess *m*, and an apron traversing said ironing faces and passing over said roller, whereby when the latter yields it can move into said recess *m*, substantially as and for the purpose set forth. 11th. In machines for ironing and similar purposes, the drums B^1, B^2, B^3 and B^4, having ironing faces on their opposite sides, in combination with curved ironing faces *e*, communicating between the adjacent faces of adjacent drums, transfer rollers L^1, L^2, L^3, between said drums respectively, gears N, on said transfer rollers, idlers O, meshing with said gears, and drive-pinion P, driving one of said idlers, and an apron traversing the respective ironing faces and each of said transfer rollers, whereby the driving power is applied to said apron between each of said drums, substantially as and for the purpose set forth.

No. 50,662. Device for Lifting Fishing Nets and Lines. (*Appareil pour soulever les rets et lignes.*)

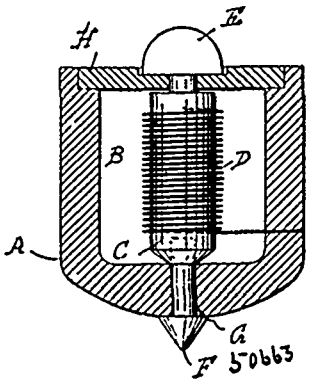


Ralph Connable and Walter M. Connable, both of Peloskey, Michigan, U.S.A., 22nd November, 1895; 6 years.

Claim.—1st. An apparatus for lifting nets and lines, comprising an endless carrier and gripping devices carried by the carrier, said gripping devices being normally closed and adapted to be opened by the stress of the nets and to automatically grip the net when opened thereby, substantially as described. 2nd. An apparatus for lifting nets and lines, comprising an endless carrier, gripping devices carried by the carrier, said gripping devices being normally closed and adapted to be opened by the stress of the net and to automatically grip the net when opened thereby, and means for automatically releasing the gripping device from the net, substantially as described. 3rd. An apparatus for lifting nets and lines, by combination of an endless carrier, clamping jaws carried by the endless carrier from the point where they are clamped upon the net to the point where the free end of the net is released, by a continuous forward motion, and deposited, substantially as described. 4th. In an apparatus for lifting nets and lines, the combination of a plurality of jaws, an endless carrier for the jaws, suitable mechanism for clamping said jaws upon nets or lines as the same is drawn from the water, and suitable mechanism for releasing the grip of the said jaws at a point where the free end of the net is discharged, substantially as described. 5th. In an apparatus for lifting nets and lines, the combination with an endless carrier of gripping jaws on the said carrier, suitable mechanism for automatically closing said gripping device on the net, and carrying it forward with the carrier, means for limiting the opening of said gripping jaws a sufficient distance to receive the net only, and means for disengaging the jaws from the net at the delivery end of the carrier, substantially as described. 6th. An apparatus for lifting nets and lines, provided with gripping devices held on an endless carrier, suitable mechanism for automatically releasing said grip at the point where the free end is discharged or deposited from the carrier, substantially as described. 7th. An apparatus for lifting nets and lines, comprising an endless carrier, and gripping devices carried by the carrier, each of such gripping devices consisting of a series of independent jaws arranged transversely of the carrier whereby the net may be gripped at one or more points and the facility with which it is gripped increased, substantially as described. 8th. In an apparatus for lifting nets and lines, the combination of a plurality of jaws, an endless support for said jaws, suitable mechanism for clamping said jaws upon the nets or lines as the same is drawn from the water, and suitable mechanism for releasing the grip of said jaws at a point where the free end of the net is discharged, substantially as described. 9th. In an apparatus for lifting nets and lines, a plurality of clamping jaws having inclined openings at their outer ends whereby the net may automatically open said jaws, a sufficient width to receive the net, an abutting surface for limiting the opening movement of the jaws, an endless carrier supporting said jaws, and suitable mechanism for clamping said jaws upon the net, substantially as described. 10th. An apparatus for lifting nets and lines, a carrier provided with a plurality of clamping jaws adapted to be opened by the stress of the nets, and a suitable mechanism for clamping the jaws upon the nets, substantially as described. 11th. In an apparatus for lifting nets and lines, a plurality of clamping jaws, a carrier supporting said clamping jaws and conveying the same in contact with the under side of the net, and carrying said net clamped to a point where the free end of the net is discharged, and means for releasing the said net, substantially as described. 12th. In an apparatus for lifting nets and lines, the combination of a plurality of clamping jaws adapted to open sufficiently to receive the net, an abutting surface to limit the opening to the required width, an endless carrier supporting said jaws, clamping devices for automatically closing said jaws, and devices for automatically releasing the same, substantially as described. 13th. In an apparatus for lifting nets and lines, the combination of a plurality of clamping jaws adapted to be opened by the stress of the nets sufficiently to receive the net, an abutting surface to limit the opening to the required width, an endless carrier supporting said jaws and conveying them in contact with the under side of the nets, clamping devices for automatically closing said jaws, and devices for automatically relieving or opening the same, substantially as described. 14th. In an apparatus for lifting nets and lines, the combination of an endless carrier, a series of clamping jaws supported by and travelling with said carrier, mechanism for clamping the net between said jaws as it is drawn from the water and conveying the same to the opposite side of the carrier, and automatic mechanism for releasing the free end of the net from the said jaws, substantially as described. 15th. In an apparatus for lifting nets and lines, the combination of an endless carrier, a series of clamping jaws supported by and travelling with said carrier, mechanism for clamping the net between said jaws as it is drawn from the water, and conveying the same to the opposite side of the carrier where the free end of the net is released from said jaws automatically, substantially as described. 16th. An apparatus for lifting nets and lines, comprising a carrier frame, an endless carrier travelling in the frame, gripping devices secured on the said carrier and each comprising a plurality of jaws held loosely on a support, and an automatically controlled compressing device for closing said jaws to clamp the net or line between adjacent jaws, substantially as described. 16th. An apparatus for lifting nets and lines, comprising a pivotally and yieldingly mounted support or frame adapted to swing sidewise, an endless carrier supported by said frame, gripping devices held on the said carrier, and a guiding device near the receiving end of the said frame, to guide the lines and nets on to the said carrier and the said gripping jaws, substantially as shown and described. 18th. In an apparatus for lifting nets and lines, a plurality of suitably supported clamping jaws, one jaw provided with a groove or depression, and its corresponding jaw provided with a rib or projection to fit in the depression in its corresponding jaw for the purpose of more securely grasping the net, and an endless carrier moving said jaws from the point where the net is automatically clasped or gripped to the point where it is automatically loosened, substantially as described. 19th. In an apparatus for lifting nets and lines, an endless carrier and a plurality of clamping jaws supported on said endless carrier, each set of clamping jaws consisting of a jaw provided with a groove on its face that stands at an acute angle with the line or nets as they are drawn from the water, and its corresponding jaw provided with a rib adapted to engage with the groove on its corresponding jaw for the purpose of receiving and securely clamping the net and giving to the net a continuous forward motion from the point where the said net is grasped by the jaws to where the free end is released, substantially as described. 20th. An apparatus for lifting nets and lines, provided with a carrier frame, an endless travelling carrier mounted in the frame, gripping devices held on the said carrier and placed suitable distances apart, each gripping device comprising a transversely slidable rod, jaws held loosely on the said rod, a wheel journalled on the said rod, and rails held on the said frame and adapted to be engaged by said wheel, to impart a transverse shifting motion to the said rod, substantially as shown. 21st. An apparatus for lifting nets and lines, comprising a frame, carrier chains mounted to travel in the said chains, slats supported by the said chains, a bolt attached to and resting on the said slats, transversely extending bars attached to the said bolt and connected with the said chains, rods fitted to slide in the said bars, clamping jaws held looosely on each of the

said rods, a fixed shoulder or disc held on the said rod, a stud secured on the said rod and carrying a wheel, and rails or springs combined and adapted to be alternately engaged by the said wheel, to impart a transverse shifting motion to the said rod, to loosen or open and close the said jaws for clamping the net or line, substantially as shown. 22nd. An apparatus for lifting nets and lines, comprising a frame, carrier chains mounted to travel in the said frame, slats supported by the said chains, a belt attached to or resting on the said slats, transversely extending bars attached to the said belt and connected with the said chains, rods fitted to slide in the said bars, clamping jaws held loosely on each of the said rods, a fitted disc or shoulder held on the said rod, a stud secured on the said rod and carrying a wheel, rails or springs combined, adapted to be alternately engaged by the said wheel to impart a transverse shifting motion to the said rod and loosen or open and close the said jaws for clamping the net or line, so arranged as to prevent a lateral shifting of the carrier and chains, a second set of wheels held on the said bars, and a second set of rails or a spring adapted to be engaged by the said wheels, substantially as shown.

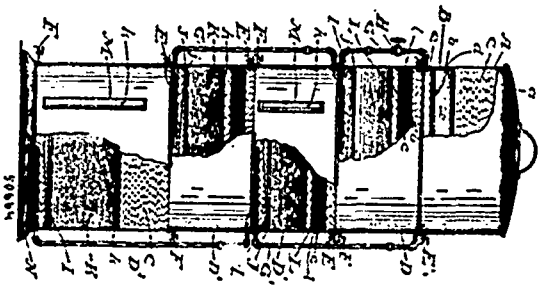
No. 50,663. Toy Spinning Top. (*Toupie.*)



Richard Bowden Waters, 28 Hanlon Street, Deptford, England, 22nd November, 1895; 6 years.

Claim.—1st. In combination with toy spinning tops, the drum C, and spring D, or equivalent arranged in the manner and for the purposes as herein described and as illustrated in my drawings. 2nd. In toy spinning tops, the drum C, spring D, and thumb-piece E, all combined and arranged for the purposes as herein fully explained and as illustrated in my drawings.

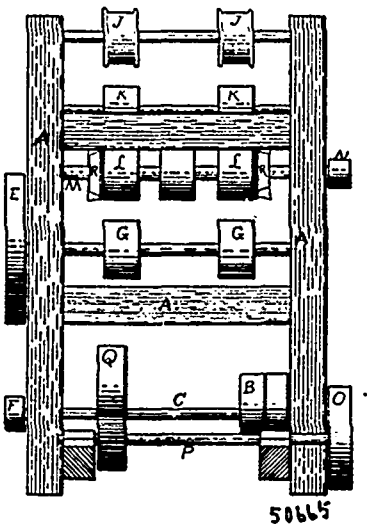
No. 50,664. Oil Filter. (*Filtre.*)



Allan Thomas Morrow, Hamilton, Ontario, Canada, 22nd November, 1895; 6 years.

Claim. 1st. In an oil filter, an unfiltered oil reservoir in combination with a filtering chamber on which the unfiltered oil reservoir is placed, the filtering chamber being provided with a perforated false bottom and a filter, and adapted to contain both oil and water, an oil pipe for conducting the unfiltered oil from the unfiltered oil reservoir to the bottom of the filtering chamber so that the oil after passing through the perforated false bottom may rise through the water to the filter in globules or small particles, and means for drawing off the oil from the top of the filtering chamber above the filter, substantially as described and specified. 2nd. In an oil filter an unfiltered oil reservoir provided with a filter in combination with a series of filtering chambers superimposed on each other, each provided with a perforated false bottom and a filter, and adapted to contain both oil and water, an oil pipe for conducting the unfiltered oil from the unfiltered oil reservoir to the bottom of the filtering chamber immediately subjacent, and an oil pipe for conducting the oil from the upper part of each filtering chamber above the filter to the lower part of the next subjacent filtering chamber below its perforated false bottom, cocks to withdraw the oil, and means for regulating the flow of the unfiltered oil, substantially as described and for the purpose specified. 3rd. In an oil filter, the combination with the filtering chamber D, of the perforated flaring false bottom I, the packing ring J, packing *j*, the filter L, provided with animal charcoal *l*, absorbent cotton *c* and perforated top and bottom *b*, the ledges *c*, and inlets and outlets for the water and the oil, substantially as described, and for the purpose specified. 4th. In an oil filter, the combination with the unfiltered oil reservoir A, of the filter B, provided with sawdust *d*, absorbent cotton *c*, and perforated top and bottom *b*, the ledge *c*, and oil pipe G, provided with regulating valve H, and the oil tap E, substantially as described and for the purpose specified. 5th. In an oil filter, the combination with the unfiltered oil reservoir A, of the sawdust filter B, the oil pipe G, regulating valve H, the filtering chamber D, the perforated false bottom I, the charcoal filter L, the oil tap E, water tap F, and the oil pipe G^1, substantially as described and for the purpose specified. 6th. In an oil filter, the combination with the unfiltered oil reservoir A, of the sawdust filter B, the filtering chambers D, D^1, D^{11}, D^{111}, the oil taps E, the water taps F, the oil pipe G, with its discharge end centrally located at the bottom of the filtering chamber D, below the false bottom I, regulating valve H, oil pipes G^1, with their discharge ends centrally located at the bottom of the filtering chamber, below the false bottoms I, perforated false bottoms I, and charcoal filters L, substantially as described and for the purpose specified. 7th. In an oil filter, the combination with the unfiltered oil reservoir A, of the sawdust filter B, ledges *c*, the filtering chambers D, D^1, D^{11}, D^{111}, the oil taps E, the water taps F, the oil pipe G, regulating valve H, oil pipes G^1, perforated false bottoms I, packing rings J, packing *j*, charcoal filters L, and gauges M, substantially as described and for the purpose specified.

No. 50,665. Machine for Pointing Butcher's Skewers.
(*Machine pour aiguiser les brochettes des bouchers.*)



Frederick Harrison, Owen Sound, Ontario, Canada, 23rd November, 1895; 6 years.

Claim.—1st. The planes L, L, with solid convex heads adjustable to suit different lengths of blanks, substantially as set forth. 2nd. The combination with the bevelled head A, of the knives C, C, so bent and bevelled laterally as to sheer from heel to point, substantially as set forth, 3rd. The combination of the pulleys G, G, J, J, K, K, with the belts H, H, substantially as set forth. 4th. The combination of the belts H, H, with the planes L, L, substantially as set forth. 5th. The combination of the cutters R, R, the planes L, L, the pulleys G, G, J, J, K, K, belts H, H, the roller S, and hopper W, substantially as set forth.

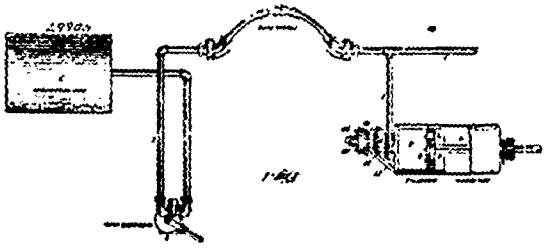
No. 50,666. Medicinal Compound.
(*Préparation médicale pour le rhumatisme.*)

Edmond Edouard Delisle, Montréal, Québec, Canada, 25 novembre, 1895; 6 ans.

Résumé.—Un traitement nouveau contre les rhumatismes et fièvres dans lequel sont appliqués en premier lieu, des gaz et vapeurs provenant de la vaporisation d'une poudre composée de soufre, de farine d'avoine, de serpentaire canadien, de poivre, de cannelle et d'acide citrique, et en deuxième lieu un liniment composé d'eau, de serpentaire canadien, d'alcool, de teinture d'écorce de pruche, d'acool camphré, d'ammoniaque, d'huile de graine de coton, d'essence de menthe poivrée et d'huile calsamique, le tout dans les proportions ci-dessus décrites et pour les fins susmentionnées.

No. 30,667. Air-Brake Valve Mechanism.

(Mécanisme de soupape pour freins à air)

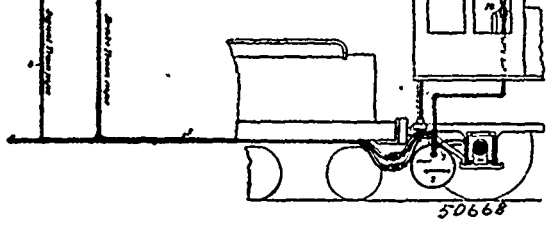


Charles Goodwin Emery, New York, assignee of Edward G. Shortt, Carthage, both in the State of New York, U.S.A., 26th November, 1895; 6 years.

Claim.—1st. In combination in an equilibrio air-brake mechanism and with the brake cylinder and train pipe thereof, a valve controlling an exhaust passage from the train pipe, and also controlling an exhaust passage from the cylinder and operable by a variation of train pipe pressure to open said passages. 2nd. In combination in an equilibrio air-brake mechanism and with the brake cylinder and train pipe thereof, a valve controlling an exhaust passage from the train pipe and an exhaust passage from the cylinder, and a valve operating piston actuated by variations of train pipe pressure for operating said valve. 3rd. In combination in an equilibrio air-brake mechanism and with the train pipe and cylinder thereof, a valve controlling an exhaust passage from the train pipe and an exhaust passage from the brake cylinder, a piston for operating said valve and normally having train pipe air on one side thereof and cylinder air on the other side thereof, whereby upon train pipe reduction of pressure the valve will be operated to conjointly exhaust the train pipe and the brake cylinder. 4th. In combination in an equilibrio air-brake mechanism and with the train pipe and cylinder thereof, an exhaust passage from the train pipe, an exhaust passage from the cylinder of smaller size than that from the train pipe, and a valve mechanism controlling said passages and operable by reduction of train pipe pressure to open the same to exhaust. 5th. In combination in an equilibrio air-brake mechanism, and with the brake cylinder and train pipe thereof, an exhaust passage from the train pipe and a separate exhaust passage from the cylinder, and a valve controlling said passages and acting to direct the train pipe and the cylinder exhaust jets separably to the atmosphere. 6th. In combination, with a brake cylinder and train pipe, an exhaust passage from the train pipe and one from the cylinder, a valve controlling said passages and containing a train pipe exhaust passage and a cylinder exhaust passage of smaller size than the train pipe passage and operable by variation of train pipe pressure to exhaust the train pipe and the cylinder. 7th. In combination, with an air-brake cylinder and train pipe, an exhaust passage from the train pipe and an exhaust passage from the cylinder, a slide valve controlling said exhaust passages, a piston for actuating said valve and operable under variations of train pipe pressure, and a spring supported abutment for holding said piston in running position and against movement by increase of feed flow. 8th. In combination in an equilibrio air-brake mechanism and with the train pipe auxiliary reservoir and cylinder thereof, a valve controlling an exhaust port from the cylinder, a separate reservoir valve controlling a passage from the reservoir to the cylinder, and valve operating mechanism normally held in running position by said reservoir valve and actuated by reduced train pipe pressure to open said exhaust valve and by increase train pipe pressure to open said reservoir valve. 9th. In combination in an equilibrio air-brake mechanism and with the train pipe auxiliary reservoir and brake cylinder thereof, a valve controlling an exhaust port from the cylinder, a valve controlling a passage from the reservoir to the train pipe and to the cylinder, and valve operating mechanism actuated by a reduction of train pipe pressure to open said exhaust valve, and operated by an increase of train pipe pressure to open said reservoir valve to effect equalization of reservoir pressure with train pipe and cylinder pressures. 10th. In combination in an equilibrio air-brake mechanism, and with the train pipe auxiliary reservoir and brake cylinder thereof, a valve controlling an exhaust port from the cylinder, a valve controlling a passage from the reservoir to the train pipe, and a valve operating mechanism actuated by a lowering of train pipe pressure to open said exhaust valve and by an increase of train pressure to open said reservoir valve to effect equalization of reservoir pressure with train pipe pressure. 11th. In combination in an equilibrio air-brake mechanism, a brake piston and cylinder connected on one side of the piston with an auxiliary reservoir and on the other side thereof with a train pipe, a reservoir charging passage from one side to the other of said piston and valves to retain reservoir air, an equalizing passage from the train pipe to the reservoir, a valve acting to normally hold said passage closed against reservoir pressure, and a valve acting to hold the passage closed against train pipe pressure. 12th. In combination in an equilibrium air-brake mechanism and with the train pipe, brake cylinder and auxiliary reservoir thereof, a valved passage from the cylinder to the reservoir, a valved passage from the reservoir to the train pipe, and mechanism operating by an increase in train pipe pressure to equalize air pressures through the cylinder when a reservoir pressure lower than train pipe pressure obtains and acting to effect through said reservoir passage equalization of air pressures when a train pipe pressure lower than reservoir pressure exists. 13th. In combination with the brake cylinder and train pipe of an equilibrio air-brake system, a feed valve controlling a passage from the train pipe to the cylinder and acting to retain cylinder pressure, a cylinder exhaust valve and mechanism for operating said valve which is oppositely acted on by train pipe and cylinder pressure, whereby a reduction of train pipe pressure will close said feed valve and open said exhaust valve, and the consequent reduction of cylinder pressure will cause the exhaust valve to close, for the purpose of producing a graduation application of the brakes. 14th. In combination in an equilibrio air-brake mechanism and with the brake cylinder, auxiliary reservoir and train pipe thereof, a valve acting to control an exhaust port from the cylinder, a valve controlled passage from the reservoir to the train pipe, a valve operating mechanism acting to open the said cylinder valve under the action of a reduction of train pipe pressure and to open the valve of the reservoir passage by an increase of train pipe pressure, whereby a partial application of the brakes is produced and upon release movement the reservoir air is equalized with that of the train pipe and cylinder. 15th. In combination with the brake cylinder, auxiliary reservoir, and train pipe of an equilibrio air brake mechanism, a valve controlling an exhaust port from the train pipe and a valve controlling an exhaust port from the cylinder, a passage from the reservoir to the train pipe and a spring supported valve controlling such passage, and valve operating mechanism held in normal position against said reservoir passage valve and acting upon decrease of train pipe pressure to open said cylinder or said train pipe valve and upon increase of train pipe pressure to open said reservoir passage valve. 16th. In combination in an equilibrio air brake mechanism and with the train pipe brake cylinder and auxiliary reservoir thereof, a passage between said reservoir and the train pipe, a valve controlling said passage and operated upon by an increase of train pipe pressure to put the train pipe and reservoir to open communication for the purpose of recharging the cylinder, and a check valve located in said passage and acting to prevent a train pipe pressure greater than reservoir pressure flowing into said reservoir. 17th. In combination in an equilibrio air brake mechanism and with the train pipe cylinder and auxiliary reservoir thereof, a valved passage from the cylinder to the reservoir whereby the latter is charged from the former, a passage from the reservoir to the train pipe and a valve and valve-operating mechanism controlling the same and operable under train pipe pressure to put the reservoir to open communication with the train pipe and through the same with the cylinder. 18th. In combination with the brake cylinder and train pipe of an equilibrio air-brake mechanism, a brake cylinder exhaust valve acting in running position to separate the train pipe from the cylinder and provided with a feed passage having a valve acting when in open position to control the operative side of the passage and to hold the same closed against cylinder pressure, a valve operating mechanism oppositely acted upon by variations between train-pipe and cylinder air pressure, whereby to effect a partial or graduated exhaust from the cylinder. 19th. In combination in an equilibrio air-brake mechanism, and with the brake cylinder and train pipe thereof, a graduation valve controlling an exhaust port from the cylinder, an emergency valve controlling an exhaust port from the cylinder and one from the train pipe, and valve operating mechanism acting under different train pipe reductions of pressure to move the graduation valve to exhaust the cylinder and to move the emergency valve to exhaust the train pipe and cylinder. 20th. In combination in an equilibrio air-brake mechanism, and with the brake cylinder and train pipe thereof, a graduation valve controlling an exhaust port from the cylinder, an emergency valve controlling an exhaust port from the cylinder and one from the train pipe, and valve operating mechanism oppositely acted upon by train pipe and cylinder air and moved by different train pipe reductions of pressure to open the cylinder to graduate exhaust or to open the train pipe and cylinder to emergency exhaust. 21st. In combination in an equilibrio air-brake mechanism and with the brake cylinder and train pipe thereof, an emergency valve controlling an exhaust port from the cylinder and one from the train pipe, and a graduation valve seated on and having movement relatively to said emergency valve and controlling a graduation passage from the cylinder, and valve operating mechanism oppositely acted on by train pipe and cylinder pressure, and moved by a train pipe reduction to open the cylinder to graduate exhaust, and by a greater reduction to open the train pipe and cylinder to emergency exhaust. 22nd. In combination with an equilibrio air-brake mechanism and with the brake cylinder and train pipe thereof, an emergency valve controlling an exhaust port from the cylinder and one from the train pipe, and a graduation valve movably mounted thereon and controlling the graduation exhaust passage from the cylinder, and a movable abutment connected to said graduation valve and for independently operating said valves, the abutment normally having cylinder pressure upon one of its faces and train pressure upon the other of its faces. 23rd. In combination with a brake cylinder and train pipe of an equilibrio air-brake mechanism, an emergency valve controlling an exhaust port from the train pipe and one from the cylinder, a graduation valve controlling a gradua-

tion passage from the cylinder, valve operating mechanism connected to the graduation valve and through the same to the emergency valve, and means whereby the graduation valve is first moved to graduation exhaust position, and then both valves are moved to emergency position, and upon closing movement of the said valves the graduation valve engages the emergency valve and moves the same to closed position. 24th. In combination with the brake cylinder and train pipe of an equilibrio air-brake mechanism, a valve acting to control exhaust from the train pipe, a valve acting to control exhaust from the cylinder, a valve operating mechanism connected with and for operating said valves, and a spring support for holding the said mechanism and the said valves in normal or running position. 25th. In combination with the brake cylinder, auxiliary reservoir and train pipe of an equilibrio air-brake mechanism, a graduation valve controlling an exhaust port from the cylinder an emergency valve controlling exhaust ports from the cylinder, and train pipe, valve operating mechanism connected to and for operating said valves, a passage from the auxiliary reservoir to the train pipe controlled by a spring seated valve, which also acts as a support to hold the said abutment and the said valves in normal or running position. 26th. In combination with the brake cylinder and train pipe of an equilibrio air-brake mechanism, an emergency valve movable to first put the train pipe to exhaust and then to put the cylinder to exhaust through the train pipe space and the train pipe exhaust port, and mechanism acting to operate said valve by variation between train pipe and cylinder pressures normally maintained upon its opposite faces. 27th. In combination with the brake cylinder and train pipe of an equilibrio air-brake mechanism, a valve movable to put the train pipe and then the cylinder to full exhaust, a valve actuating mechanism operated by a variation of air pressures upon its opposite sides, and a vent port from the cylinder normally controlled by said valve and acting to prevent the accumulation of air pressure in the cylinder space during the closing movement of the valve. 28th. In combination with the brake cylinder and train pipe of an equilibrio air-brake mechanism, a valve movable to put the train pipe and cylinder to exhaust, a second or graduation valve movable to put the cylinder to exhaust through the other said valve, an exhaust passage from the cylinder controlled by said valves whereby accumulation of air pressure in the cylinder space upon closure of the valves is prevented, and mechanism for operating the said valves under variation of train pipe pressure. 29th. In combination, with the brake cylinder and train pipe of an equilibrio air-brake mechanism, a partition closing communication between the train pipe and cylinder, a feed passage piercing said partition, and a spring valve located on the cylinder side of the partition and acting, when in open position, to control the operative size of the passage and to close said passage upon a reduction of train pipe pressure below cylinder pressure. 30th. In combination, with the brake cylinder and train pipe of an equilibrio air-brake mechanism, a partition closing communication between the train pipe and cylinder, a feed passage piercing said partition, and an elastic plate or tongue valve acting in open position to control the operative size of the passage and acting to close said passage against the escape of cylinder pressure. 31st. In combination in an equilibrio air-brake mechanism and with the brake cylinder and train pipe thereof, valve mechanism for exhausting the train pipe and cylinder, a piston operated upon its opposite faces by the cylinder and train pipe pressures, a passage from the train pipe to the cylinder and a valve independent of the said piston controlling the same, whereby upon the train pipe reduction the said passage is closed and cylinder air is prevented from entering the train pipe. 32nd. In combination in an equilibrio air-brake mechanism and with the brake cylinder and train pipe thereof, a combined recharging and feeding passage between the cylinder and train pipe, and a spring valve controlling said passage and acting in open position to vary the operative size thereof, whereby for the purposes of feed, a small spring-regulated passage is obtained, and, for the purposes of recharging, a relatively larger spring-controlled charging passage is obtained. 33rd. In combination in an equilibrio air-brake mechanism and with the brake cylinder and train pipe thereof, an emergency and a graduation valve independently acting to exhaust the train pipe or cylinder and a movable abutment normally having train pipe pressure upon one face and cylinder pressure upon the other face thereof, charge passages through said valves from the train pipe to the cylinder and located relatively to each other so that in running position the full carrying capacity of the passages is limited to a size suitable to effect the ordinary or running feed, and also located so that upon suitable movement of the said abutment, the passages will be opened to their full conjoint capacity. 34th. In combination in an equilibrio air-brake mechanism and with the brake cylinder and train pipe thereof, an emergency and graduation valve independently acting, one to exhaust the train pipe and one to exhaust the cylinder, and a valve-supporting abutment normally having train pipe pressure upon one face cylinder pressure upon the other face thereof, charge passages through said valves from the train pipe to the cylinder, and located relatively to each other so that in running position the full carrying capacity of the passages is limited to a size suitable to effect the ordinary or running feed, and also located so that upon suitable movement of the said abutment, the passages will be opened to full capacity, and a spring valve controlling the operative size of the passage through the said graduation valve and acting under cylinder pressure to close. 35th. In combination with the brake cylinder and train pipe of an equilibrio air-brake mechanism, a graduation and an emergency valve closing communication between the train pipe and cylinder, a passage piercing the said valves and controlled as to its operative size by the relative movement of the valves, and an elastic plate or tongue located upon the cylinder side of said valves and acting to control the operative size of the said passage, whereby the size of the said passage for the purposes of feed or for the purposes of charging is automatically regulated by said valve. 36th. In combination in an equilibrio air-brake mechanism and with the train pipe and brake cylinder thereof, a valve controlling an exhaust port from the cylinder and one controlling an exhaust port from the train pipe, said valves being located between the train pipe and cylinder spaces and each provided with a charging passage located to communicate with that of the other, and means acting under train pipe variation of pressure to move said valves relatively to effect the operative size of said passages. 37th. In combination with the brake cylinder, reservoir and train pipe of an equilibrio air-brake mechanism, a passage from the reservoir to the train pipe containing a valve acting normally to hold reservoir air and operable to open the passage to the train pipe, a cylinder exhaust valve acting in running position as a partition separating the train pipe and cylinder and provided with a feed passage having a valve acting to control the operative size of the passage and to close under cylinder pressure, a valve operating mechanism oppositely acted upon by maintained train pipe and cylinder pressure and movable under train pipe variation of pressure to open the exhaust valve and effect a partial or graduation exhaust from the cylinder and upon closing to open the reservoir valve and effect equalization of reservoir and train pipe.

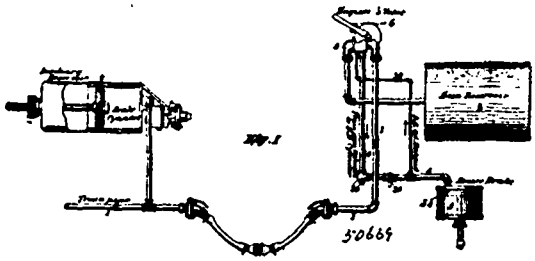
No. 50,668. Signalling Mechanism for Railway Trains. (*Mécanisme de signalement pour trains de chemin de fer.*)



Charles Goodwin Emery, New York, assignee of Edward G. Shortt, Carthage, both in the State of New York, U.S.A., 26th November, 1895; 6 years.

Claim.—1st. In combination in a fluid signal mechanism for railway trains, a signal train pipe and air pressure mechanism connected thereto and acting to maintain therein an artificial standard air-pressure, a signal mechanism connected to said pipe and actuated by an increase to the pressure of the signal pipe above its normal pressure, a chamber or reservoir normally containing air under pressure greater than that in the signal pipe, and a valve mechanism connecting said chamber and signal pipe and operable to increase the signal pipe pressure for the purpose of actuating said signal mechanism, substantially as set forth. 2nd. In combination in a fluid signal mechanism for railway trains, a signal pipe air storage reservoir and an automatic valve acting to supply said pipe from said reservoir and to maintain in the pipe a normal air-pressure less than that normally held in the reservoir, a signal mechanism connected to said pipe and actuated by an increase of the signal pipe pressure above its normal pressure, a second train pipe (or air-brake train pipe) connected to said reservoir and normally containing air under pressure greater than that in the signal pipe, and mechanism acting to openly connect the two pipes whereby to increase the signal pipe pressure and actuate said signal mechanism, substantially as set forth. 3rd. In combination with the main reservoir, train-pipe and auxiliary reservoir of an air-brake system, a signal pipe and valve mechanism connecting the same to said main reservoir and acting to maintain in the signal pipe a pressure less than that in the main reservoir, signal mechanism connected with the signal pipe and operable upon and by an increase of signal pipe pressure above its normal pressure, and valve connections between the signal pipe and the auxiliary reservoir whereby air can be drawn from the auxiliary reservoir for the purpose of adding to the signal pipe pressure and actuating said signal mechanism, substantially as set forth. 4th. In combination in a fluid signal mechanism for railway trains and with the signal pipe thereof, mechanism for maintaining a certain stored or normal air pressure therein, mechanism for increasing said air pressure, and a differential signal valve controlling an exhaust passage from the signal pipe, whereby when the normal pressure in the signal pipe is increased said valve is operated to effect a signal and reduce the signal pipe pressure to its standard or normal condition.

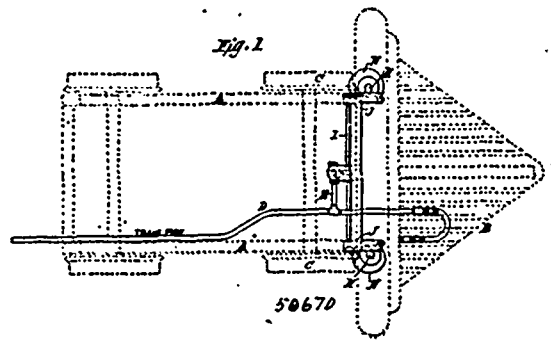
No. 50,669. Air-Brake Mechanism and Engineer's Valve. (*Mécanisme de frein à air et soupape d'ingénieur.*)



Charles Goodwin Emery, New York, assignee of Edward G. Shortt, Carthage, both in the State of New York, U.S.A., 26th November, 1895; 6 years.

Claim.—1st. In combination with an air-brake system mechanism in which the brakes thereof are applied by exhausting from the system air normally held therein under pressure, a supplemental brake cylinder and brake-actuating piston, an exhaust passage connection from said mechanism to said cylinder, and a valve controlling said connection and operable to conduct the air exhausted from said mechanism to said cylinder to effect a braking action of its piston. 2nd. In combination with an air-brake system mechanism in which the brakes thereof are applied by exhausting from the system air normally held under pressure therein, a supplemental brake cylinder and brake-actuating piston, an exhaust passage connection from said mechanism to said cylinder, a valve controlling said connection and operable to conduct the air exhausted from said mechanism to said cylinder to effect a braking action of its piston, and an exhaust passage connection from said cylinder to and controlled by said valve. 3rd. In combination with an air-brake mechanism and with the train pipe and a brake cylinder and piston thereof, a supplemental brake cylinder and piston, an exhaust passage connection from the train pipe to said supplemental cylinder, and a valve controlling said connection and operable to conduct the air exhausted from the train pipe to the supplemental cylinder to effect a brake application action of its piston. 4th. In combination with an air-brake train pipe, a brake cylinder auxiliary reservoir and valve mechanism acted upon by train pipe pressure to control the same, a supplemental brake piston and cylinder, and a valved passage connection from the train pipe to the supplemental cylinder acting to conduct the train pipe exhaust air to said supplemental cylinder whereby to actuate its brake piston. 5th. In combination in an air-brake mechanism and with the train pipe and engineer's valve thereof, a brake piston and cylinder, and a passage connection from the train pipe exhaust port of the engineer's valve to said cylinder, whereby train pipe exhaust air is conveyed to said cylinder and to actuate its brake piston. 6th. In combination in an air brake mechanism and with the train pipe and engineer's valve thereof, a brake piston and cylinder, a passage connection from the train pipe exhaust port of the engineer's valve to said cylinder, whereby train pipe exhaust air is conveyed to said cylinder and to actuate its brake piston, and a retaining valve located in said connection and acting to prevent flow of air from the cylinder to the train pipe. 7th. In combination in an air-brake mechanism and with the train pipe and engineer's valve of the same, a brake piston and cylinder having a passage connection to the train pipe exhaust port of said valve, and the said valve having ports and passages acting upon suitable movement of the valve to convey the train pipe exhaust air to said cylinder and to exhaust the same therefrom. 8th. In combination in an engineer's valve mechanism, a valve controlling an exhaust port from the train pipe, a piston connected thereto and having a substantially uniform air pressure on one of its faces and normally maintained opposing air pressure on its opposite face, and a hand valve acting upon suitable movement to exhaust the normally maintained air to operate said piston to open said valve. 9th. In combination in an engineer's valve mechanism, a valve controlling the emergency exhaust port from the train pipe and normally held closed by a spring, a piston movable by a variation of pressure on its opposite faces to open said valve, and a hand-operated valve acting upon suitable movement to effect said variation of pressure, substantially as set forth. 10th. In combination in an engineer's valve mechanism, a valve controlling the emergency exhaust port from the train pipe and normally held closed by a spring, a piston for opening said valve, an open passage conveying reservoir air to one side of said piston, and a controllable passage for conveying reservoir air to and exhausting it from the other side of said piston for the purpose of opening said emergency valve, substantially as set forth. 11th. In combination in an engineer's valve mechanism, a valve controlling the emergency exhaust port from the train pipe, a piston for operating said valve and arranged in a chamber openly communicating with the main reservoir on one side of the piston, a passage extending from the reservoir to the said chamber on the other side of said piston, and a valve located in said passage and operable to effect a variation of reservoir pressure on the piston, for the purpose of opening and closing said emergency valve, substantially as set forth. 12th. In combination in an engineer's valve mechanism, a slide valve controlling the emergency exhaust port from the train pipe, a piston attached to and for operating said valve, and arranged in a chamber openly communicating with the main reservoir on one side of said piston, a passage extending from the reservoir to the said chamber on the other side of said piston, and a valve located in said passage and for effecting a variation of reservoir pressure on the piston to operate said emergency valve, and also to put the train pipe to graduate exhaust, substantially as set forth. 13th. In combination in an engineer's air-brake valve mechanism, a casing and a conical or plug valve seated therein, a spring for holding said valve to seat, and a stop bearing against and moving with said valve, and adjustable to control the valve seating action of said spring, for the purpose set forth. 14th. In combination in an engineer's air-brake valve mechanism, a casing and a conical valve seated herein, a spring for holding said valve seated, a stem engaging and for rotating said valve, and a stop carried by said stem and adjustable to limit the valve seating action of said spring, for the purpose set forth.

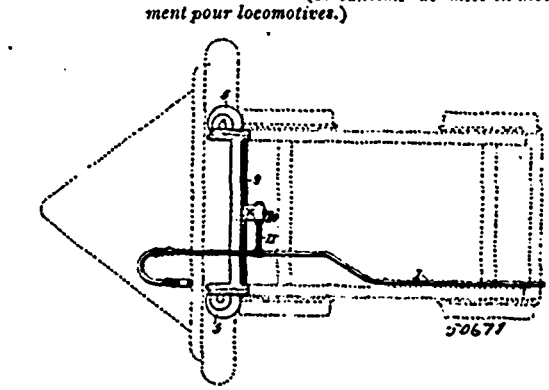
No. 50,670. Air Brake Mechanism.
(*Mécanisme de frein à air.*)



Charles Goodwin Emery, New York, assignee of Edward G. Shortt, Carthage, both in the State of New York, U.S.A., 26th November, 1895; 6 years.

Claim.—1st. A railroad vehicle fluid-brake mechanism provided with a valve arranged to move to set the brakes, and a movable device for holding the valve closed and adapted under the force of an explosion to release said valve. 2nd. In combination, with a railroad car or locomotive fluid-brake mechanism, a valve in said brake mechanism capable of movement to effect the application of the brakes, and mechanism controlling said valve and positioned near a wheel of the car, and adapted to be actuated to release the said valve by the action of an explosion effected by the wheel. 3rd. In combination with a brake train-pipe, a valve normally closing said pipe and operative to effect a brake-application reduction of pressure, valve releasing mechanism consisting of a disc or piston connected with said valve, and a hood or bell enclosing said piston and acting to direct the force of a concussion upon the same. 4th. In combination, the train-pipe provided with the valve F, a cam holding said valve closed, and a disc or plate, as piston M, connected to said cam and adapted to be acted upon by the force of an explosion and to thereby release said valve.

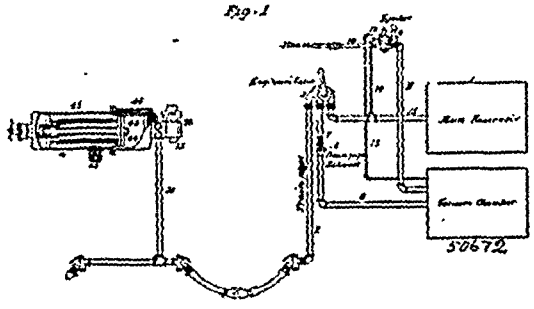
No. 50,671. Throttle Actuating Mechanism for Locomotives. (*Mécanisme de mise en mouvement pour locomotives.*)



Charles Goodwin Emery, New York, assignee of Edward G. Shortt Carthage, both in the State of New York, U.S.A., 26t November, 1895; 6 years.

Claim.—1st. In combination with the throttle lever of a locomotive or the mechanism whereby the valve supplying the cylinders is operated, fluid-pressure apparatus connected with said lever and adapted to operate the same, and mechanism controlling said fluid-pressure apparatus and operating by the force of an explosion to set the same in action. 2nd. In combination with the throttle valve of a locomotive, mechanism located near a wheel of the locomotive and adapted to be brought into action by an explosion effected thereby, and throttle valve mechanism controlled by said explosion mechanism whereby the former is operated by the latter. 3rd. In combination with the throttle valve actuating mechanism of a locomotive, a fluid-pressure apparatus operatively connected thereto, and a torpedo apparatus located adjacent one of the wheels of the locomotive and adapted under the force of an explosion to bring said fluid pressure apparatus into action. 4th. In combination with the throttle lever or valve of a locomotive, a cylinder and piston for operating the same which is connected with a fluid-brake system, a torpedo apparatus also connected with said brake system and adapted under the force of an explosion to bring the same into operation. 5th. In combination, in a mechanism for operating the throttle valve of a locomotive, a lever connected to and for actuating said valve, a fluid-pressure cylinder and piston connected to said lever and for operating said valve through said lever, and connections between the said piston, and the said lever permitting the independent opening and closing of the lever and the throttle valve, but adapted to engage said lever and close the valve by a movement of the said piston.

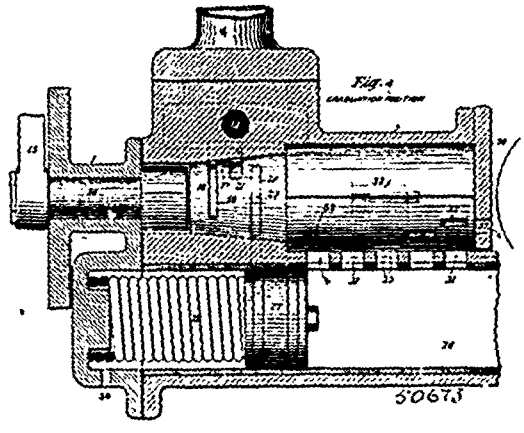
No. 50,672. Method of and Mechanism for Operating Air Brakes. (*Méthode et mécanisme pour actionner les freins à air.*)



Charles Goodwin Emery, New York, assignee of Edward G. Shortt, Carthage, and Joseph Elie Normand, Watertown, all in the State of New York, U.S.A., 26th November, 1895; 6 years.

Claim.—1st. In combination in a fluid brake mechanism and with a brake piston or other brake actuating device thereof, a reservoir normally containing air stored under greater than atmospheric pressure, a chamber normally exhausted of air to below atmospheric pressure, and mechanism acting to operatively apply the reservoir air pressure to said brake actuating device and to operatively connect said chamber to said brake actuating device to effect a brake application action thereof. 2nd. In combination in a fluid brake mechanism and with a brake piston or other brake actuating device, a reservoir normally containing air stored under greater than atmospheric pressure, mechanism for applying said reservoir air upon said piston to produce a brake application action thereof, a chamber normally exhaust of air to below atmospheric pressure, and mechanism acting to operatively connect said chamber to said brake actuating device, whereby to increase the brake application action of the reservoir air. 3rd. In combination in a fluid-brake mechanism, separate chambers are adapted to contain a fluid at greater than atmospheric pressure, a brake-actuating piston or similar partition arranged between and separating said chambers, and a vacuum chamber operating to effect the reduction of fluid pressure in one of said chambers to below atmospheric pressure. 4th. In combination in an air brake mechanism, a piston and cylinder or other brake-actuating mechanism, a reservoir connected to said cylinder at one side of said piston and adapted to contain and exert a stored fluid pressure on one face of the piston, and a vacuum chamber adapted to be put to communication with said cylinder at the other side of the piston and operating to exhaust the pressure fluid from that end of the cylinder to below atmospheric pressure. 5th. In combination in an air brake mechanism, a piston and cylinder or similar brake-actuating mechanism, a reservoir connected to said cylinder at one side of said piston and adapted to contain and exert a stored fluid pressure on one face of the piston, and vacuum producing and maintaining mechanism connected with the train pipe and operating to exhaust the fluid pressure from the brake cylinder to below atmospheric pressure. 6th. In combination in a fluid brake mechanism, separate chambers adapted to contain a fluid at greater than atmospheric pressure and provided with means for charging the same, a brake-actuating piston or partition arranged between and separating said chambers, and a vacuum chamber adapted to be openly connected with one of said vacuum piston chambers and operating to effect the reduction of fluid pressure in such chamber to below atmospheric pressure. 7th. In combination in a fluid brake mechanism, separate chambers adapted to contain a fluid at greater than atmospheric pressure, a brake-actuating piston or partition arranged between and separating said chambers, mechanism for charging said chambers by causing the pressure fluid to pass from one to the other, and a vacuum-maintaining exhaust mechanism operating to effect the reduction of fluid pressure in one of said chambers to below atmospheric pressure. 8th. In combination with an equilibrio brake-piston air brake system, a vacuum-producing mechanism having a vacuum chamber normally exhaust of air to below atmospheric pressure, and means for putting said chamber to communication with the train pipe for the purpose of exhausting the same to below atmospheric pressure. 9th. In combination with an equilibrio brake-piston air brake system, an automatic vacuum-producing mechanism having a vacuum chamber normally exhaust of air to below atmospheric pressure, and means for putting said chamber to communication with the train pipe for the purpose of exhausting the same to below atmospheric pressure. 10th. In combination in a fluid brake mechanism and with an engineer's valve, the train pipe and a brake piston and cylinder, of a local reservoir adapted to apply a stored pressure upon the face of said piston opposite the train pipe space, valve mechanism for locally exhausting train pipe air from said cylinder, a vacuum chamber adapted to be put to communication with the train pipe space, and a valve for closing the local exhaust against atmospheric air. 11th. In combination in an air brake mechanism, a balance brake piston and its cylinder, a local reservoir communicating with one end of said cylinder and a train pipe connected to the other end thereof, an engineer's valve controlling said train pipe, and a vacuum-maintaining and exhausting mechanism adapted to be put to communication with the train-pipe exhaust port of said valve and for exhausting the fluid pressure from the train pipe and the end of the brake cylinder connected thereto. 12th. In combination in a brake mechanism, and with a balance brake piston and cylinder provided with a local reservoir connected to one side thereof and a train pipe and main reservoir connected to the other side thereof, an engineer's valve controlling the train pipe and its connection to the main reservoir, and a vacuum chamber adapted to be put to communication with and for exhausting the train pipe. 13th. In combination with the vacuum chamber, a steam-actuated air-ejector and a valve controlling the admission of steam thereto, a piston balanced or held inoperative between vacuum-chamber pressure and an exterior pressure and adapted upon variations of the vacuum pressure to open said steam valve. 14th. In combination with a vacuum chamber, a steam air-ejector and a valve controlling the admission of steam thereto, and a piston controlled by vacuum-chamber pressure and adapted upon variation of such pressure to act to open the steam valve.

No. 50,673. Air-Brake Graduating Mechanism.
(*Mécanisme gradué pour freins à air.*)



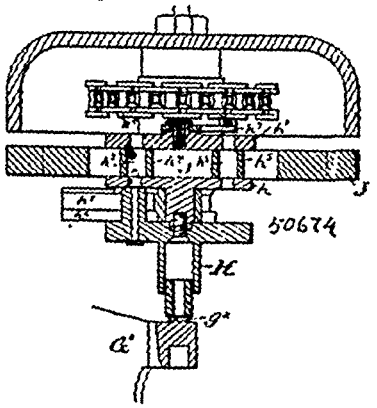
Charles Goodwin Emery, New York, assignee of Edward G. Shortt, Carthage, both in the State of New York, U.S.A., 26th November, 1895; 6 years.

Claim.—1st. In combination with a train pipe, and an exhaust passage therefrom, mechanism adjustable to put said passage at different points along the same to communication with an exhaust port, and an elastically supported abutment movable under train pipe pressure to open said passage to the said port, for the purpose set forth. 2nd. In combination with a train pipe, an exhaust passage therefrom having an outer exhaust port, an elastically supported abutment located in said passage and moving under train pipe pressure to put said passage and port into open communication, and a valve acting independently of said abutment to control said port, for the purpose set forth. 3rd. In combination with a train pipe, an abutment adapted to receive train pipe pressure, a plurality of

exhaust ports from the train pipe controlled by said abutment, means whereby relative movement is effected by train pipe pressure as between said abutment and said ports, and a port closing mechanism for opening one of said ports and closing the others, for the purpose set forth. 4th. In combination with a train pipe exhaust passage, an elastically supported abutment or piston, two or more exhaust ports from the train pipe relative to which said abutment has movement under train pipe pressure to open the train pipe thereto, and a valve mechanism movable to open any one of said ports and to close the others, substantially as set forth. 5th. In combination with a train pipe and an exhaust passage therefrom adapted to be opened and closed as by a hand valve, an abutment in said passage, and a plurality of exhaust ports therefrom controlled by said abutment and by relative movement between the ports and abutment, and means such as a hand valve for opening one of said ports to exhaust the train pipe and for closing the others, substantially as set forth. 6th. In combination with an engineer's valve mechanism, a train pipe exhaust passage connection to and opened and closed by the hand-operated part of said mechanism, a spring sustained piston in said passage movable over and to connect a series of exhaust ports with the passage, said ports being also controlled by said hand operated part, substantially as set forth.

No. 50,674. Machine for Cutting Soles, etc.

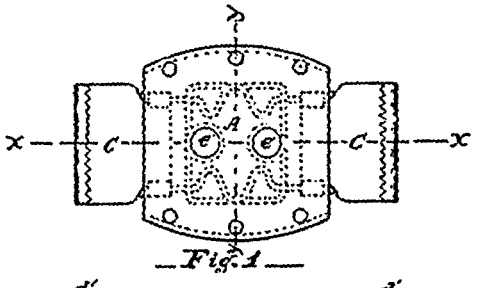
(*Machine pour tailler les semelles etc.*)



The Canadian Rubber Company of Montreal, Montreal, Quebec, Canada, assignee of the W. Inman Sole Cutting Machine Company, Boston, assignee of Allison Morris Stickney, Medford, both in Massachusetts, U.S.A., 26th November, 1895; 6 years.

Claim.—1st. In a machine for cutting forms from sheet material, the combination of the knife carrier, a grooved bar receiving in its groove the spindle of the knife carrier, and means for moving that grooved bar bodily in its proper path, the motion of the grooved bar moving the knife carrier, all substantially as described. 2nd. The combination of the knife carrier, two forms, two bearings, one co-operating with one form, and the other with the other form, a third bearing, and a spring co-operating with the third bearing to keep the two bearings each against its form, substantially as described. 3rd. The combination of the knife block, the knife carrier, a slide, ways for the slide on the knife carrier, and ways for the slide on the knife block crosswise of those on the knife carrier, substantially as described.

No. 50,675. Ice Creeper. (*Grappin.*)

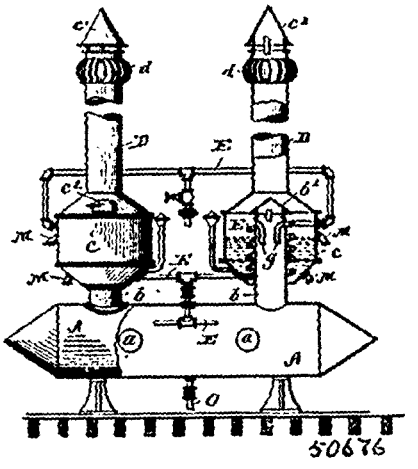


Adelard Emile Charron, Montreal, Quebec, and Louis Charron, Ottawa, Ontario, both in Canada, 26th November, 1895; 6 years.

Claim.—1st. An ice creeper consisting of a top plate having two of its edges turned downward, a bottom plate held against said edges by means of rivets, and provided with downwardly turned spikes, springs secured to studs, riveted into said top and bottom plates, and clips secured to said springs and having their outer portions turned upward, and inward, and provided with serrated edges, substantially as set forth. 2nd. The combination in an ice creeper, of a top and a bottom plate, secured together at their edges, but separated intermediately, with movable clips having raised and serrated edges, and wire springs attached to said clips, and secured to studs fixed in said top and bottom plates, substantially as herein shown and described.

No. 50,676. Disinfecting Apparatus, etc.

(*Appareil à désinfecter, etc.*)



Rudolph Arnhold Rosenblatt and Martin Francis Schmidt, both of New York, State of New York, U.S.A., 26th November, 1895; 6 years.

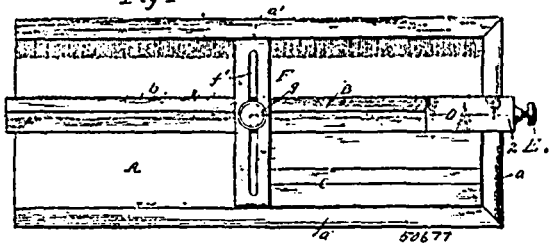
Claim.—1st. A disinfecting and odor-dispelling apparatus, comprising one or more blowers located immediately within the building containing the odor-impregnated air, one or more receptacles of tar secured to the outside of the building and opening into the outer air, flues connecting the said receptacles with the interior of the building, and steam connections from the said building to the said tar vessels, substantially as shown and described. 2nd. A disinfecting and odor-dispelling apparatus, comprising a chamber having a steam jet opening thereinto, flues connecting the steam chamber to one or more receptacles of tar opening into the outer air, steam pipes within the said receptacles to heat the same, pipes connecting the steam chamber with the odor-impregnated air, and one or more blowers located immediately within the building containing the odor-impregnated air, substantially as shown and described. 3rd. A disinfecting and odor-dispelling apparatus, consisting of a cylindrical chamber connecting with the odor-impregnated air, one or more flues extending upward from the said chamber and surrounded by receptacles adapted to receive tar, a steam pipe entering the receptacles and coiled around the flues and opening into the steam chamber, and one or more blowers adapted to force the impure air and the steam through the receptacles, substantially as shown and described. 4th. A disinfecting and odor-dispelling apparatus, consisting of a cylindrical chamber connecting with the odor-impregnated air, one or more flues extending upward from the said chamber and surrounded by receptacles adapted to receive tar, said flues and receptacles being each provided with a raised dome, a steam pipe entering the said receptacles and coiled around the flues, afterward opening into the steam chamber, and one or more blowers adapted to force the impure air through pipes into the steam chamber and through the receptacle, substantially as shown and described. 5th. A disinfecting and odor-dispelling apparatus, consisting of a cylindrical chamber adapted to be suspended from the outer wall of the building, pipes connecting it with the odor-impregnated air, one or more flues extending upward from the said chamber and provided with raised domes and with overflow pipes, tar receptacles surrounding said flues and provided with raised domes and ventilators at the top, a steam pipe entering the said receptacles and coiled around the flues and said steam pipe also extending and opening into the steam chamber, and one or more blowers adapted to force the impure air through pipes into the steam chamber and through the receptacles, substantially as shown and described. 6th. A disinfecting apparatus, comprising a body or chamber having a plurality of flues connected therewith, a pipe or pipes connected therewith and with the building to be de-odorized, receptacles surrounding said flues and adapted to receive tar or similar substances, said flues being provided with ventilating domes within said receptacle and said receptacles being provided with pipes

and ventilating domes, a steam pipe communicating with each of said receptacles and coiled around said flues therein and passing from said receptacles into the said chamber, and a blower connected with pipes which form a communication between the body or chamber and the building, substantially as shown and described. 7th. A disinfecting apparatus, comprising a body or chamber having a plurality of flues connected therewith, a pipe or pipes connected therewith and with the building to be de odorized, receptacles surrounding said flues and adapted to receive tar or similar substance, said flues being provided with ventilating domes within said receptacles and said receptacles being provided with pipes and ventilating domes, a steam pipe communicating with each of said receptacles and coiled around said flues therein and passing from said receptacles into said chamber, and a blower connected with pipes which form a communication between the body or chamber and the building, said receptacles being also provided with discharge pipes located at or near the bottom and at or near the top thereof and also with gages and said flues being provided with overflow pipes which extends downwardly therein and are adapted to discharge the overflow of the tar within the vessel or chamber, substantially as shown and described.

No. 50,677. Printers' Galley Lock.

(*Serrure pour galées d'imprimeurs.*)

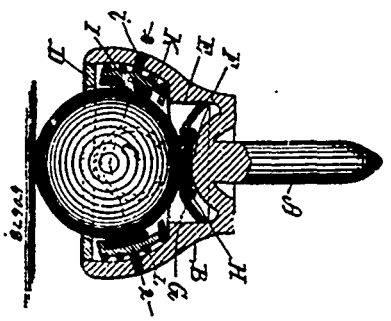
Fig 1



Joshua Thomas Johnston, assignee of William Young, both of Toronto, Ontario, Canada, 27th November, 1895; 6 years.

Claim.—1st. The combination with a galley, of a longitudinal retaining bar adjustable toward and from the sides of the galley, and a transverse retaining bar adjustable toward and from the head of the galley, substantially as set forth. 2nd. The combination with a galley, of a longitudinal retaining bar adjustably secured at one end to the head of the galley, and a transverse retaining bar adjustably secured to the said longitudinal retaining bar, substantially as set forth. 3rd. The combination with a galley, of a longitudinal retaining bar having a longitudinal groove or slot, a transverse retaining bar having a longitudinal slot and a fastening device arranged in the groove or slot of the longitudinal bar and the slot of the transverse bar, substantially as set forth. 4th. The combination with a galley, of a longitudinal retaining bar having an undercut longitudinal groove, a transverse retaining bar having a longitudinal slot and provided at its ends with lips or flanges adapted to engage against the side rims of the galley, and a clamping device passing through the intersecting portions of said slot and groove, substantially as set forth. 5th. The combination with a galley, of a grooved or slotted longitudinal retaining bar provided at one end with a clamping device whereby the same is adjustably secured to the head rim of the galley, a transverse retaining bar having a longitudinal slot intersecting the groove or slot of the longitudinal bar and provided at its ends with feet or flanges and a clamping device passing through the slot or groove of the longitudinal bar and the slot of the transverse bar, substantially as set forth.

No. 50,678. Caster. (*Roulette de meuble.*)

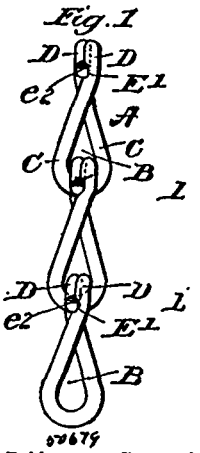


Charles Henry Gaffney, Gloucester, Massachusetts, U.S.A., 27th November, 1895; 6 years.

Claim.—The herein described ball bearing caster consisting of a socket B, having a vertical bearing surface F, and a series of balls contained in a perforated cup arranged above the caster ball C, and having a series of anti-frictionally journalled pockets I, pivoted to the socket B, and containing a series of anti-friction balls K, adapted to bear against the caster ball, substantially as and for the purpose set forth.

No. 50,679. Chain Link. (*Chaînon de chaine*)

Fig. 1

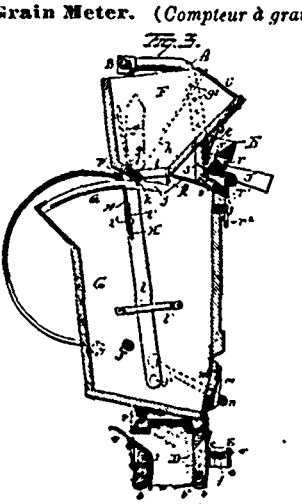


Richard Alvin Breul, Bridgeport, Connecticut, U.S.A., 27th November, 1895; 6 years.

Claim.—1st. The improvement in a chain link, constructed of a single piece of wire, bent at its centre to form a loop, sides, and converging, curved, overlapping ends, the lapped portion containing an unreduced double layer of the wire employed, said improvement consisting in the herein described interlocking teeth E, located on and mutually engaging the inner meeting faces of the above defined overlapping ends, all substantially as and for the purpose set forth. 2nd. As a new article of manufacture, a split chain li.... having overlapping hooked ends, on the inner faces of which are formed by pressure, without removing any of the stock or material, the herein-described interlocking teeth E, and at strengthening ribs E', arranged as specified, substantially as and for the purpose set forth. 3rd. A chain consisting of links each of which is formed of a single piece of wire bent at its centre to form a loop, sides, and converging, curved, overlapping ends forming a double layer of the stock employed, said ends being provided on their adjacent sides with interlocking inclined teeth, the bow of each link running through and enclosing said curved toothed ends and forming them together under any strain on the chain, substantially as set forth. 4th. As an improved article of manufacture, a chain link made from a single piece of wire bent at its centre to form a bow, the curved ends of the wire converging, passing, and overlapping each other, forming a double layer of the wire, and locked together and against the direction of strain by registering inclined teeth extending in line across said curved ends, at right angles to the length of the link-body, substantially as set forth.

No. 50,680. Grain Meter. (*Compteur à grain.*)

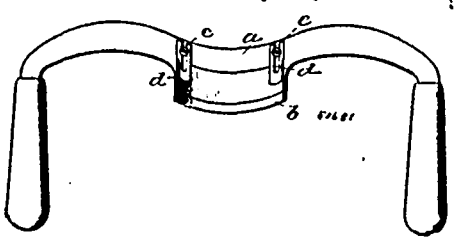
Fig. 3.



Frederick Frank Kaune, Waterville, Minnesota, U.S.A., 27th November, 1895; 6 years.

Claim.—1st. In a grain meter, the combination with a frame, a pivotally supported hopper, and a similarly supported receptacle located beneath the hopper, of latching device located in position to lock the receptacle and be automatically disengaged therefrom by the tilting of the hopper from its normal position, due to the accumulation of the grain in the latter, substantially as set forth. 2nd. In a grain meter, the combination with a tilting hopper, a tilting receptacle located beneath the hopper in position to receive grain from the hopper, and a latch for locking the receptacle and adapted to be released therefrom by the hopper when the latter is tilted from its normal position, of a movable partition located within the receptacle and capable of being adjusted therein to regulate the grain capacity of the receptacle, substantially as set forth. 3rd. In a grain meter, the combination with a pivotally supported receptacle, of a movable partition located therein and adapted to compensate for the difference in the weight of different materials passing through the receptacle, an extension plate having elongated slots, and devices for fastening said extension plate to the partition, substantially as set forth. 4th. In a grain meter, the combination with a pivotally supported hopper, adapted to be turned by the weight of material discharged therein, of a main receptacle eccentrically pivoted beneath said hopper and adapted to receive grain therefrom, of a dividing plate at the top of said receptacle adapted to constitute a temporary bottom for the hopper when said receptacle is discharging material, and means for returning said receptacle to its normal position when its contents shall have been discharged, substantially as set forth. 5th. In a grain meter, the combination with a pivotally supported hopper adapted to be turned by the weight of material discharged therein, of a main receptacle eccentrically pivoted beneath said hopper and adapted to receive grain therefrom, of a dividing plate at the top of said receptacle adapted to constitute a temporary bottom to close said hopper while said receptacle is discharging material, brushes carried by said hopper and adapted to brush material from said dividing plate into the receptacle, and means for returning said receptacle to its normal position when its contents shall have been discharged, substantially as set forth. 6th. In a grain meter, the combination with a hopper adapted to be turned by the weight of the material therein and a lower or main receptacle eccentrically pivoted below said hopper, of a pivoted weighted catch, a device carried by the lower or main receptacle with which said catch engages, arms projecting from said catch at right angles to each other, and a hinged tongue carried by said hopper and adapted to engage one of said arms of the catch when said hopper is tilted to release the catch from the lower or main receptacle, the other arm of said catch being adapted to shove the tongue from engagement with the first mentioned arm before the main receptacle returns to its normal position, substantially as set forth. 7th. In a grain meter, the combination with a hopper adapted to be turned by the weight of the material discharged therein, and a lower or main receptacle eccentrically pivoted below the hopper, of a pivoted weighted catch, a bracket carried by the lower or main receptacle, a roller carried by said bracket and adapted to be engaged by said catch, arms projecting from said catch at right angles to each other, and a hinged tongue carried by said hopper and adapted to engage one of said arms and be engaged by the other to release it from the first mentioned arm before the main or lower receptacle returns to its normal position, substantially as set forth. 8th. In a grain meter, the combination with a frame, of a hopper eccentrically pivoted therein, an adjustable spring for returning said hopper to its normal position, a main receptacle eccentrically pivoted beneath said hopper and an adjustable spring for returning said main receptacle to its normal position after its contacts shall have been discharged, and means for automatically locking and releasing said main receptacle, substantially as set forth. 9th. In a grain meter, the combination with a pivotally supported receptacle having a lateral opening at its bottom, and a hinged gate adapted to normally close said opening, of a yoke pivotally secured at its ends to the side of the receptacle and passing in front of and resting against the gate and adapted to retain said gate normally closed and release it when said yoke engages a part of the apparatus independent of the pivoted receptacle, substantially as set forth. 10th. In a grain meter, the combination with a frame of a receptacle pivotally supported therein, and provided with a projection on the bottom thereof, a spout at the lower end of said frame under the pivoted receptacle, and a shield pivotally connected to said spout and provided with an extension adapted to be engaged by the projection on the receptacle as the latter moves, substantially as set forth. 11th. In a grain meter, the combination with a pivotally supported receptacle, a frame for supporting the same and a spout at the lower end of the frame, of a shield pivotally supported by said spout, an arm projecting from the shield, and an arm projecting from the receptacle and adapted to strike the arm of the shield and cause the latter to partially close the opening in the spout when the receptacle begins to turn to its normal position, substantially as set forth. 12th. In a grain meter, the combination with a main or measuring receptacle adapted to have an oscillatory movement, of a pivoted upper receptacle adapted to be tipped by the weight of the grain therein, means for returning said upper receptacle, a latch bar adapted to engage the main receptacle, and means carried by the upper receptacle for disengaging said latch bar from the main receptacle, said latch bar provided with a device whereby it is released from said disengaging means so that it may again engage the main receptacle before the upper receptacle returns to its normal position, substantially as set forth. 13th. In a grain meter, the combination with a main pivotally supported receptacle, of an upper pivoted hopper, a latch bar adapted to be actuated by the hopper, and a roller located at the upper end of the receptacle, and adapted to insure the easy operation of said bar in locking the receptacle, substantially as set forth. 14th. In a grain meter, the combination with a lower pivoted receptacle and an upper pivoted receptacle adapted to be tipped by the weight of grain therein, of a stop adapted to limit the movement of said upper receptacle, an adjustable spring for returning said upper receptacle, and latch mechanism for releasing the lower receptacle when the upper receptacle is operated, substantially as set forth. 15th. In a grain meter, the combination with a main receptacle, of a pivotally supported hopper located in position to discharge its contents into the receptacle, said hopper eccentrically pivoted so that it is tilted by the weight of the grain backed up therein from the main receptacle to effect a release of the main receptacle and a closure thereby of the hopper, substantially as set forth. 16th. In a grain meter, the combination of a main receptacle and a hopper located above and discharging into the receptacle, both the receptacle and hopper eccentrically pivoted, whereby the flow of grain from the hopper to the receptacle is cut-off by the grain backing up into the hopper sufficiently to cause the hopper to tip, and the receptacle to be released and allowed, substantially as set forth. 17th. In a grain meter, the combination with a pivoted hopper, and a pivoted main receptacle, of a latch for locking one of said parts, said latch constructed to be operated to release the receptacle by a tilting motion of the hopper, substantially as set forth. 18th. In a grain meter, the combination with a main receptacle of a hopper pivoted above the receptacle in position to receive grain and discharge it into the receptacle, means for holding the receptacle in its upright position, and connections between the hopper and said holding means for releasing the receptacle when the hopper is made to tilt, substantially as set forth. 19th. In a grain meter, the combination with an oscillatory receptacle having two compartments, and a door at the lower end of each compartment, of a pivotally supported upper receptacle adapted to be tipped by the weight of grain therein, means for returning said upper receptacle and latch mechanism for the main receptacle adapted to be actuated by the upper receptacle, said latch mechanism being so constructed and arranged as to automatically release the main receptacle and automatically release itself before the return of the upper receptacle, substantially as set forth. 20th. In a grain meter, the combination with a frame, and a main receptacle pivotally mounted therein, of an upper pivoted receptacle adapted to be tipped by the weight of the grain therein, a segment pivoted to said frame, a latch bar pivoted to said segment and adapted to engage the main receptacle, and an arm carried by the upper receptacle and adapted to engage said segment and raise the latch bar and release said segment and latch bar before the upper receptacle returns to its normal position and means for returning said upper receptacle to its normal position, substantially as set forth. 21st. In a grain meter, the combination with a frame and a main receptacle pivotally supported therein, of a segment pivoted to said frame, a lath bar pivoted to the segment and adapted to engage the main receptacle, an arm pivotally connected at one end to the upper receptacle and at the other end to the latch bar, a spring carried by the upper receptacle and bearing on said arm whereby to ensure the engagement of the latch bar with the main receptacle, and an arm carried by the upper receptacle and adapted to engage said segment to release the latch bar from the main receptacle, said arm being so arranged as to release said segment and latch bar before the upper receptacle returns to its normal position, and means for returning said upper receptal to its normal position, substantially as set forth. 22nd. In a grain meter, the combination with a frame, and two receptacles pivotally supported in said frame, one receptacle having a recessed upper edge, of a pivoted segment constructed and adapted to be operated by the upper receptacle when the latter tilts, and a latch bar pivoted to the segment and adapted to engage the recessed upper edge of the lower receptacle, substantially as set forth. 23rd. In a grain meter, the combination with a frame, and two receptacles pivotally supported thereon, of a segment pivoted to the frame, a latch connected with the segment and adapted to engage the lower receptacle and lock it, an arm pivoted to the receptacle for operating the segment and a spring actuated arm connected with one of the receptacles and with the latch, substantially as set forth. 24th. In a grain meter, the combination with a frame, and a main receptacle pivotally supported therein, of an upper pivoted receptacle, a segment pivoted to said frame, a tooth projecting from said segment, a latch bar pivoted to said segment and adapted to engage the main receptacle, and an arm carried by the receptacle and adapted to engae said tooth to raise the latch bar and release it before the upper receptacle assumes its normal position, and means for returning said upper receptacle to its normal position, substantially as set forth. 25th. In a grain meter, the combination with a frame having a pin or projection extending inwardly therefrom, of a receptacle pivotally supported on the frame and capable of slight vertical movement relative thereto, and a brake secured to the receptacle and having an edge curved substantially concentric with the pivot and adapted to turn on the pin or projection on the frame, substantially as set forth.

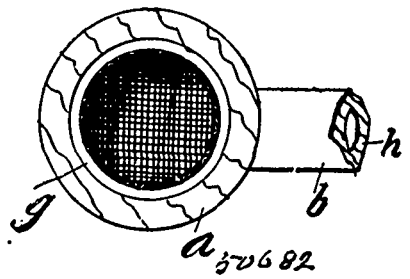
No. 50,681. Instrument for Carving, etc.
(*Outil de sculpteur.*)



Gustav Adolf Kleinknecht, Peter Keltsch and Paul Keltsch, all of Erlangen, Bavaria, Germany, 27th November, 1895; 6 years.

Claim.—An instrument for carving round or for hollowing out flat objects, distinguished by a bow shaped cutting knife, an obliquely rising cutting rest *b*, which is adjustable on the knife *a*, by means of the slits *d*, and screws *c*, so as to alter the cutting angle, substantially as hereinbefore described and shown in the accompanying drawing.

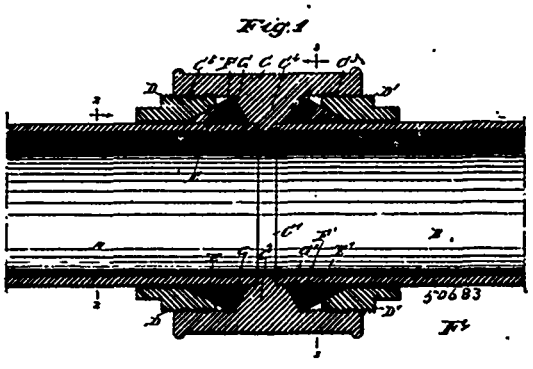
No. 50,682. Pipe. (*Pipe.*)



William Bohrer, Montreal, Quebec, Canada, 27th November, 1895; 6 years.

Claim.—1st. A pipe containing a perforated basket-like receptacle within its bowl cavity, for the purpose set forth. 2nd. A pipe containing a perforated basket-like receptacle within its bowl cavity and providing an air space between it and the bowl, for the purpose set forth. 3rd. A pipe having an enlarged channel through its stem, for the purpose set forth. 4th. A pipe having a perforated basket-like receptacle within its cavity, an air space between such receptacle and the bowl, and an enlarging channel through its stem, for the purpose set forth.

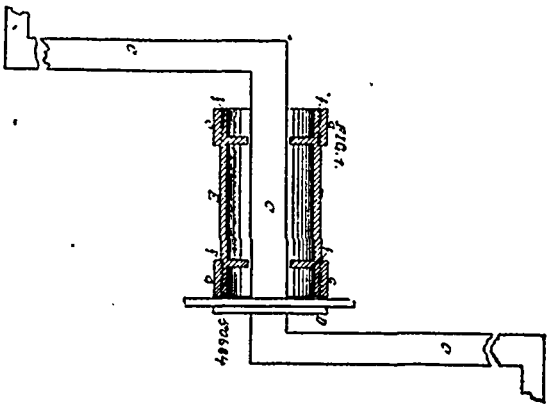
No. 50,683. Pipe Joint. (*Joint de tuyau.*)



Michael Sexton, New York, State of New York, U.S.A., 27th November, 1895; 6 years.

Claim.—1st. A pipe joint comprising a sleeve having an integral annular projection against which the ends of the pipe sections abut, collars screwing in the ends of the sleeve and formed at their inner ends with bevels, and wedge-shaped rings each consisting of separated segmental portions adapted to be engaged by the bevels of the said collars and be pressed upon the pipe ends, substantially as shown and described. 2nd. A pipe joint, comprising a sleeve formed with an integral interior annular projection against which the ends of the pipe sections abut, packing rings seated on the said internal projection and surrounding the said pipes, wedge-shaped rings made in detached segments or sections fitted on the pipes within the said sleeve, and collars screwing in the threaded ends of the said sleeve and formed at their inner ends with bevels adapted to engage the said wedge-shaped rings, to press the latter upon the said packing rings and to fasten the rings on the said pipes, substantially as shown and described. 3rd. A pipe joint, comprising a sleeve formed with an interior annular projection forming a seat for the ends of the pipes to be coupled, packing rings seated on the said internal projection and surrounding the said pipes, wedge-shaped rings made in separated sections fitted on the pipes within the said sleeve, collars screwing in the threaded ends of the said sleeve and formed at their inner ends with bevels adapted to engage the said wedge-shaped rings, to press the latter upon the said packing rings and to fasten the rings on the said pipes, and washers between the said packing rings and wedge-shaped rings, substantially as shown and described. 4th. A pipe joint comprising a shell formed with an interior annular projection having an inclined face and also a recess on each side, the recessed portions forming stops and guides for pipes to be coupled, and the inclined portions forming seats, the packing rings seated on said inclined portions and encircling said pipes, wedge-shaped rings in segmental sections fitted on the pipes within the said shell and collars screwing in the threaded ends of the said shell and formed at their inner ends with bevels adapted to engage the said wedge-shaped and rings to press the latter forward onto the said packing ring, and inward on the sides of the pipes to be coupled, thereby forming a fluid-tight joint at the outer annular projection and holding the pipe rigidly in place with the friction joint formed by the wedge-shaped rings being pressed against the sides of the pipe, substantially as shown and described. 5th. A pipe joint, comprising a shell formed with an interior annular projection having an inclined face and also a recess on each side, the recessed portion forming stops and guides for pipes to be coupled, and the inclined portions forming seats, the packing rings seated on said bevelled pipes and encircling the said pipes, wedge-shaped rings in detachable segmental sections fitted on the pipes within the said shell, and collars screwing in the threaded ends of the said shell and formed at their inner ends with bevels adapted to engage the said wedge-shaped rings and to press the latter forward onto the said packing rings and inward on the sides of the pipes to be coupled, and metal retaining rings or washers between the said packing rings and wedge-shaped rings, substantially as shown and described.

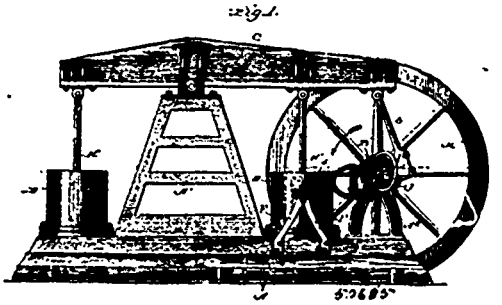
No. 50,684. Bicycle Crank. (*Pédale de bicycle.*)



David Kirk Strachan, Goderich, Ontario, Canada, 27th November 1895; 6 years.

Claim.—In a bicycle, is a solid steel axle and cranks in one piece having a collar D, to which is attached the sprocket-wheel, yoke E having a removable section H, and collars G, screwed on to the ends of the yoke at *f*, all formed, arranged and combined substantially as and for the purpose hereinbefore set forth.

No. 50,685. Hydraulic Engine. (*Machine hydraulique.*)



Fred Starr, Chicago, Illinois, U.S.A., 27th November, 1895; 6 years.

Claim.—1st. The combination of a pair of cylinders having suitable inlets and exhausts at one end, a valve chamber common to said cylinders and communicating with the cylinder inlets, and suitable valves for controlling the inlet of water to the cylinders and the exhaust therefrom, the former being located in the valve chamber and being constructed, arranged, and operated to admit water to the cylinders alternately without closing the inlet to the chamber and without interrupting the flow, substantially as described. 2nd. The combination of a pair of cylinders having suitable inlets and exhausts at one end, a valve chamber common to said cylinders, said chamber having a constantly open inlet, a two-way valve in the chamber for diverting the flow of water through said chamber into the cylinders alternately, and mechanism for operating said two way valve so that the openings to the cylinders will be closed alternately, but not together, and without closing the inlet to the chamber, substantially as described. 3rd. The combination of a pair of cylinders having suitable inlets and exhausts at one end, a circular valve chamber common to said cylinders and communicating with the cylinder inlets at opposite sides, a constantly open supply inlet for the valve chamber located at a point intermediate the cylinder inlets, a balanced, oscillating, two way valve working in said chamber, and mechanism for operating the valve so that the openings to the cylinders will be closed alternately, but not together, and without closing the inlet to the chamber, substantially as described. 4th. The combination of a pair of cylinders having independent inlets and exhausts at one end, a valve chamber common to the cylinders, said chamber having a constantly open inlet valve, and separate openings leading to the cylinders, a two-way valve in said chamber, said valve being constructed and arranged to move in its chamber so as to close the openings communicating with either cylinders alternately, but not both of said openings together, without at any time closing the chamber inlet, and mechanism for operating said two-way and exhaust valve so that the exhaust of each cylinder is closed as the two-way valve is operated to turn the water into the cylinder, substantially as described. 5th. In a motor having a revolving shaft, the combination of a cylinder provided with a suitable inlet and exhaust at one end, valves for controlling the inlet and exhaust to and from said cylinder, and mechanism for operating the valves, said valve-operating mechanism comprising an oscillating lever having oppositely disposed cam recesses at its free end, in which recesses works a crank on a revolving shaft of the motor, substantially as described. 6th. In a motor having a revolving shaft, the combination of a pair of cylinders having suitable inlets at one end, a valve chamber common to said cylinders, a two-way valve in said chamber controlling the delivery of water therefrom alternately to said cylinders, exhausts leading from the cylinders, valves controlling the exhausts, and mechanism for operating all of said valves, said valve-operating mechanism comprising an oscillating lever having reversely curved recesses at its free end in which recesses works a crank on the revolving shaft, substantially as described. 7th. In a motor having a revolving shaft, the combination of a pair of cylinders, a valve chamber common to said cylinders, a two-way valve in the chamber controlling the delivery of water therefrom alternately to said cylinders, exhausts leading from the cylinders, valves controlling said exhausts, a sliding bar connecting all of said valves for simultaneous operation, an oscillating lever connected with said bar, said lever having at its free end reversely curved cam recesses in which works a crank on the revolving shaft, substantially as described 8th. In a motor, the combination of the main shaft having a crank, an oscillating lever, said lever having an enlargement at its free end provided with two oval communicating recesses, in one of which recesses the crank works one-half of the stroke, and in the other of which it works on the other half of the stroke, each of said recesses having a cam surface near its junction with the other recess, substantially as described. 9th. In a motor having a revolving shaft, the combination of an oscillating lever, a detachable and adjustable enlargement at the outer end of said lever, two oval communicating recesses in said enlargement in which a crank on the shaft is adapted to work, an adjustable cam surface on each of said recesses near its junction with the other, and means for adjusting the position of the enlargement on the end of the lever, substantially as described.

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

4123. ALLEN GEORGE SMITH, 2nd five years of No. 35,346, from 4th November, 1895. Hernial Truss, November 4th, 1895.

4124. THE LINOTYPE COMPANY, 3rd five years of No. 22,754, from 4th November, 1895. Machine for Producing Relief Surfaces for Letter Press Printing, November 4th, 1895.

4125. THE CANADIAN GENERAL ELECTRIC COMPANY, 2nd five years of No. 35,400, from 10th November, 1895. Dynamo Electric Generators, November 4th, 1895.

4126. CYRUS REED ROBINSON, 2nd five years of No. 35,398, from 10th November, 1895. Fire Hose Support, November 4th, 1895.

4127. THE AMERICAN TOBACCO COMPANY, 2nd five years of No. 35,619, from 17th December, 1895. Cigarette Machine, November 4th, 1895.

4128. THE AMERICAN TOBACCO COMPANY, 2nd five years of No. 35,620, from 17th December, 1895. Cigarette Machine, November 4th, 1895.

4129. GEORGE HENRY RUSSELL and REISTER RUSSELL, 2nd five years of No. 35,481, from 22nd November, 1895. Tanning Process, November 5th, 1895.

4130. EZRA F. LANDIS, 2nd five years of No. 37,811, from 18th November, 1896. Threshing Machine, November 6th, 1895.

4131. JAMES DIXON, 2nd five years of No. 35,382, from 8th November, 1895. Adjustable Tap, November 7th, 1895.

4132. JAMES DIXON, 2nd five years of No. 35,383, from 8th November, 1895. Pipe Die, November 7th, 1895.

4133. FRANK COCKSHUTT, WILLIAM FOSTER COCKSHUTT and MARY STEWART COCKSHUTT, 3rd five years of No. 22,890, from 20th November, 1895. Riding Plough, November 8th, 1895.

4134. THOMAS GORDON, WILLIAM R. SWIFT and HERMAN BECKER, 2nd five years of No. 35,522, from 29th November, 1895. Regenerative Gas Lamp, November 8th, 1895.

4135. LUDWIG MOND, 2nd five years of No. 35,427, from 18th November, 1895. Compound of Nickel and Carbonic Oxide and Process of Manufacturing, November 8th, 1895.

4136. LUDWIG MOND, 2nd five years of No. 35,428, from 18th November, 1895. Method of Making Nickel, November 8th, 1895.

4137. LUDWIG MOND, 2nd five years of No. 35,429, from 18th November, 1895. Method of Making Sheets, Stereotypes, Casts and Coatings of Nickel, November 8th, 1895.

4138. ELMER H. GRAY, 2nd five years of No. 35,420, from 13th November, 1895. Woven Wire Mattresses, November 9th, 1895.

4139. THE METALLIC ROOFING COMPANY OF CANADA, 3rd five years of No. 22,835, from 18th November, 1895. Metal Roofing Plate, November 9th, 1895.

4140. ELLIOTT S. RICE, 2nd five years of No. 35,424, from 13th November, 1895. Cartridge Loading Machine, November 11th, 1895.

4141. GEORGE BRANUM DOWSWELL, 2nd five years of No. 35,410, from 12th November, 1895. Clothes Wringer, November 11th, 1895.

4142. THE ONEIDA COMMUNITY (assignee), 2nd five years of No. 31,417, from 30th November, 1895. Swivel, November 11th, 1895.

4143. CHARLES F. LALONDE, 2nd five years of No. 35,605, from 12th December, 1890. Hot Water Furnace, November 11th, 1895.

4144. THE CANADIAN GENERAL ELECTRIC COMPANY OF TORONTO (assignee), 2nd five years of No. 35,438, from 19th November, 1895. Pulsating Electric Generator, November 12th, 1895.

4145. THE CANADIAN GENERAL ELECTRIC COMPANY OF TORONTO (assignee), 2nd five years of No. 35,455, from 20th November, 1895. Pulsating Current System, November 12th, 1895.

4146. THE CANADIAN GENERAL ELECTRIC COMPANY OF TORONTO (assignee), 2nd five years of No. 35,456, from 20th November, 1895. Method of Converting Electric Currents, November 12th, 1895.

4147. THE CANADIAN GENERAL ELECTRIC COMPANY OF TORONTO (assignee), 2nd five years of No. 35,457, from 20th November, 1895. Multiple Current, November 12th, 1895.

4148. THE CANADIAN GENERAL ELECTRIC COMPANY OF TORONTO (assignee), 2nd five years of No. 35,458, from 20th November, 1895. Alternate Current Pulsating System, November 12th, 1895.

4149. THE CANADIAN GENERAL ELECTRIC COMPANY OF TORONTO (assignee), 2nd five years of No. 35,459, from 20th November, 1895. Alternating Current Electric Reciprocating Engine, November 12th, 1895.

4150. THE CANADIAN GENERAL ELECTRIC COMPANY OF TORONTO, 2nd five years of No. 35,460, from 20th November, 1895. Reciprocating Electric Engine System, November 12th, 1895.

4151. JAMES T. KETCHLEDGE and ALBERT BARBER, 2nd five years of No. 35,421, from 13th November, 1895. Wagon Tongue, November 12th, 1895.

4152. THE ONEIDA COMMUNITY, 2nd five years of No. 35,682, from 3rd January, 1896. Halter Chain, November 13th, 1895.

4153. ROBERT LEARMOUTH, 2nd five years of No. 35,800, from 16th January, 1896. Feed Water Heater and Purifier, November 15th, 1895.

4154. THE GENDRON MANUFACTURING COMPANY, 2nd five years of No. 35,464, from 20th November, 1895. Process of Making Ties, November 15th, 1895.

4155. THE UNION HEEL TRIMMER COMPANY, 3rd five years of No. 22,903, from 27th November, 1895. Heel Trimming Machine, November 18th, 1895.

4156. ORVILLE MARION MORSE, 2nd five years of No. 35,657, from 24th December, 1895. Separating Machine, November 18th, 1895.

4157. JOHN W. COYNE and GEORGE ALLEN SHANNON, 2nd five years of No. 35,452, from 20th November, 1895. Churn, November 19th, 1895.

4158. EDWARD ETHEL GOLD, 3rd five years of No. 22,940 from 5th December, 1895. Heating Apparatus, November 20th, 1895.

4159. THE GLOBE FURNITURE COMPANY, 2nd five years of No. 35,566, from 9th December, 1895. Furniture Joint, November 20th, 1895.

4160. JAMES EDWIN WILSON and FRANK WILSON, 2nd five years of No. 35,561, from 5th November, 1895. Steam Boiler, November 22nd, 1895.

4161. JAMES SYLVESTER GOODWIN, 2nd five years of No. 35,472, from 21st November, 1895. Building Block, November 22nd, 1895.

4162. WILLIAM JAMES CUSSEN, 2nd five years of No. 35,588, from 10th December, 1895. Tobacco Pouches, November 22nd, 1895.

4163. MARCELIN CASTELMAN, 2nd five years of No. 35,606, from 12th December, 1895. Ore Concentrator, November 22nd, 1895.

4164. STEPHEN STUART, 3rd five years of No. 22,868, from 23rd November, 1895. Fastening for Guard Rails of Railways, November 22nd, 1895.

4165. THE AMERICAN ARITHMOMETER COMPANY, 2nd five years of No. 35,595, from 10th December, 1895. Mechanical Accountant, November 25th, 1895.

4166. HARVEY KELLEY, 2nd five years of No. 35,487, from 25th November, 1895. Ditching Machine, November 25th, 1895.

4167. FRANK S. McKENNEY, 2nd five years of No. 35,489, from 25th November, 1895. Lace, November, 25th, 1895.

4168. FRANKLIN S. McKENNEY, 2nd five years of No. 35,490, from 25th November, 1895. Construction of Shoe Uppers, November 25th, 1895.

4169. FRANKLIN S. McKENNEY, 2nd five years of No. 35,495, from 26th November, 1895. Fastener for Laces, November 25th, 1895.

4170. JACOB HIRAM MYERS, 2nd five years of No. 35,518, from 29th November, 1895. Voting Machine, November 26th, 1895.

4171. WILLIAM JAMES BROWN, 2nd five years of No. 35,501, from 26th November, 1895. Wheel, November 26th, 1895.

4172. WILLIAM HENRY SMITH, 2nd five years of No. 35,559, from 5th December, 1895. Shoe Lacing Stud, November 29th, 1895.

4173. THOMAS B. BENWELL, 2nd five years of No. 35,583, from 10th December, 1895. Method of covering Shoe Lacing Hooks, November 29th, 1895.

4174. GUILLAUME BOIVIN, 3rd five years of No. 23,060, from 30th December, 1895. Manufacture of Boots and Shoes, November 30th, 1895.

ERRATUM.

In Certificate No. 4064, of the September "Record," after the word "second," read "and third."

TRADE-MARKS

Registered during the month of November, 1895, at the Department of Agriculture—Copyright and Trade-Mark Branch.

5458. HENRY SWAIN & SON, Montreal, Que Cigars, 4th November, 1895.

5459. DR. F. VON HEYDEN NACHFOLGER, Radebeul, near Dresden, Saxony, German Empire. A Chemical Substance adapted for use as a medicine and for use in manufactures and arts, 4th November, 1895.

5460. JOHN ALEXANDER MACDONALD, Arnprior, Ont. Mineral Water, 5th November, 1895.

5461. WILLIAM O'BRIEN and JEREMIAH O'BRIEN, Chatham, Ont., trading as O'BRIEN BROTHERS. Cigars, 15th November, 1895.

5462. GEORGE GRANT, Maisonneuve, Que. A Medicine for the cure of Alcoholism, 18th November, 1895.

5463. ISAAC HARRIS, SAMUEL HARRIS and EDWARD YOUNGHEART, Montreal, Que., trading as HARRIS, YOUNGHEART & CO. Cigars, 19th November, 1895.

5464. LOUIS JOSEPH HENRI BEAUDRY and JOSEPH BEAUDRY, Montreal, Que., trading as THE MONTREAL SUSPENDER AND UMBRELLA MANUFACTURING COMPANY. Safety Pins, 19th November, 1895.

5465. BRIGGS PRIESTLEY and WILLIAM E. BRIGGS PRIESTLEY, Bradford, England, trading as BRIGGS PRIESTLEY & SONS. Textile Fabrics composed entirely of wool, 22nd November, 1895.

5466. BRIGGS PRIESTLEY and WILLIAM E. BRIGGS PRIESTLEY, Bradford, England, trading as BRIGGS PRIESTLEY & SONS. Textile Fabrics composed entirely of silk and wool, 22nd November, 1895.

5467. GEORGE KELLY & COMPANY, London, Ont. Cigars, 25th November, 1895.

5468. S. DAVIS & SONS, Montreal, Que. Cigars, Cigarettes and Tobaccos, 25th November, 1895.

5469. APPLETON, MACHIN & SMILES, London, England. Tea, Coffee, Cocoa, Chocolate and Chicory, 25th November, 1895.

5470. } RAWORTH, SCHODDE & COMPANY, Chicago, Illinois, U.S.A. A De-
5471. } tergent (Wool Soap), 25th November, 1895.

5472. THE AMERICAN TOBACCO COMPANY, Newark, New Jersey, U.S.A. Tobacco, Cigars and Cigarettes, 26th November, 1895.

5473. RODRIGUE CARRIÈRE, Montreal, Que. A Gum for the instantaneous cure of Toothache, 26th November, 1895.

5474. THE JOHN GRIFFITHS CYCLE CORPORATION, LIMITED, Dublin, Ireland, and Toronto, Canada. Bicycles, Tricycles and the several parts thereof, 28th November, 1895.

5475. POPE MANUFACTURING COMPANY, Hartford, Connecticut, U.S.A. Vehicles and parts thereof, 28th November, 1895.

5476. JOSEPH ADOLPHE GARNEAU, Québec, Qué. Produits chimiques et medicinaux, 29 novembre, 1895.

5477. JOHN GOWANS, JAMES G. KENT and JOHN G. KENT, Toronto, Ont., trading as GOWANS, KENT & COMPANY. Lamp Chimneys, 30th November, 1895.

COPYRIGHTS

Entered during the month of November, 1895, at the Department of Agriculture—Copyright and Trade-Mark Branch.

8192. OUTLINES OF CLASSIFICATIONS OF PLANTS. By D. P. Penhallow, B.Sc., F.R.S.C., Montreal, Que., 2nd November, 1895.

8193. APPLICATION FOR SUSPENSION OF PAYMENT OF THE YORK COUNTY LOAN AND SAVINGS COMPANY. (Form.) Joseph Phillips, Toronto, Ont., 2nd November, 1895.

8194. WEEKLY REMITTANCE FORM OF THE YORK COUNTY LOAN AND SAVINGS COMPANY. Joseph Phillips, Toronto, Ont., 2nd November, 1895.

8195. THE ILLUSTRATED CATALOGUE AND PRICE LIST OF THE JAMES MORRISON BRASS MANUFACTURING COMPANY (LIMITED). The James Morrison Brass Manufacturing Company (Limited), Toronto, Ont., 2nd November, 1895.

8196. WHICH ONE OF THE TWO. Words and Music by Dave Marion. Arranged by Ivan Davis. Whaley, Royce & Co., Toronto, Ont., 4th November, 1895.

8197. ADVANCED CHECK SYSTEM FOR LOCATING ERRORS IN BOOK-KEEPING. By Henry Goldman, Montreal, Que., 5th November, 1895.

8198. THE USE AND ABUSE OF THE HUMAN EYE. L. G. Chamberlain, Toronto, Ont., 6th November, 1895.

8199. THE EYE. (Circular.) L. G. Chamberlain, Toronto, Ont., 6th November, 1895.

8200. JUST AS I AM. (Sacred Song.) Music by J. E. P. Aldous. Whaley, Royce & Co., Toronto, Ont., 6th November, 1895.

8201. HIGH SCHOOL BOTANICAL NOTE BOOK. By H. B. Spotton, M.A., F.L.S. (Part II.) The W. J. Gage Company (Limited), Toronto, Ont., 7th November, 1895.

8202. IN OLD QUEBEC. (Polka.) By Vincent E. Green. The Anglo-Canadian Music Publishers' Association (Limited), London, England, 7th November, 1895.

8203. SUN OF MY SOUL. (Sacred Song.) Music by R. S. Ambrose. The Anglo-Canadian Music Publishers' Association (Limited), London, England, 7th November, 1895.

8204. THE DAYS OF AULD LANG SYNE. By Ian Maclaren. (Book.) Hodder & Stoughton, London, England, 8th November, 1895.

8205. THE BROADWAY TWO-STEP. By Theo. F. Morse. Whaley, Royce & Co., Toronto, Ont., 8th November, 1895.

8206. PRIDE OF THE BALL. (Waltz Song and Refrain.) Words by Harry C. Clyde. Music by H. C. Verner. Whaley, Royce & Co., Toronto, Ont., 8th November, 1895.

8207. THE SCHOOL PLAY GROUND. (Song.) By Charles Miller. Whaley, Royce & Co., Toronto, Ont., 8th November, 1895.

8208. MAGNIFICAT and NUNC DIMITTIS. (In the Key of D.) By Arthur Dorey, Sherbrooke, Que., 9th November, 1895.

8209. JOSEPHINE. Words by Henry P. Blackey. Music by Chas. R. Palmer. Whaley, Royce & Co., Toronto, Ont., 9th November, 1895.

8210. THE CANADIAN STUDENTS PREPARED EXCUSE SCHOOL NOTES AND ASSISTANT PEACE MAKER. Thomas Paterson, Peterborough, Ont., 9th November, 1895.

8211. THE YOUNG STUDENT. (A Selection of Simple Pieces in Various Styles for the Pianoforte.) The Anglo-Canadian Music Publishers' Association (Limited), London, England, 11th November, 1895.

8212. REVUE CANADIENNE, OCTOBRE 1895. C. O. Beauchemin et fils, Montréal, Qué., 11 novembre 1895.

8213. REVUE CANADIENNE, NOVEMBRE 1895. C. O. Beauchemin et fils, Montréal, Qué., 11 Novembre 1895.

8214. BELL TELEPHONE COMPANY OF CANADA (LIMITED). WESTERN EXCHANGES. SUBSCRIBERS' DIRECTORY, ONTARIO DEPARTMENT, DECEMBER, 1895. The Bell Telephone Company of Canada (Ltd.), Montreal, Que., 14th November, 1895.

8215. FORMS OF POLICY CONTRACTS. By John F. Mathieson, Montreal, Que., 15th November, 1895.

8216. THE DE BRISAY ANALYTICAL LATIN METHOD. PART IV. By Charles T. DeBrisay, Toronto, Ont., 16th November, 1895.

8217. HOUSE OF BISHOPS OF THE ECCLESIASTICAL PROVINCE OF CANADA. (Photo.) W. Notman & Son, Montreal, Que., 16th November, 1895.

8218. SLATER SHOE ADVERTISEMENTS. Series B. Geo. T. Slater & Sons, Montreal, Que., 18th November, 1895.

8219. THE ARRIVAL OF THE BRIDE. (Two-Step March.) By Theo. F. Morse. Whaley, Royce & Co., Toronto, Ontario, 18th November, 1895.

8220. THE ONTARIO LAW INDEX. By Harris H. Bligh, Q.C., Ottawa, Ont., 18th November, 1895.

8221. THE HOLIDAY. (Two-Step.) By W. D. Shanks. The Anglo-Canadian Music Publishers' Association (Ltd.), London, England, 19th November, 1895.

8222. GOD BLESS THE QUEEN OF CANADA. (Lyric.) By Charles D. Bingham, Toronto, Ont., 19th November, 1895.

8223. TEST TYPES. (Card.) Montreal Optical Co., Montreal, Que., 19th November, 1895.

8224. THE BOOK-KEEPER'S HAND-BOOK. By John Keith, Ottawa, Ont., 20th November, 1895.

8225. THE HISTORY OF CANADA. (Vol. VIII., 1808-1815. With Maps.) By William Kingsford, LL.D., F.R.S.C., Ottawa, Ont, 22nd November, 1895.

8226. HISTORICAL CHART OF CANADA. James P. Taylor, Lindsay, Ont., 22nd November, 1895.

8227. ONLY FOR THEE. Words by Gerald Deane. Music by Hastings Weblyn. Whaley, Royce & Co., Toronto, Ont., 23rd November, 1895.

8228. CÆSAR'S BELLUM GALLICUM. (Books II., III. and IV., with Introductory Notices, Notes, Complete Vocabulary, &c.) By John Henderson, M.A., and E. W. Hagarty, B.A. The Copp, Clark Co. (Ltd.), Toronto, Ont., 23rd November, 1895.

8229. THE CANADIAN ALMANAC, 1896. The Copp, Clark Co. (Ltd.), Toronto, Ont., 23rd November, 1895.

8230. CLOSE HIS EYES. (Part Song.) Words by Geo. Henry Boker. Music by Horace W. Reyner. The Anglo-Canadian Music Publishers' Association (Ltd.), London, England, 25th November, 1895.

8231. THE DEAF MUTES' QUESTION BOOK. By J. Scott Hutton, A. & W. Mackinlay, Halifax, N.S., 25th November, 1895.

8232. THE COLLECTOR'S GUIDE. By James Morrison Glenn, LL.B. The Municipal World Publishers, St. Thomas, Ont., 29th November, 1895.

8233. MY LITTLE FRIEND. By John Strange Winter. Published in "Saturday Night," Toronto, Ont. (Temporary Copyright.) The National Press Agency (Ltd.), London, England, 29th November, 1895.

8234. ZEROLA OF NAZARETH. By Louie Barron. Chas. J. Musson, Toronto, Ont., 29th November, 1895.

8235. ANNNAL ACCOUNT OF * * * CHURCH. W. Parker, Cayuga, Ont., 29th November, 1895.

8236. SION. (Sacred Song.) By Paul Rodney. Arranged for mixed voices by William Rees. The Anglo-Canadian Music Publishers' Association (Ltd.), London, England, 29th November, 1895.

8237. FASHIONS. (An Illustrated Monthly Journal for Canadian Women, Vol. I, No. 1, November, 1895. David Irvine Barnett, Toronto, Ont., 30th November, 1895.