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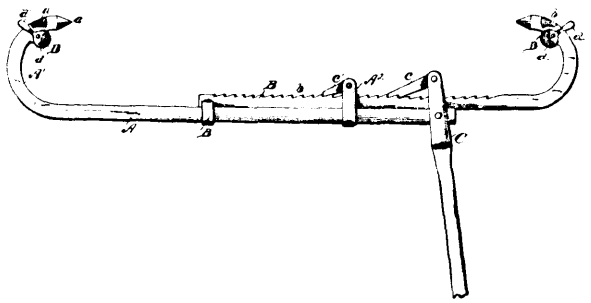
## INVENTIONS PATENTED.

**NOTE.—Patents are granted for 18 years. The term of years for which the fee has been paid, is given after the date of the patent.**

### No. 55,474. Machine for Stretching Fence Wire.

(*Tendeur de fil de fer.*)

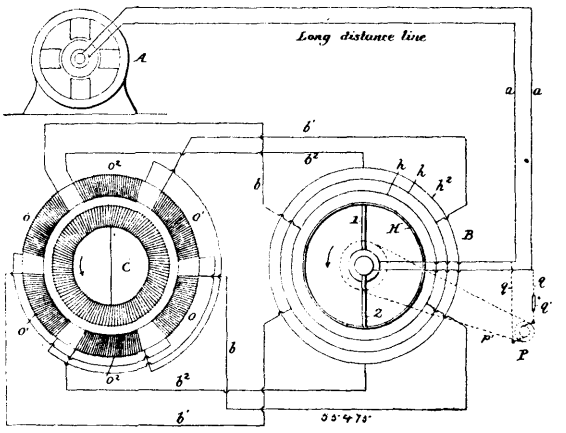


John Arthur Walker and Archie Nelson Walker, both of Harrow, Ontario, Canada, 1st April, 1897; 6 years. (Filed 5th March, 1897.)

*Claim.*—1st. In a machine for stretching fence wire, parallel bars sleeved together, one of said bars provided with a rack, a lever pivoted to the other bar and provided with a dog to engage said rack, means for engaging the wire to one of said bars, and means for engaging the fence post whereby the wire may be drawn towards said post, substantially as described. 2nd. In a machine for stretching fence wire, parallel bars sleeved together, one of said bars provided with a rack, a locking dog to hold said rack while the lever is being operated, and means for engaging the wire to one of said bars and engaging a post by means of the other bar, substantially as described. 3rd. In a machine for stretching fence wire, parallel bars sleeved together, one of said bars provided with a rack, a lever having a suitable dog pivoted in said lever adapted to engage said rack, the ends of said parallel bars formed into hooks and provided with a sharpened point whereby they may readily enter the fence post, and means secured to said bars whereby a fence wire may be held thereby securely, substantially as described. 4th. In a machine for stretching fence wire, parallel bars sleeved together, one of said bars provided with a rack, suitable lever and dogs for operating and locking said racked bar, the opposite ends of said parallel bars formed into hooks, and means for securing the wire to said bars, said means consisting of cams pivoted to said bars, and lugs formed on said bar in suitable proximity to said cams whereby the fence wire may be held securely when said cams are operated, substantially as described.

### No. 55,475. System of Electric Distribution.

(*Système de distribution électrique.*)



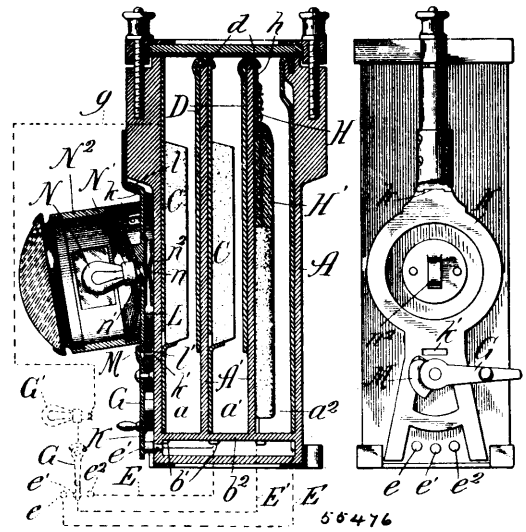

Gordon J. Scott and William S. Janney, both of Philadelphia, Pennsylvania, U.S.A., 1st April, 1897; 6 years. (Filed 29th June, 1896.)

*Claim.*—1st. In a system of electric power transmission, an induction director for inductively transmitting a single-phase alternating current through a plurality of circuits in succession, consisting of secondary coils included in said circuits, a primary coil or coils in inductive relation to said secondary coils, and movable means for gradually increasing and then decreasing the electromotive force and current in said circuits whereby waves of electrical energy are sent through them successively, substantially as described. 2nd. In a system of electric power transmission, an induction director for inductively transmitting a single-phase alternating current through any desired number of circuits in succession, consisting of secondary coils, to different points of which the terminals of the circuits are connected, a primary coil or coils in parallel inductive relation to said secondary coils, and means for moving the points of greatest difference of potential in the secondary coils relatively to the terminals of the circuits, whereby waves of electrical energy are sent successively through said circuits, substantially as described. 3rd. In a system of electric power transmission, a single-phase alternating current circuit, a motor having a plurality of motor circuits, and an induction director for inductively transmitting a single-phase current successively through said motor circuits, said induction director consisting of secondary coils, to opposite points of which the terminals of the motor circuits are connected, a primary coil or coils in parallel inductive relation to said secondary coils and to opposite points of which the line circuit is connected, and means for moving the points of greatest difference of potential in the secondary coils relatively to the terminals of the motor circuits, whereby waves of electrical energy are sent successively through said motor circuits, substantially as described. 4th. In a system of electric power transmission, a single-phase alternating current circuit, a motor having a plurality of motor circuits, and an induction director consisting of circular secondary rings or coils to diametrically opposite points of which the terminals of the motor circuits are connected, primary rings or coils in parallel inductive relation to the secondaries and having the line circuit connected thereto at diametrically opposite points, and means for

rotating the points of greatest difference of potential in the secondary coils relatively to the terminals of the motor circuits, whereby waves of electrical energy are sent successively through said motor circuits, substantially as described. 5th. In combination, a primary inducing ring or member, a single-phase alternating current circuit connected to opposite points of said primary member, a secondary ring or member in parallel inductive relation to said primary member, a circuit through which the induced current of the secondary member passes, the terminals of said circuit being connected to opposite points of the secondary ring or member, and means for moving or rotating said terminals or points of connection relatively to the points of greatest difference of potential in said secondary ring, substantially as described. 6th. In combination, a primary or inducing ring or member included in a single-phase alternating current circuit, a secondary ring or member in inductive relation to said primary member, a circuit having its terminals connected to opposite points of said secondary member, and means for mechanically moving the points of greatest difference of potential in said secondary member, substantially as described. 7th. An induction director for single-phase alternating currents, consisting of two rings or coils in parallel inductive relation, brushes constantly in direct contact with one of said rings and movable relatively thereto, the single-phase alternating line circuit being connected through the brushes and the ring in contact with said brushes, and a circuit having its terminals connected to opposite points of the other ring, or vice versa, substantially as described. 8th. In induction director for single-phase alternating currents having a closed primary ring or coil, brushes movable relatively to and constantly in direct contact with said ring at opposite points, a secondary ring or coil in parallel inductive relation to said primary ring, and a circuit having its terminals connected to said secondary ring or coil, the relative movement of said primary ring and brushes varying the induced current in said circuit, substantially as described. 9th. An induction director having a closed primary ring or coil, relatively movable brushes constantly in direct contact with said ring at opposite points, a series of secondary rings or coils in parallel inductive relation to said primary ring, and a corresponding series of motor circuits having their terminals connected to the respected secondary rings at opposite points, substantially as described. 10th. An induction director having a closed primary ring or coil, relatively movable brushes constantly in direct contact with said ring at opposite points, a series of secondary rings in parallel inductive relation to said primary ring, a laminated core in which said rings are embedded, and a series of motor circuits corresponding in number to and having their terminals connected with said secondary rings at opposite points, substantially as described. 11th. An induction director having a series of closed primary rings or coils, a series of relatively movable brushes constantly in direct contact with said rings at opposite points, a series of secondary rings respectively in parallel inductive relation to said primary rings, and a corresponding series of closed motor circuits including secondary rings, substantially as described. 12th. An induction director having a series of closed primary rings or coils, a corresponding series of movable brushes constantly in direct contact with said rings at opposite points, a series of secondry rings or coils in inductive relation to said primary rings, a laminated core in which all of said rings are embedded, connections to the brushes whereby the current is passed through adjacent rings in opposite directions, and motor circuits connected to said secondary rings, substantially as described. 13th. An induction director for single-phase alternating currents, consisting of a frame carrying fixed primary and secondary rings or coils in parallel inductive relation, a shaft mounted in the frame, brushes carried by the shaft and constantly in direct contact with the primary rings, means for rotating the shaft, and internal circuits whereby the current may be passed through the brushes and the primary rings, substantially as described. 14th. An induction director consisting of the frame or drum E provided with the laminated core G, the primary rings H, and secondary rings $h, h^1$, etc., in combination with the shaft D mounted in bearings in the frame, the cylinder F carried by the shaft, the core I and the brushes carried by the cylinder, the insulated rings upon the shaft, the fixed brushes on the drum, and the electrical connection between the insulated rings and the brushes of the primary rings, substantially as described. 15th. The combination with an alternating current motor having a series of independent circuits, of an induction director having a corresponding series of secondary rings or coils to which the terminals of said motor circuits are connected, primary rings or coils in parallel inductive relation to said secondary coils, a single-phase alternating circuit connected to opposite points of said primary coils, and mechanical connections between the movable member of the motor and the movable member of the induction director, substantially as described. 16th. The combination with a motor having a series of field circuits, of an induction director having a corresponding series of secondary rings or coils, the terminals of each field circuit being connected to opposite points of its respective coil, a primary ring or coil in parallel inductive relation to the secondary coils, a pair of movable brushes connected to a single-phase alternating circuit and in constant contact with the primary ring or coil, and mechanical connections from the armature of the motor for rotating the brushes of the induction director, substantially as described.

## No. 55,476. Electric Lamp for Vehicles.

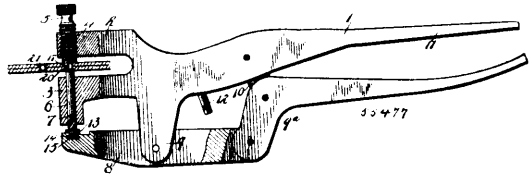
*(Lampe électrique pour voitures.)*




John Zimmerman, assignee of Walter Ambrose Crowders, both of Chicago, Illinois, U.S.A., 1st April, 1897; 6 years. (Filed 25th February, 1896.)

*Claim.*—1st. A primary battery having two or more cells, partitions dividing such cells, a metallic conducting piece hanging from and extending lengthwise with the dividing partition, a negative element supported thereon, and a positive element hooked over and supported by the negative element support to electrically connect such cells in series, substantially as described. 2nd. In a primary battery having two or more cells, a partition dividing the cells, a metallic conducting support for the negative element attached to, extending lengthwise with and forming a part of the dividing partition, a negative element removably secured in the metallic support, and a positive element in the adjacent cell hooked over and suspended from the negative element support to electrically connect such cells in series, substantially as described. 3rd. In a primary battery provided with a false bottom having two or more cells electrically connected in series, a switch located on and secured to the case, and means disposed beneath the false bottom by which the flow of current is increased or diminished by the movements of the switch, substantially as described. 4th. In a primary battery having two or more cells, positive and negative elements of adjacent cells joined together across the dividing partition to electrically connect such cells in series, a switch located on and secured to the case, and the wire or set of wires connecting the switch with the negative element of each cell individually and arranged by the switch movements to cut one or more of the cells into and out of action, substantially as described. 5th. In a primary battery having two or more cells, elements of the adjacent cells supported and joined on and across the dividing partitions to electrically connect such cells in series, an incandescent lamp located on and secured to the battery case, a switch located on and secured to the case, and a wire or set of wires connecting the switch with the negative element of each cell individually and arranged by the switch movements to cut one or more of the cells into and out of the electrical connection with the lamp, substantially as described. 6th. In a primary battery, a metallic conducting support provided with a spring pocket for holding the negative element in position and permitting its free insertion or removal, substantially as described. 7th. In a primary battery, a negative element of carbon and oxide of copper pressed or moulded into desired shape, substantially as described. 8th. As a new article of manufacture in primary batteries, a porous negative element of carbon and oxide of copper pressed or moulded into desired shape, substantially as described. 9th. A negative element for primary batteries consisting of a reticulated supporting conducting plate provided with a porous coating or baked copper oxide and a carbonized binder, substantially as described. 10th. A negative element for primary batteries consisting of a wire mesh supporting conducting plate provided with a porous coating or baked copper oxide and a binder of resinous oil, substantially as described. 11th. In combination with a battery cell having a metallic supporting piece, an electric incandescent lamp having a metallic back portion, one of such portions provided with a projecting hinge and the other with a hinging perforation and means for positioning and locking the lamp on its supporting piece, substantially as described. 12th. In combination with a battery cell having a metallic supporting conducting piece provided with a hinging perforation and electric incandescent lamp having a back portion provided with a projecting hinge adapted to enter the hinging perforation of the supporting piece and means for positioning and locking the lamp on its supporting piece so that the parts may be readily coupled or uncoupled, substantially as described.

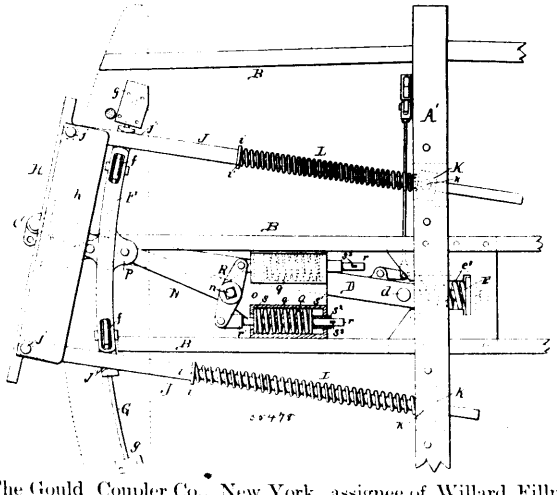
**No. 55,477. Rivetting Machine.** (*Machine à river,*)



Tuscarawas Manufacturing Co., Canal Dover, assignee of Frank A. Jaberg, New Philadelphia, both in Ohio, U.S.A., 1st April, 1897; 6 years. (Filed 21st January, 1897.)

*Claim.*—1st. In a machine of the class described, the combination of a stock or frame having fixed spaced jaws provided with axially aligned guide-openings formed perpendicular to the faces of the jaws, an axially adjustable die fitted in one of the guide openings and adjustable toward the face of the other jaw to clamp an article between its extremity and said jaw, a plunger fitted in the other guide opening and adapted to recede at its extremity beyond the face of the jaw in which it is mounted, to provide for the introduction of a rivet or eyelet into its guide opening before the article is clamped by said die, and means for operating the plunger, substantially as specified. 2nd. In a machine of the clas described, the combination of a stock or frame provided with fixed integral spaced jaws having axially aligned guide openings arranged perpendicular to the face of the lower jaw, a die threaded in the guide opening of the upper jaw and adapted to be adjusted toward and from the plane of the face of the lower jaw, to clamp an article between its extremity and said lower jaw, a plunger fitted to slide in the guide opening of the lower jaw and adapted to recede at its upper extremity below the plane of the face of the lower jaw, whereby a rivet or eyelet may be arranged in said guide opening to rest upon the upper extremity of the plunger before the article is clamped between the extremity of the die and the face of the lower jaw, said die having its lower extremity constructed to spread or swage the upper end of a rivet or eyelet coming in contact therewith, and means for operating the plunger, substantially as specified.

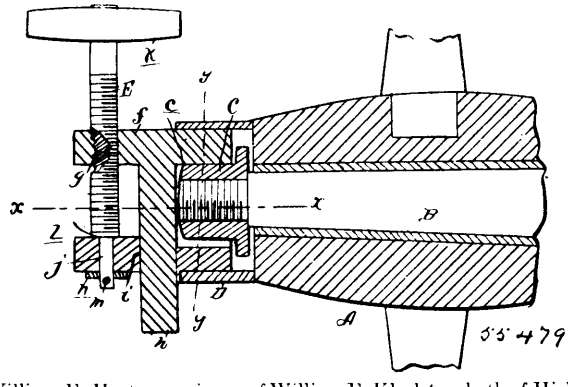
**No. 55,478. Car Buffer.** (*Tampon pour chars.*)



The Gould Coupler Co., New York, assignee of Willard Fillmore Richards, Buffalo, New York, both in the U.S.A., 1st April, 1897; 6 years. (Filed 13th March, 1897.)

*Claim.* 1st. The combination with a car platform and a laterally movable buffer arranged at the end thereof, of an oscillatory arm or lever connected with the buffer and having a cross head at its pivoted end, and centreing springs arranged lengthwise of the car and operating upon the arms of said cross-head, substantially as set forth. 2nd. The combination with the car frame and a laterally movable drawbar, of an oscillating arm or lever connected with the buffer and having a cross-head, and centreing springs operating upon the arms of said cross-head and resisting the lateral movement of said oscillating arm substantially, as set forth. 3rd. The combination with a car platform and a laterally movable buffer arranged at the end of the platform, of an oscillating arm or lever connected with the buffer and having a cross-head, a pair of centreing springs, and compression rods connected respectively with the arms of said cross-head and operating to compress said springs in opposite directions, substantially as set forth. 4th. The combination with the car frame and a laterally movable drawbar, of an oscillating arm or lever connected with the drawbar and having a cross-head, a pair of centreing springs, and compression rods, connected respectfully with the arms of the said cross-head and operating to compress said springs in opposite directions, substantially as set forth. 5th. The combination with the car platform, and a laterally movable buffer arranged at the end thereof, of an oscillating arm or lever arranged on the underside of the platform, connected with the buffer and provided with a cross-head, a pair of longitudinal centreing springs arranged in rear of said oscillating lever and supported in suitable casings, compression rods passing through said springs and connected respectively to the arms of said cross-head and followers arranged on said rods between the ends of each spring and the opposing heads of their casings, substantially as set forth. 6th. The combination with the car platform, and a laterally movable buffer arranged at the end thereof, of an oscillating arm or lever arranged on the underside of the platform, connected with the buffer and provided with a cross head, a pair of longitudinal centreing springs arranged in rear of said oscillating lever and supported in suitable casings, compression rods passing through said springs and connected respectively to the arms of said cross-head, a washer or follower arranged on each of said rods between the front end of the spring and the front head of the spring casing, and a tubular rear follower arranged on said rod between the rear end of the spring and the rear head of the spring casing, said rods being provided in front of the spring casing with shoulders adapted to bear against said front followers and on their rear portions with stops adapted to bear against said tubular followers, substantially as set forth. 7th. The combination with a car platform, of a transverse track arranged on the underside of the platform, a carriage running upon said track, and a laterally movable buffer and a laterally movable drawbar, both supported upon said carriage whereby the buffer and drawbar are moved laterally in unison, substantially as set forth. 8th. The combination with a car platform and a laterally movable drawbar, of a buffer arranged at the end of the platform and having laterally movable supporting stems, a transverse track arranged on the underside of the platform and a carriage running on said track and provided above said track with seats for said buffer stems and below said track witn a yoke or seat in which the drawbar is supported, substantially as set forth.

**No. 55,479. Axle Nut Wrench.** (*Clé pour noix d'essieux.*)



William F. Horton, assignee of William E. Kleckner, both of Hicksville, Ohio, U.S.A., 1st April, 1897; 6 years. (Filed 14th January, 1897.)

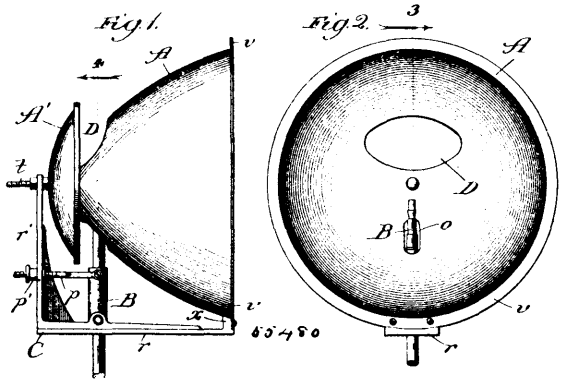
*Claim.*—1st. The axle wrench comprising the fixed jaw carrying the nut seat or socket, and having the lug or branch provided with the screw tapped aperture, and the slidable branch extending therefrom, the slidable jaw arranged on said slidable branch, and both jaws adapted to engage the inner side of a hub band, and the operating screw connecting said jaws, substantially as specified. 2nd. The fixed or stationary jaw having its outer side beveled and carrying the nut seat or socket provided with friction springs, and having the lug or branch provided with the screw tapped aperture *g*, and also having the slidable branch or bearing *h*, the slidable jaw *b*, having the slot *i*, and also beveled on its outer side, and the screw *c*, bearing in the threaded aperture *g*, and secured at one end in the aperture *j*, of the slibable jaw, substantially as specified.

**No. 55,480. Reflector.** (*Reflecteur.*)

Pettibone, Mulliker & Co., assignee of Henry Frederick Fuller, both of Chicago, Illinois, U.S.A., 1st April, 1897; 6 years. (Filed 22nd January, 1897.)

*Claim.*—1st. In combination, a parabolic reflector having an upper ventilating opening near its apex and a supplemental reflector adjacent to and behind the said apex to complete the reflecting surface, substantially as described. 2nd. In combination, a reflector having a lower opening for the burner, and an upper ventilating opening, said openings being located near the apex of the reflector, and a supplemental reflector located behind said apex, and having a diameter in excess of that of the reflector at the forward ends of said openings, thereby extending beyond the confines thereof, substantially as and for the purpose set forth. 3rd. In combination with a supporting frame, a reflector A secured on said frame and having a base opening *a* for the burner and an upper ventilator opening D, and a supplemental reflector A' rotatably supported behind said ventilator opening, substantially as and for the purpose set forth. 4th. In combination, a reflector having an upper ventilating opening

near its apex, and a supplemental reflector adjacent to and behind the said apex, provided with a reflecting surface the area of which



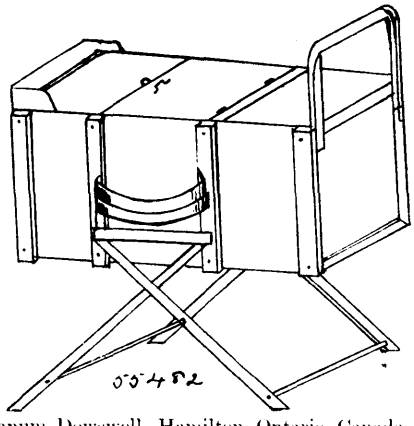

is in excess of that of the ventilating opening and mounted to be shifted to present different portions thereof to the said opening, substantially as described. 5th. In combination with a reflector provided with an opening in its wall, a pivotally supported burner extending through said opening, and means for adjusting the burner on its pivotal support to vary the focus, substantially as described. 6th. In combination with a supporting frame, a reflector A secured on said frame, and having an opening in its wall, a pivotally supported burner B extending through the opening into said reflector, and a rad connection $p$ between the burner and the frame, provided with an operating nut $p^1$, substantially as and for the purpose set forth.

**No. 55,481. Artificial Fuel.** (*Combustible artificiel.*)

Sally Katz, Hamburg, assignee of Rudolph Arnold, Magdeburg Neustacht, both in Germany, 1st April, 1897; 6 years. (Filed 2nd March, 1897.)

*Claim.*—The herein described process of manufacturing artificial fuel from saw-dust, mill refuse, etc., which consists in heating the said saw-dust or saw-mill refuse, while it is under a high pressure in a mould or chamber, air being excluded from said moulds or chambers until the brickets are thoroughly converted into charcoal, substantially as set forth.

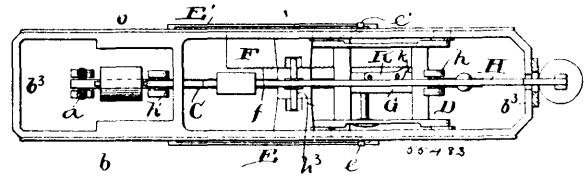
**No. 55,482. Washing Machine.** (*Machine à laver.*)




George Branum Dowswell, Hamilton, Ontario, Canada, 1st April, 1897; 6 years. (Filed 8th March, 1897.)

*Claim.*—In the washing machine, the combination of the semi-arched floor $D^1$, $D^2$, $D^3$, corrugated with the corrugated walls $A^1$ and $A^3$, and the corrugated angular sides $A^2$, vents B and recesses C, all operating substantially as and for the purposes herein set forth.

**No. 55,483. Computing Scale.** (*Balance.*)

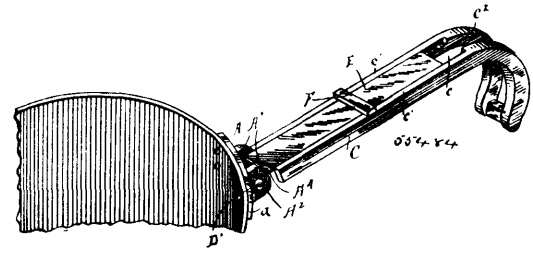



The National Computing Scale Co., assignee of John Henry Swihart, Cleveland, Ohio, U.S.A., 1st April, 1897; 6 years. (Filed 22nd January, 1897.)

*Claim.*—1st. In a computing scale, the combination with a graduated rate beam which has no sensible longitudinal movement, of movable fulcrum which is adapted to be moved into engagement with different parts of the rate beam, and is supported independently of the scale beams, substantially as and for the purpose specified. 2nd. In a computing scale, the combination of a rate beam which does not move longitudinally, and a fulcrum which is supported independently of the scale beams and is movable longitudinally of said rate beam, with means for relatively moving the fulcrum and scale beam toward and from each other to cause their engagement and disengagement, substantially as and for the purpose specified. 3rd. In a computing scale, the combination of a graduated valve beam, an auxiliary beam, a connecting rod for connecting the auxiliary beam with the platform levers or scale pan, and two freely swinging links suspended respectively from said two beams, with a horizontal rate beam extending between and freely suspended upon said links, and a horizontally movable fulcrum adapted to be moved into engagement with any part of the rate beam, substantially as and for the purpose specified. 4th. In the described scale, the fulcrum carriage which is mounted in horizontal grooves in the scale frame, and a vertically movable fulcrum block mounted upon said carriage, substantially as and for the purpose specified. 5th. In the described scale, a fixed rate plate graduated to correspond with the graduations in the rate beam, and a pointer secured to the fulcrum carriage and extended in front of said rate plate, substantially as and for the purpose specified. 6th. In the described scale, the fixed rate bar notched to correspond with the graduations on the rate beam, and a spring-actuated finger connected with the movable fulcrum, and adapted to engage with the notched edge of said bar, substantially as and for the purpose specified. 7th. In the described scale, the two stops placed respectively close to but out of contact with the ends of the rate beam, substantially as and for the purpose specified. 8th. A combined gravity and balance weight secured to beam A and adjustable thereon both vertically and in the arc of a circle, substantially as described.

**No. 55,484. Detachable Handle for Pans.**

(*Poignée pour casseroles.*)




Thomas Wright and Edmund A. Stansfield, both of Emans, Pennsylvania, U.S.A., 1st April, 1897; 6 years. (Filed 15th March, 1897.)

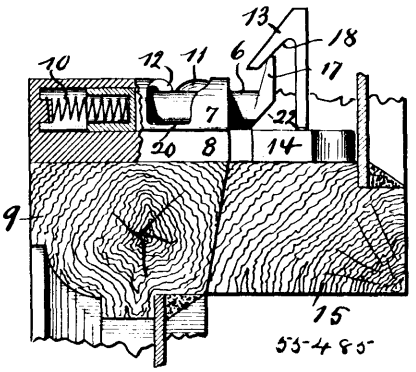
*Claim.*—1st. The combination with the coupling having ears with notches and openings and adapted for attachment to a pan, of the handle having a sliding catch and a hooked end, and a spring acting upon said slide, substantially as described. 2nd. The combination with the coupling having ears with notches and openings, one of which is open at its upper side, of a handle having an extension with a cross-bar and a sliding-catch, substantially as described. 3rd. The combination with a coupling having ears with notches and openings, one of which is open at its upper side, of a handle having an extension with a cross-bar and a sliding-catch, provided with a trigger and with a stop-plate, substantially as described. 4th. The combination with a coupling having ears and openings, one of which is open at its upper side, of a handle having an extension with a cross-bar adapted to said openings, the handle being hooked at its other end and a spring-actuated slide for movement lengthwise of the handle and having a bevelled end to engage the notches of the coupling, substantially as described. 5th. The combination with a coupling having ears with notches and openings, one of which is open at its upper side of a handle having an extension with a cross-bar adapted to said openings, the handle being hooked at its other end and a spring-actuated slide for movement lengthwise of the handle and having a bevelled end to engage the notches of the coupling, and a spring connected with said slide to normally hold it in engagement with said notches, substantially as described.

**No. 55,485. Sash Fastener.** (*Arrête-croisée.*)

Herbert C. Oettinger and Jacob Wallenstem, both of Cincinnati, Ohio, U.S.A., 2nd April, 1897; 6 years. (Filed 22nd July, 1896.)

*Claim.*—1st. In a sash-fastener, the combination of a housing 7, with flanges for attachment and a cylindrical bore closed at one end, a slot 12 in the upper bored part of the housing, a locking-bolt confined in the bore of the housing, a spring between the closed end of the latter and the bolt, an operating knob 11 on the latter, its shank projecting through slot 12, a projection 17 on the outer bolt end, a notch 16 branching off from slot 12, a hook-shaped catch 13 below which the outer bolt-end is adapted to pass, and inclined surfaces

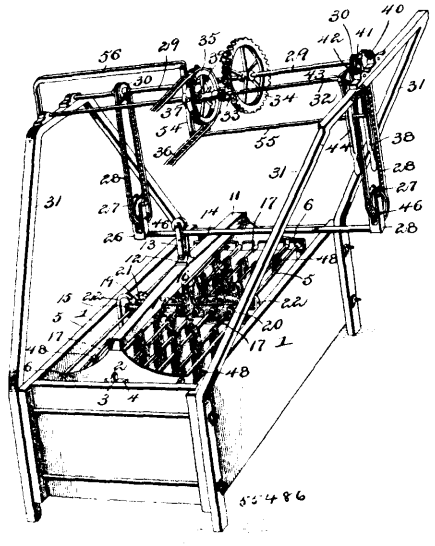
19 and 18, the former in notch 16, and the other on catch 13 which by contact with knob 11 and projection 17 respectively of the bolt




when the same is rotated, produce a compound and double action for the purpose described. 2nd. In a sash-fastener, the combination of a spring-bolt 6 having a lateral projection 17 at its end a bevelled surface 22 thereat with the projection 24 to one side, forming the extreme end of the bolt, a housing for the latter, a knob thereon, passing through a slot 12 in the upper part of the housing, a hook-shaped catch or keeper 13, lateral extensions of slot 12 in form of notches 16 and 20 in either one of which the knob of the bolt may be passed, receiving then a partial rotation to bring either extension 17 or bevelled surface 22 and projection 24 in their proper operative positions, the first to engage with the inclined undersurface 18 of the catch to secure the locked bolt in position, the other to permit, while opening to clear the catch leaving thereby also projection 24, in such position that on closing, it contacts with the upper surface of the catch in a manner to cause the bolt to become locked automatically.

**No. 55,486. Apparatus for Dyeing.**

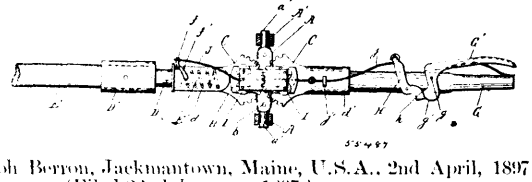
(*Appareil pour teindre.*)




Charles A. Hunt, Jr., Lexington, North Carolina, U.S.A., 2nd April, 1897; 6 years. (Filed 16th November, 1896.)

*Claim.*—1st. In a dyeing apparatus, the combination of a vat, a frame adapted to reciprocate therein, parallel plates carried by the frame, a train of gearing borne by the said plates and comprising intermeshing gear wheels and co-acting ratchet wheels at the ends of the ends of the train of gearing, supporting bars for the goods to be dyed having attachment with and operated by the train of gearing, and two pawls arranged within the vat, and having adjustable connection therewith, to engage with the co-acting ratchet wheels of said train of gearing to operate the latter by means of the reciprocating movement of the frame, substantially in the manner and for the purpose set forth. 2nd. In a dyeing apparatus, the combination of a frame comprising end pieces and longitudinal bars, means for imparting a vertical reciprocating movement to the frame, parallel plates located upon the longitudinal bars of the frame intermediate of their ends, a train of gearing comprising a ratchet wheel and individual gear wheels having laterally extending journals obtaining bearings in the said parallel plates, and having the said journals formed with angular openings, supporting bars located upon opposite sides of the train of gearing and having their outer ends journalled in the end pieces of the frame, and having their inner ends made angular and fitted into the angular openings of the individual elements of the train of gearing, and a pawl to engage with the ratchet wheel and actuate the train of gearing and the bars connected therewith, substantially as and for the purpose set forth. 3rd. In a dyeing apparatus, the combination with the vat, and a frame adapted to reciprocate therein, of a train of gearing mounted upon the said frame, a shaft extending lengthwise of the frame and operatively connected with the train of gearing, ratchet wheels at the ends of the shafts, and pawls having attachment with the vat and disposed to engage with the said ratchet wheels, substantially in the manner and for the purpose set forth. 4th. The combination with a vat, a frame, and a rotatable shaft, of an endless band connecting the frame with the rotatable shaft and receiving motion from the latter, and a pulley eccentrically mounted and located in a bight of the endless band to impart a reciprocating motion to the frame during the rotation or travel of the said band, substantially as set forth. 5th. The combination with a vat, and a frame placed therein to support the goods to be dyed, of a mounting operatively connected with the said frame, a sprocket pulley eccentrically journalled in the said mounting, a sprocket chain for driving the sprocket pulley to impart a reciprocating movement to the frame, and a locking pin to secure the sprocket pulley to its mounting, whereby when desired the frame can be lifted from the vat by applying power to the sprocket chain, substantially in the manner specified. 6th. The combination with a vat, and a frame to support the goods to be dyed, of a track having the frame suspended therefrom, pulleys eccentrically mounted at the ends of the track, and endless bands for driving the said pulleys to impart a vertical reciprocating movement to the track, substantially as set forth for the purpose described. 7th. The combination with a vat, and a frame adapted to receive the goods to be dyed, of a track arranged above the vat and having the frame suspended therefrom, sprocket pulleys eccentrically mounted at the ends of the track, an elevated power-driven shaft provided with sprocket pinions corresponding in position to the sprocket pulleys, sprocket chains connecting the sprocket pinions and sprocket pulleys, and means for locking the sprocket pulleys, whereby upon rotating the said power-driven shaft the track and the frame suspended therefrom will be elevated, substantially as and for the purpose set forth. 8th. The combination with a vat, and a frame adapted to receive the goods to be dyed, of a track having the frame suspended therefrom, sprocket pulleys eccentrically mounted at the ends of the track, an elevated shaft having sprocket pinions, sprocket chains connecting the sprocket pinions and sprocket pulleys, means for securing the sprocket pulleys against rotation, a ratchet and pawl for holding the said elevated shaft against rotation, and a brake mechanism to control the descent of the track upon releasing the said elevated shaft, substantially as set forth. 9th. A dyeing apparatus, comprising a vat, a frame disposed to reciprocate vertically within the vat, a train of gearing mounted upon the frame and having a ratchet wheel, a pawl attached to the vat and arranged to operate the train of gearing by the reciprocating movements of the frame, supporting bars for the goods to be dyed operated by the said train of gearing, a track having the frame suspended therefrom, sprocket pulleys eccentrically mounted at the ends of the track, an elevated shaft having sprocket pinions, sprocket chains connecting the sprocket pinions with the sprocket pulleys, locking pins for securing the sprocket pulleys against rotation, a ratchet-and-pawl mechanism for holding the said elevated shaft against rotation, a second shaft geared with the elevated shaft, a brake mechanism applied to the said second shaft, and means for applying power to and disconnecting it from the aforesaid second shaft, substantially as set forth for the purpose described.

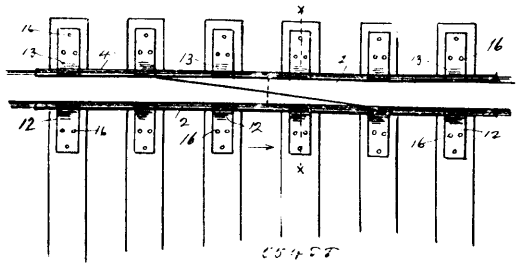
**No, 55,487. Oars.** (*Rames pour vaisseaux.*)




Joseph Berron, Jacksmantown, Maine, U.S.A., 2nd April, 1897; 6 years. (Filed 22nd January, 1897.)

*Claim.* 1st. The combination with a pivoted frame, of two intergearing toothed segments journalled in the frame, one of the said segments being provided with a socket having a spiral slot, shank revoluble in the said socket and provided with a pin engaging with the said slot, a spring pressing forward the said shank in the said socket, a handle secured to the other segment, lever mechanism pivoted to the said handle, a flexible connection connecting the said lever mechanism with the said pin, and guide rolls for the said connection carried by the said frame, substantially as set forth. 2nd. The combination with a pivoted frame, of two intergearing toothed segments journalled in the frame, a revoluble spring-pressed shank carried by one of the said segments, a handle connected with the other said segment, a lever pivoted to the said handle and provided with a heel, a second lever pivoted to the handle and provided with a heel operated by the aforesaid heel, and a flexible connection connecting the said second lever with the said shank, substantially as set forth.

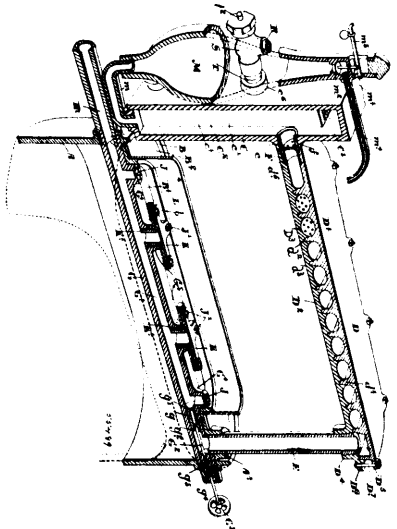
**No. 55,488. Rail Joint.** *(Joint de rail.)*



Winfield S. Smith, Kingman, Maine, U.S.A., 2nd April, 1897; 6 years. (Filed 6th November, 1896.)

*Claim.* In a railroad rail joint, the combination of two rails having their opposing ends overlapping and bevelled on their meeting faces, each rail having a side plate extending beyond its bevelled extremity and formed on its inner side with a longitudinal recess to receive an interlocking projection on the web portion of the adjacent rail, and means for securing the two rails together, substantially as set forth.

**No. 55,489. Water and Oil Burner and Gas Generator.** *(Brûleur à eau et huile et générateur à gaz.)*



Ezra Glassco, Brantford, Ontario, Canada, 2nd April, 1897; 6 years. (Filed 2nd February, 1897.)

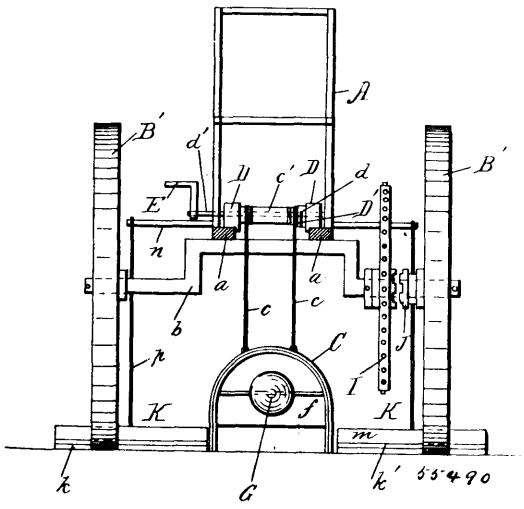
*Claim.*—1st. In a water and oil burner, in combination a base provided with a suitable central opening, a bridge spanning the opening, formed with a hollow passage-way, burners supported on the bridge and communicating with the passage-way, a retort suitably supported in proximity to the burners and provided with three vertical compartments, a compartment to receive the oil, a compartment to receive the water and an intermediate compartment all communicating with each other at the top, carbonate of lime in pebbly form situated in the oil and water compartments, suitable water and oil supply pipes leading to the side compartments, valves for the pipes, a deflecting crown provided with a serpentine passage-way and suitably supported above the burners, a nipple connecting one end of the passage-way of the crown to the central compartment of the retort and a pipe connecting the opposite end of the passage-way of the crown to the passage-way in the bridge as and for the purpose specified. 2nd. In a water and oil burner, in combination a base provided with a suitable central opening, a bridge spanning the opening formed with a hollow passage-way, burners supported on the bridge and communicating with the passage-way, a retort suitably supported in proximity to the burners and provided with three vertical compartments, a compartment to receive the oil, a compartment to receive the water and an intermediate compartment all communicating with each other at the top, carbonate of lime in pebbly form situated in the oil and water compartments, suitable water and oil supply pipes leading to the side compartments, valves for the pipes, a deflecting crown provided with a serpentine passage-way and suitably supported above the burners, a nipple connecting one end of the passage-way of the crown to the central compartment of the retort, a pipe connecting the opposite end of the passage-way of the crown to the passage-way in the bridge and a plug or sleeve to the inside of the pipe leading to the bottom passage-way having a small orfice and tapered recess leading to such orfice and a needle valve rod with tapered inner end extending through a space below the pipe and provided with a screwed portion extending through a corresponding hole in the plug to the outside of the passage-way and a hand wheel on the end of the valve rod as and for the purpose specified. 3rd. In a water and oil burner, in combination a base provided with a suitable central opening, a bridge spanning the opening formed with a hollow passage-way, burners supported on the bridge and communicating with the passage-way, a retort suitably supported in proximity to the burners and provided with three vertical compartments, a compartment to receive the oil, a compartment to receive the water and an intermediate compartment all communicating with each other at the top, carbonate of lime in pebbly form situated in the oil and water compartments, suitable water and oil supply pipes leading to the side compartments, valves for the pipes,a deflecting crown provided with a serpentine passage-way and suitably supported above the burners, a nipple connecting one end of the passage-way of the crown to the central compartment of the retort, a pipe connecting the opposite end of the passage-way of the crown to the passage-way in the bridge and an asbestos wicking surrounding the opening and supported upon the base and means for saturating such asbestos wicking with oil as and for the purpose specified. 4th. In a water and oil burner, in combination a base provided with a suitable opening, a bridge spanning the opening formed with a hollow passage-way, burners supported on the bridge and communicating with the passage-way, a retort suitably supported in proximity to the burners and provided with three vertical compartments, a compartment to receive the oil, a compartment to receive the water and an intermediate compartment all communicating with each other at the top, carbonate of lime in pebbly form situated in the oil and water compartments, suitable water and oil supply pipes leading to the side compartments, valves for the pipes, a deflecting crown provided with a serpentine passage-way and suitably supported above the burners, a nipple connecting one end of the passage-way of the crown to the central compartment of the retort, a pipe connecting the opposite end of the passage-way of the crown to the passage-way in the bridge, an asbestos wicking surrounding the openings and supported upon the base, and a plug provided with a small passage-way leading from the oil compartment of the retort over the wicking and a needle valve rod having a tapered inner end designed to close such passage-way extending through the retort and means for adjusting such valve longitudinally, as and for the purpose described. 5th. In a machine of the class described in combination, the base,the burners constructed as specified,the bridge for supporting the same provided with hollow passage-way leading to the burners, the openings at each side of the bridge and the upwardly extending flange surrounding the opening, as and for the purpose specified. 6th. In a machine of the class described, in combination the base, the burners constructed as specified, the bridge for supporting the same provided with hollow passage-way leading to the burners, the openings at each side of the bridge, the upwardly extending flange surrounding the openings, and an upwardly contracted extension surrounding the flange, as and for the purpose specified. 7th. The combination with the burners supported on the bridge and communicating with the bottom passage-way, and the retort formed as specified, of the deflecting crown comprising the bottom plate having cross corrugations and recesses, the top plate having depending ribs arranged alternately to extend to one side and then to the other, so as to form a continuous serpentine passage-way, the inclosing flanges of the plates and means for holding them together, the passage-way leading to the retort from the serpentine passage-way,and the pipe connecting the opposite end of the passage-way to the bottom passage-way in the bridge, as and for the purpose specified. 8th. In a device of the class described, a retort, side compartments to receive the oil and water, a needle valve for each compartment attached directly to the retort and comprising a plug with a small passage-way leading into the compartment, a valve rod with tapered end designed to close the end of this passage-way, a pipe joint or coupling forming a space outside the valve,a pipe leading from such space to the reservior, and means for longitudinal adjusting the valve rod to and from its seat, as and for the purpose specified. 9th. In a device of the class described, the retort, side passage-way, the central passage-way communicating with the side passage-ways, a compression chamber connected by a pipe to the central compartment, a weighted lever at the top of the compression chamber, and a pipe leading out from the top of such compression chamber above the valve seat, as and for the purpose specified.

**No. 55,490. Machine for Exterminating Vegetation.** *(Sarcleur.)*

Andrew Thomson Fotheringham and Robert McDonell, both of Grenfell, North West Territories,Canada, 2nd April, 1897; 6 years. (Filed 14th November, 1896.)

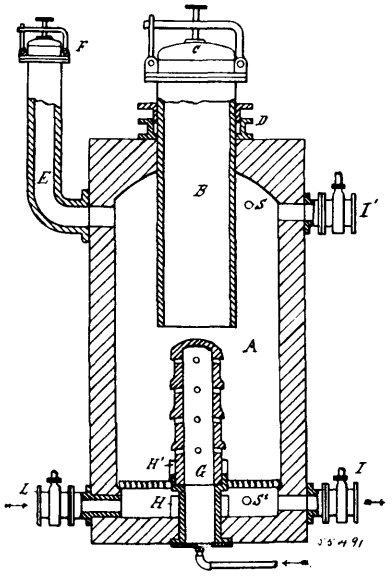
*Claim.*—1st. In a vegetation exterminator, the combination, with an arch shaped chamber, of a fan communicating with the said chamber, substantially as set forth. 2nd. In a vegetation exterminator, the combination, with a supporting frame, of a series of telescopic arch shaped sections carried by the said frame, substantially as set forth. 3rd. In a vegetation exterminator, the combination, with a supporting frame, of a series of telescopic arch shaped sections carried by the said frame, and lifting devices for raising and lowering the said sections, substantially as set forth. 4th. In a vegetation exterminator, the combination, with a frame mounted on wheels of an arch shaped chamber carried by the said frame, a fan connected to the said chamber, and driving devices operatively connecting

the said fan with one of the said wheels, substantially as set forth. 5th. The combination, with a portable vegetable exterminator, of



extinguishers each consisting of a flexible metallic layer, a layer of hide above it, and weights above the hide, and flexible connections attaching the said extinguishers, to the exterminator, substantially as set forth.

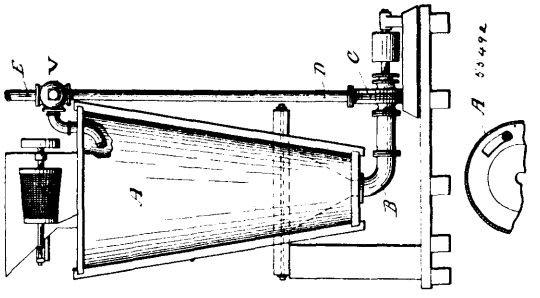
**No. 55,491. Fire Escape.** (*Sauveteur d'incendie.*)



Zdzislaw, Szpor, Krakau, Galicia, Austria, 2nd April, 1897; 6 years. (Filed 8th February, 1897.)

*Claim.*—1st. In a fire escape, the combination with an outer frame, of an inner frame pivotally connected with said outer frame, an intermediate frame between said outer and inner frame and eccentrically arranged on their pivotal connection, a spiral spring connecting the outer and the intermediate frame, and a series of pins arranged in each of said frames and adapted to form a passage for the main rope, all said parts being so arranged, that when the inner frame is operated, the said series of pins are brought into frictional contact with the main rope, substantially as described. 2nd. In a fire escape, the combination with an outer frame, of an inner frame pivotally connected with said outer frame, an intermediate frame between said outer and inner frame and eccentrically arranged on their pivotal connection, a spiral spring connecting the outer and the intermediate frame, a series of pins arranged in each of said frames, and a spring controlled lever pivotally secured within the intermediate frame and in engagement with the main rope and adapted to be controlled by the inner frame, all said parts being so arranged, that when the inner frame is swung upwards, the said lever disengages the rope, and when swung downwards, the series of pins are brought into frictional contact with the said main rope, substantially as described.

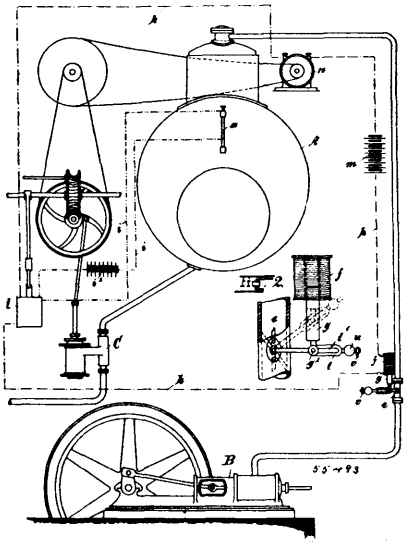
**No. 55,492. Agitating Apparatus.** (*Appareil agitateur.*)



Charles S. Wheelwright, Providence, Rhode Island, U.S.A., 2nd April, 1897; 6 years. (Filed 6th February, 1897.)

*Claim.*—The combination with a conical tank or a tank with a conical bottom, of a centrifugal or similar continuously discharging pump connected with the bottom of said tank by a suction pipe, and with the top of said tank by a return pipe, entering at one side tangential with the periphery thereof, substantially as described.

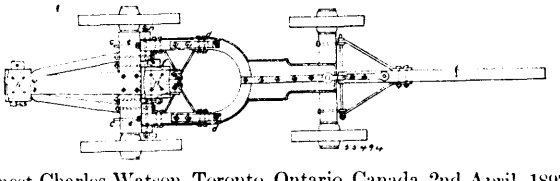
**No. 55,493. Electric Water Gauge and Stopping Machine.** (*Indicateur électrique du niveau d'eau et machine à arrêter.*)



Hermann Biermann, of Breslau, Germany, 2nd April, 1897; 6 years. (Filed 1st March, 1897.)

*Claim.*—1st. In a water-level indicator according to patent No. 52,475 an arrangement for automatically stopping the motor B fed by the steam boiler A on starting the feed pump C, and starting it again, consisting of a wire coil *f* inserted into the circuit *h*, of the generator *m* working the electro-motor *n* for the feed pump *l*, attracting the anchor *g* connected with the steam valve *e* of the motor B, as soon as the electric conductor *i*, *h* is closed by the float of the water-level indicator *a*, when the lowest water-level permissible in the boiler A has been reached, thus closing the valve *e*, while the wire coil *f* is deprived of its current and the anchor *g* released as soon as the circuit *i*, *h* is broken by the feed pump C after the highest water-level in the boiler A has been reached, so that the steam valve *e* may be opened by a counter weight.

**No. 55,494. Wagon for Transplanting Large Trees.** (*Wagon pour transplanter les gros arbres.*)

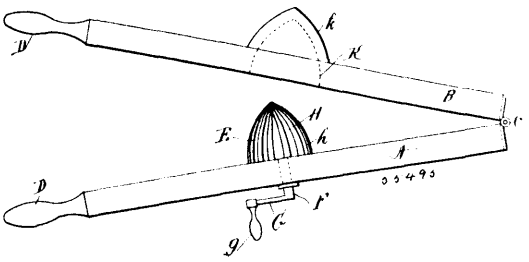


Ernest Charles Watson, Toronto, Ontario, Canada, 2nd April, 1897; 6 years. (Filed 8th March, 1897.)

*Claim.*—1st. The method of attaching the reach to the hind axle by the bolts *n*, *n*, and the chains *a*, *a*, substantially as and for the purpose hereinbefore set forth. 2nd. The method of attaching the tree to the hind axle by means of the blocks *f*, *f*, *f*, the iron spikes

*h*, *h*, in the iron plates *g*, *g*, the chain *k*, *k*, the clevis *s*, *s*, the bolt *m* and the winged nut *o*, substantially as and for the purpose hereinbefore set forth.

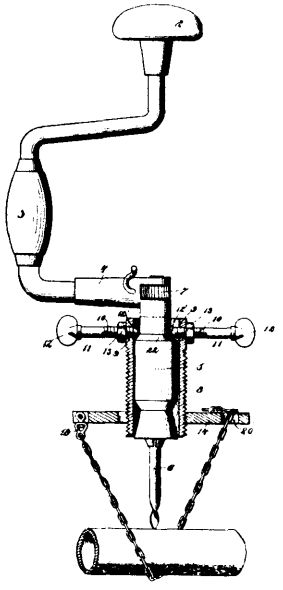
**No. 55,495. Lemon Juice Extractor.** (*Pressoir à citron.*)




Fred. Waldhams Wright, Jackson, Tennessee, U.S.A., 2nd April, 1897; 6 years. (Filed 5th March, 1897.)

*Claim.*—The herein described device for extracting the juice of lemons and other fruit, consisting of two hinged parts having handles formed on their free ends, one of said parts carrying a cone having a corrugated outer surface mounted on a shaft passing through said part, the outer end of said shaft having a shank and handle whereby the cone may be rotated, the other of said parts being provided with an opening above which is placed a hollow cone adapted to receive the first mentioned cone, constructed and adapted to operate in the manner specified.

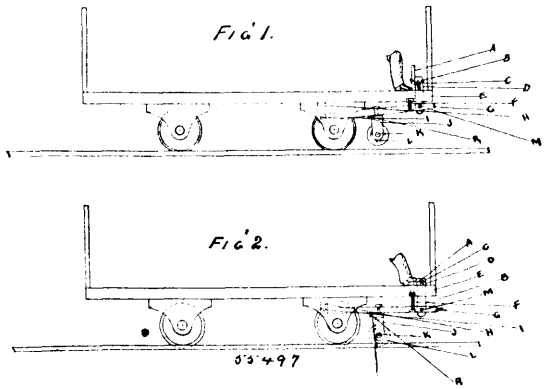
**No. 55,496. Drill Chuck.** (*Mandrin à forer.*)



Charles Davis Cutts, Fort Fairfield, Maine, U.S.A., 2nd April, 1897; 6 years. (Filed 8th March, 1897.)

*Claim.*—1st. In a drill chuck of the character described, the combination with a sleeve and sleeve securing mechanism, of a travelling nut carried by the sleeve, and a chain adjustably carried by the nut, substantially as specified. 2nd. In a drill chuck of the character described, the combination with an externally screw-threaded sleeve, of adjustable sleeve retaining mechanism, a travelling nut carried by the sleeve, and a chain adjustably carried by the travelling nut, substantially as specified. 3rd. In a drill chuck of the character described, the combination with an externally screw-threaded sleeve, of abutment screws carried thereby, locking nuts upon said screws, a travelling chain nut carried by the sleeve, a chain secured to one side of the travelling nut, and a chain clamp upon the opposite side of said nut designed to adjustably secure the chain, substantially as specified. 4th. In a drill chuck of the character described, the combination with a cylindrical sleeve externally screw-threaded and provided with a plurality of threaded taps near one extremity, of threaded abutment screws piercing said taps and provided with rounded ends, lock nuts upon said abutment screws, a travelling chain nut provided with an internal threaded bore designed to receive the chuck sleeve, and with oppositely extending chain clamps, a chain secured to one of said clamps, and a T-shaped slot constituting a negative element of the other of said clamps and designed to adjustably retain the free end of the chain, substantially as specified.

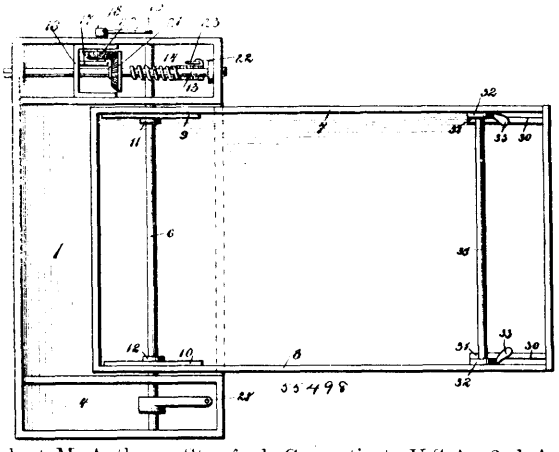
**No. 55,497. Car Switch.** (*Aiguille automatique pour chars.*)




Herrick Hewitt Roche, Kingston, Ontario, Canada, 2nd April, 1897; 6 years. (Filed 13th March, 1897.)

*Claim.*—The method as above set forth of guiding a car at a switch by means of employing a foot lever A, and a catch C, on the car platform, for the purpose of depressing a flanged-wheel L, carried in a freely turning box J, on an arm G, beneath the car, to engage with a stationary rail U, laid between the other rails at the switch, and which will lead the car in the direction required.

**No. 55,498. Folding Bed.** (*Lit pliant.*)

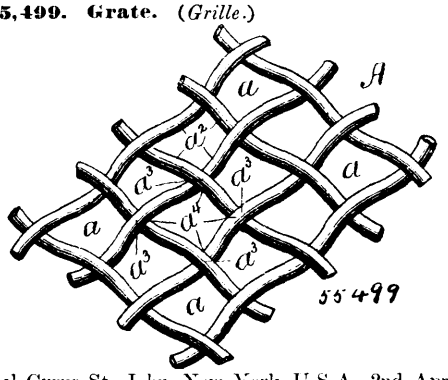



Robert M. Anthony, Stamford, Connecticut, U.S.A., 2nd April, 1897; 6 years. (Filed 16th March, 1897.)

*Claim.*—1st. A folding bed comprising a head portion, sides, a shaft extended through said sides, and a head portion to which the sides are secured, a toothed segment on said shaft, an operating shaft meshing with said segment for operating the shaft and closing the bed, a foot piece adapted to swing out of the way when the bed is to be closed, and a means for imparting motion to the operating shaft, substantially as described. 2nd. A folding bed comprising a head section, side pieces adapted to close within said section, a shaft extended through the head section to which the side pieces are secured, a toothed segment on one end of said shaft, a shaft having a worm gear intermeshing with said toothed segment for operating the same and closing the bed, ropes attached to one end of said shaft and having at their opposite ends counter-weights, a foot piece for said bed pivoted to swing upwardly and out of the way when the bed is to be closed, and a means for operating the worm gear for closing the bed, substantially as described. 3rd. A folding bed comprising a head section provided with side compartments and a top, a shaft extending through the compartments, side pieces secured to the shaft, a toothed segment on one end of the shaft within one of the compartments, a shaft extended longitudinally through said compartment, a worm gear on said shaft adapted to intermesh with the toothed segment, a crank attached to said shaft for operating the worm gear and raising the side pieces, and a swinging foot board pivoted to the opposite ends of the side pieces, substantially as described. 4th. A folding bed comprising a head section, a shaft extended transversely through said head portion, side pieces secured to the said shaft, a foot piece, levers pivoted at one end to the foot piece and curved at their opposite ends, a shaft extended transversely through the side pieces adjacent the foot piece, operating discs upon the ends of said shaft to which the curved ends of the levers are secured, operating handles upon the operating discs for moving the same and swinging the foot piece out of engagement with the side pieces and upwardly upon the bed clothes where it is adapted to be secured, and a means for operating the first named shaft and swinging the side pieces within the head

section, substantially as described. 5th. A folding bed comprising a head section having side compartments and a top, a shaft extended transversely through the head section, side pieces secured to the said shaft, a toothed segment upon one end of the shaft and within one of the compartments, a lug formed upon the toothed segment, a rope secured at one end of the lug and extending upwardly over a pulley suitably journalled in the top of the head section, a weight attached to the end of the rope, an arm attached to the opposite end of the shaft within the other compartment, a rope secured to said arm and extending upwardly over the pulley at the top of the head section, a weight upon the end of the rope, a foot piece, and a means for operating the shaft and swinging the side pieces and foot piece within said section, substantially as described. 6th. A folding bed comprising a head section formed with a top and with side compartments, a shaft extended through the head section, a toothed segment upon one end of the shaft and within one of the compartments, a second shaft extended longitudinally through the said compartment, and provided with a worm gear intermeshing with the toothed segment, a casting attached to the inner wall of the compartment, a short shaft extended through the side of the compartment and the casting, a mitre gear carried by the short shaft, a mitre gear upon the worm gear shaft adapted to intermesh with the first-named mitre gear, a crank upon the end of the short shaft for operating the mitre gears and swinging the side pieces upwardly within the head section, and a foot piece attached to the side pieces, substantially as described.

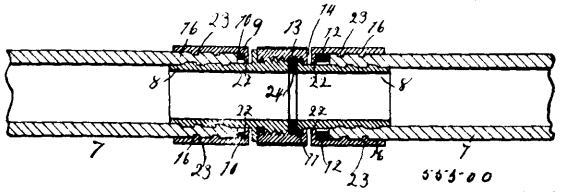
**No. 55,499. Grate.** (*Grille.*)




Gamaliel Cyrus St. John, New York, U.S.A., 2nd April, 1897; 6 years. (Filed 16th March, 1897.)

*Claim.*—1st. A grate in the nature of a warped and woofed reticulated structure, substantially as described. 2nd. A grate in the nature of a reticulated structure, and a reinforcing frame or rim surrounding the grate, substantially as described. 3rd. A grate comprising an open-work body portion, and a frame surrounding and reinforcing the body portion, substantially as described. 4th. A grate comprising an open-work body portion, and a frame or rim cast integral with the body portion, substantially as described. 5th. A grate in the nature of a reticulated structure, and a reinforcing frame or rim secured to and constituting the perimeter of the grate, the grate being substantially a plane surface freely exposed underneath, substantially as described. 6th. A grate having its body portion constructed of interlaced or interwoven wires or rods, and a reinforcing frame or rim secured to and constituting the perimeter of the grate, the combined area of the draft-spaces being greatly in excess of the area of the metal presented to the direct action of the heat, whereby a strong and constant upward draft will be generated by the rapid intake of air beneath the grate, operating to convey the heat away from the meshes or webs constituting the fuel-supporting surfaces, and also shielding these surfaces, thereby protecting them from rapid destruction, substantially as described. 7th. A grate in the nature of a reticulated or woven structure having raised portions at the air-openings constituting fuel supports, and a reinforcing frame or rim secured to and constituting the perimeter of the grate, substantially as described. 8th. An endless travelling grate, comprising a plurality of open-work grate surfaces, and a frame inclosing each surface, substantially as described.

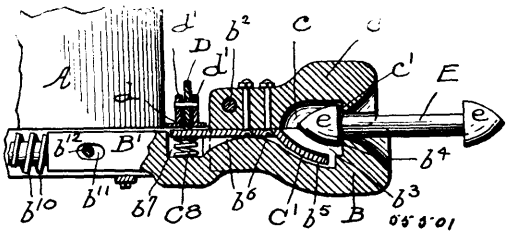
**No. 55,500. Hose-coupling.** (*Joint de boyau.*)




John H. Hess, Milwaukee, Wisconsin, U.S.A., 2nd April, 1897; 6 years. (Filed 16th March, 1897.)

*Claim.*—In a hose-coupling, the combination of a hose-section, a tube inserted therein, said tube provided with a lug or lugs, a clamp consisting of two similar half-sections hinged together at their meeting edges, and provided at their outer edges with outstanding projections having registering apertures, said sections adapted to embrace the hose, and provided at their outer ends with right-angular inwardly-extending shoulders adapted to engage back of the lug or lugs of the tube, a thumb-screw passing through the registering apertures of the outstanding projections of the hinged sections, and a nut engaging the tube, and adapted for engagement with another part.

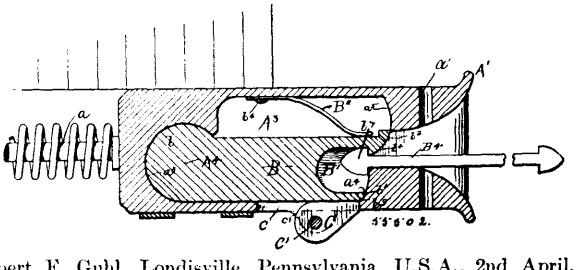
**No. 55,501. Car Coupling.** (*Attelage de chars.*)




Frederick Linde, Donaldsonville, Louisiana, U.S.A., 2nd April, 1897; 6 years. (Filed 16th March, 1897.)

*Claim.*—1st. In a car-coupler, the combination with a lower jaw of a hinged upper jaw, said jaws constituting the draw-head, a link, lifting lever attached to said latter jaw and projecting to the rear of the same, a spring acting on said lever for keeping the jaw normally closed, and a cam-lever adapted to engage said lifting-lever to raise the upper jaw and disengage the coupling-link, substantially as described. 2nd. In a car-coupler, the combination with a lower jaw forming one part of the draw-head, and having laterally-extending projections and upwardly-extending lugs, of an upper jaw forming the other part of the draw-head, and pivoted between said lugs, a link-lifting lever attached to said jaws, and means for lifting said jaw to disengage the coupling-link, substantially as described. 3rd. In a car-coupler, the combination with a lower jaw, of an upper jaw pivoted thereto, but being shorter than the same, said jaws constituting the draw-head, and applied so that the shock of concussion is received by the lower jaw alone, a link-lifting lever attached to the upper jaw, and means for lifting said upper jaw, substantially as described. 4th. In a car-coupler, the combination with a lower jaw forming one part of the draw-head and having laterally extending attaching projections, upwardly-extending lugs and a spring-receiving recess, an upper jaw forming the other part of the draw-head and pivoted between said lugs, a link-lifting lever attached to said latter jaw and projecting to the rear of the same over the spring-recess, a coil-spring in said recess and bearing against said lever, and a cam-lever for depressing the rear end of the link-lifting lever to lift the upper jaw and release the coupling-link, substantially as described. 5th. In a car-coupler, the combination with a lower jaw forming one part of the draw-head and having a rearwardly-extending draw-bar, a spring attached to said draw-bar to resist shocks, an upper pivoted jaw forming the other part of the draw-head, a link-lifting lever attached to said latter jaw and projecting to the rear of the same, a spring connecting said lever and the lower jaw to hold the jaws normally closed, and a cam-lever for depressing the end of the lifting-lever to uncouple, substantially as described.

**No. 55,502. Car Coupling.** (*Attelage de chars.*)

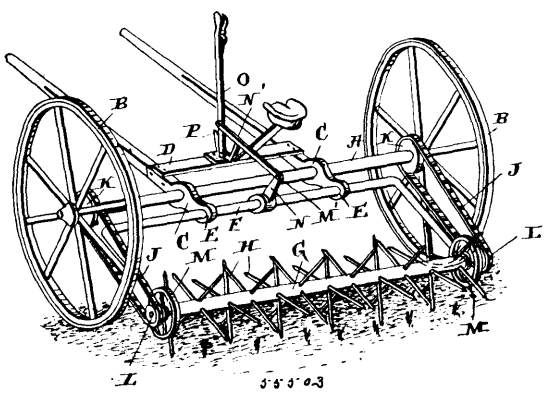



Albert F. Guhl, Londisville, Pennsylvania, U.S.A., 2nd April, 1897; 6 years. (Filed 16th March, 1897.)

*Claim.*—1st. In a car coupling of the character described, in combination, the draw-head A having the bull-nose $A^1$ and the plate $A^2$ secured into a side thereof, the housing-chamber in the forward end of the draw-head with the circular rear end wall $a^3$ and the circular front end wall portions $a^4$ and $a^5$, said circular portions having different radii from the common centre $A^4$, having also the link-aperture through the bull-nose end thereof opening into said chamber, and the side opening thereinto with the plate $A^2$ adapted to close said opening, the coupling-block B housed within the chamber and having the circular rear end portion $b$ engaging the wall portion $a^3$ and the circular front end portions $b^1$ and $b^2$ engaging the wall portions $a^4$ and $a^5$, said block having in its forward end the link-socket $B^1$ with the link-engaging hook $b^4$ and the link-lifting portion $b^5$, with mechanism provided to raise the forward end of said block, and a spring $B^2$ as shown to press said end normally

down, all substantially as described and for the purpose hereinbefore set forth. 2nd. In an automatic car coupling, with a draw-head adapted to be secured to the body of a car as shown, a coupling-block housing chamber within the draw-head, near to the bull-nose end thereof, having the recess 11 in the rearward end wall, and the abutting end portions 13 and 14 in the forward end wall, the curved portions having each a different radial extent from the pivot-point 12, with the link-mouth 9, opening through the bull-nose face into the chamber, having the curved portion, 15 about, and the link-holding hook 16, within said opening, with a link-shaft recess on each side of the hook, of a two-parted block, rule-jointed at one end, fitted into said chamber, and a plate secured into the bottom of the draw-head, with means provided, such as the described link 38, to connect two draw-heads, and with mechanism provided to manipulate said block, substantially as described and for the purpose hereinbefore set forth. 3rd. In an automatic car coupling of the character described, a coupling-block comprising two portions, placed one above the other, rule-jointed at one end and adapted to be placed within the housing-chamber as shown, the jointed end within the rear end wall recess, and the forward ends of the portions in contact with the curved portions of the forward end wall, a notched spring-arm-supporting strip secured forwardly to the top of the upper portion, a coupling-link end recess in the adjacent faces of both of the portions, with a link-retaining hook constituting the front wall of said recess in the upper portion, and an edge ledge rearward of said wall in the top of said recesses, a vertical opening through the body of the open portion of the block, and a lifting finger or lug, as shown, extending through said opening and secured to the under face of the upper portion of said block, all substantially as described and for the purpose hereinbefore set forth. 4th. In a car coupling of the character described, with a draw-head having the usual bull-nose end, the usual link-entering opening therein, with a link-retaining nose or coupling-hook and a link-shaft channel on either side of said hook, of the coupling-block housing-chamber opening through the bottom thereof and situated in the forward portion of the draw-head with a bottom plate provided to close said opening, said chamber having a rear end wall recess with a circular arched upper face, and lower and upper front end wall circular arc portions, said arched face and circular arc portions radiating from a common centre and situated at different radial distances from said centre, said centre constituting the pivot-axis of the coupling-block, and the rearwardly and downwardly sloping concaved portion on either side of said link-entering opening joining said circular arc portions, all substantially as described and for the purpose hereinbefore set forth.

**No. 55,503. Rotary Weeder.** (*Sarcleur rotatoire.*)



Everett C. Welch, Friedeno, Pennsylvania, U.S.A., 3rd April, 1897; 6 years. (Filed 16th March, 1897.)

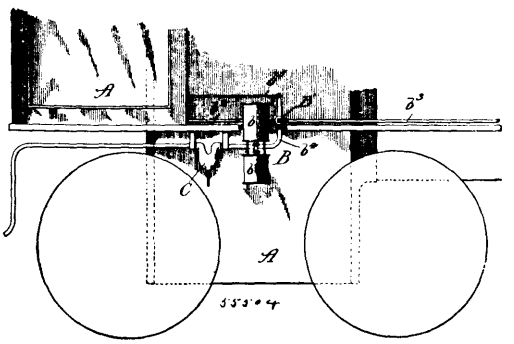
*Claim.*—1st. An improved implement of the class described comprising the main shaft, the drive-wheels, the boxings on the main shaft, the thill frame extended forward therefrom, the bearings extended rearward from the boxings, the bail-frame secured and adapted to vibrate in said bearings, the rotary weeder journalled in the ends of the said bail-frame, and a mechanism for rotating the weeder, substantially as shown and described. 2nd An implement of the class described comprising the main shaft and drive-wheels, the boxings on the main shaft, the thill-frame extended forward therefrom, the bearings extended rearwavd from the boxings, the vibratory frame secured in said bearings, the arm extended upward from the frame, the hand lever, the link connecting the arm and hand lever, the rotary weeder carried by the vibratory frame, the sprocket wheels and the pinions for imparting motion to the weeder, substantially as shown and described.

**No. 55,504. Locomotive Feed Water Heater.**

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

Joshua Bartlett Barnes, Springfield, Illinois, U.S.A., 3rd April, 1897; 6 years. (Filed 16th March, 1897.)

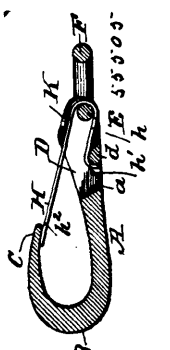
*Claim.*—1st. In a feed-water heater for locomotives, the combination of a tender provided with a water-holding chamber, a horizontal pipe arranged therein adjacent to the bottom portion, a series of vertical stand-pipes having nozzles at or near their upper portion to



assist in relieving back pressure, and a pipe connecting the horizontal pipe with a source of exhaust steam, substantially as described. 2nd. In a feed-water heater for locomotives, the combination of a tender provided with a water chamber, a horizontal pipe arranged in such chamber at or near the bottom portion of the same, a series of vertical stand-pipes arranged thereon having return bends at their upper portions, nozzles on such return bends, and a pipe connecting the horizontal pipe with a source of exhaust steam supply, substantially as described. 3rd. In a feed-water heater for locomotives, the combination of a tender provided with a water chamber, a horizontal heating pipe arranged therein adjacent to the bottom portion, a series of vertical stand-pipes arranged on the horizontal pipe and provided with return-bend upper portions having reduced nozzles extending downwardly to permit the exhaust of vapour and relieve back pressure, and a pipe connecting the horizontal pipe with a source of exhaust steam supply, substantially as described. 4th. In a feed-water heater for locomotives, the combination of a tender provided with a water chamber, a horizontal heating pipe arranged on the chamber and adjacent to the bottom portion thereof, a series of vertical stand-pipes arranged thereon and provided with return-bend upper portions having nozzles of a reduced diameter, the last of the series being provided with a nozzle or a larger opening than the rest, and a pipe of smaller diameter than the horizontal pipe connecting it with a source of exhaust steam supply, substantially as described. 5th. In a feed-water heater for locomotives, the combination of a tender provided with a water chamber, a horizontal heater pipe arranged therein adjacent to the bottom portion, a series of vertical stand-pipes having return-bend upper portions and nozzles of a reduced diameter, a pipe connecting the horizontal pipe with the exhaust opening of the steam pump, a three-way valve interposed on such exhaust steam supply pipe, and a pipe connecting one of the exhaust openings of the three-way valve with the stack of the locomotive, whereby steam may be shut off from the heater in the tender and forced out through the ordinary passage in the stack or vice versa, substantially as described. 6th. In a feed-water heater for locomotives, the combination of a tender provided with a water chamber, a horizontal heater pipe arranged therein and adjacent to the bottom portion thereof, a series of vertical stand-pipes on such horizontal pipe provided with return-bend upper portions having nozzles of reduced diameter, a pipe connecting the horizontal heater with a source of exhaust steam supply, and an oil separator on such exhaust supply pipe, substantially as described.

**No. 55,505. Spring Tongue Snap-Hook.**

(*Crochet à ressort de flèche.*)

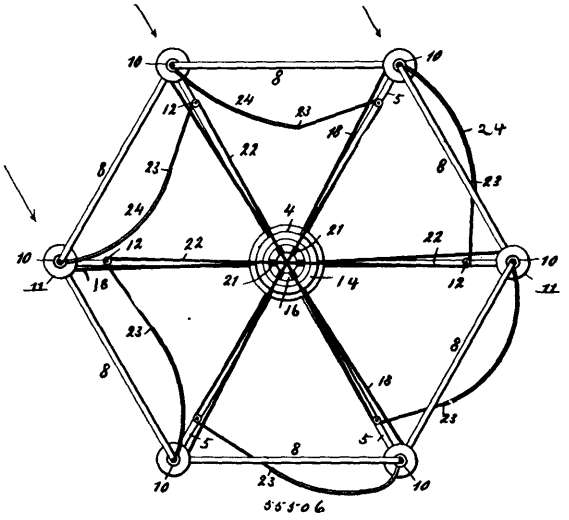


James C. Covert, Waterslist, New York, U.S.A., 3rd April, 1897; 6 years. (Filed 16th March, 1897.)

*Claim.*—1st. In a spring tongue snap-hook, a body and hook portion, separated cheek portions, a U-shaped spring tongue secured between the cheeks, and means for preventing the upward movement of the tongue consisting of the turned over upper portions of the cheeks with which the tongue engages. 2nd. A spring tongue

snap-hook consisting of a body and hook portion, the separated cheek portions, a U-shaped spring tongue secured between the cheeks, and means for holding the tongue in place against upward movement consisting of reduced bent over upper portions of the cheeks. 3rd. A spring tongue snap-hook, consisting of the body, hook and separated cheeks, a U-shaped spring tongue secured between the cheeks and extending forward its upper portion being below the plane of the upper portions of the cheeks, and means for holding the tongue in proper relation with the hook consisting of tapered or reduced portions of the cheeks, the said portions being tapered from at or near the plane of the spring tongue and bent over and into close proximity to the upper face of the tongue, substantially as described. 4th. A spring tongue snap-hook consisting of the body and hook, the separated cheeks connected by a curved cross-bar located at a point adjacent to their lower edges and between their ends, and a U-shaped spring tongue engaging the nose of the hook at one end and its opposite end being curved into a well defined hook the curvature of which corresponds substantially with that of the cross-bar around which the hook engages. 5th. A spring tongue snap-hook consisting of a body and hook portion, the separated cheek portions, a cross-bar uniting the cheek portions, and a U-shaped spring tongue having one end engaging the nose of the hook and its opposite end bent into a hook engaging around the said cross-bar, substantially as described.

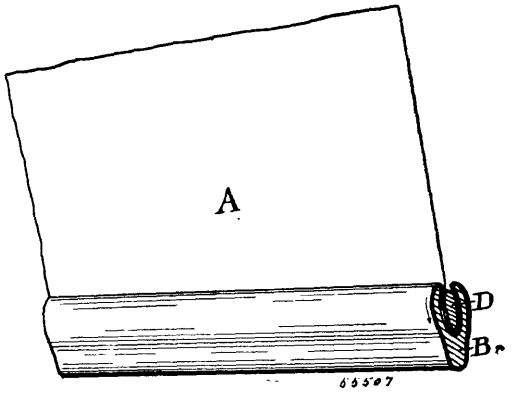
**No. 55,506. Wind Mill.** (*Moulin à vent.*)



Daniel W. Auld, Sibley, Missouri, U.S.A., 3rd April, 1897; 6 years. (Filed 16th March, 1896.)

*Claim.*—1st. A wind mill, comprising a vertical rotatable shaft, a wheel frame mounted rigidly thereon, rotatable sleeves carried by said frame, flexible sails secured to said sleeves, an adjustable weight, flexible connections suitably guided between said weights and said sails, and means for rotating said sleeves, in opposition to said weight. 2nd. A wind mill, comprising a vertical rotatable shaft, a wheel frame mounted rigidly thereon, vertical rotatable sleeves carried thereby and provided with winding drums, flexible sails secured to said winding drums, a sliding weight, flexible connections suitably guided between said weight and said sails, and flexible connections suitably guided and attached at their upper ends to said winding drums, substantially as and for the purpose set forth. 3rd. In a wind mill, comprising a vertical rotatable shaft, a weight upon said shaft which has sliding but not independent rotatable movement upon said shaft, a wheel frame mounted rigidly upon said shaft, vertical rotatable sleeves carried thereby and provided with winding drums, flexible sails attached to said sleeves, flexible connections suitably guided between said weight and said sails, and cords or cables suitably guided and attached to said winding drums, and a suitable fastening device to which the lower end of said cords or cables may be secured. 4th. A wind mill, comprising a suitable framework, a vertical hollow shaft journalled therein and provided with longitudinal slots and external ribs, a wheel frame mounted rigidly upon the upper end of said shaft and provided with the hub portion having series of superposed guide pulleys and an apertured flange surrounding the same, cylindrical rods erected vertically at the outer ends of the arms of said frames and suitably braced, sleeves mounted rotatably upon said rods and provided with winding drums, a series of guide rollers located inward of the vertical rods, flexible sails secured to said sleeves, a weight embracing the hollow shaft and provided with longitudinal grooves embracing the ribs of said shaft, and with a transverse rod or bail which extends through the slots of the shaft, a series of cords or cables suitably guided around the last mentioned series of rollers and over the upper series of guide rollers first mentioned, and connecting the free ends of the sails with the bail of the sliding weight, a second series of cords or cables which are attached at their outer ends to said drums and are guided through and over the apertured flange and the lower series of guide rollers first-named, and a fastening device, to which the lower ends of said series of cords or cables may be attached, substantially as shown, and for the purpose set forth.

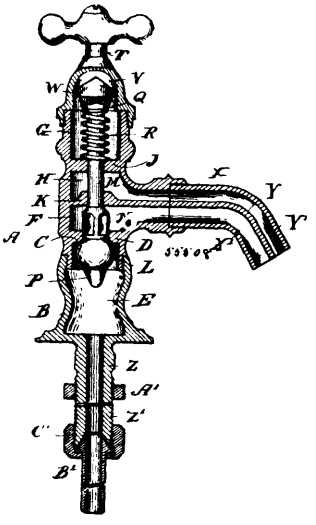
**No. 55,507. Curtain Fixture.** (*Appareil de rideau.*)




Edward Alfred Roberts, Cleveland, Ohio, U.S.A., 3rd April, 1897; 6 years. (Filed 17th March, 1897.)

*Claim.*—The combination with the shade A, of the strip B having the groove C and the oval strip D, said oval strip D adapted to be inserted by pressure in the groove by the springing of the sides of the binding strip, substantially as described.

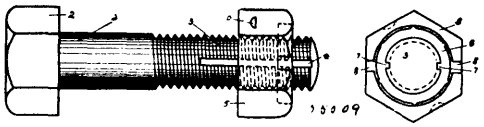
**No. 55,508. Faucet.** (*Fausset.*)



Wilson G. Cornell, Chicago, Illinois, U.S.A., 5th April, 1897; 6 years. (Filed 17th March, 1897.)

*Claim.*—1st. A self-closing faucet having a sectional casing, one section of which is provided with partitions forming pressure and dry chambers respectively at the ends thereof, with intermediate receiving and reservoir chambers, a valve adapted to control the passage between said receiving and pressure chambers, mechanism for opening said valve, means in said dry chamber for automatically closing said valve, and a nozzle having a partition therein forming passages leading from said receiving and said reservoir chambers respectively, said partition extending to the outer end of said nozzle and being continuous of the partition between said receiving and reservoir chambers, substantially as and for the purpose set forth. 2nd. A self-closing faucet having a sectional casing, one section of which has partitions forming at the ends thereof, pressure and dry chambers respectively with intermediate receiving and reservoir chambers, a valve with stem closely fitting in said partitions, a spring in said dry chamber for seating said valve, a cap-section, means having a bearing in said cap-section for operating said stem and valve, and a nozzle on said first mentioned section with a partition therein forming passages leading from said receiving and said reservoir chambers respectively, said partition extending to the outer end of said nozzle and being continuous of the partition between said receiving and reservoir chambers, substantially as and for the purpose set forth.

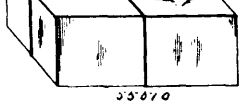
**No. 55,509. Nut Lock.** *(Arrête-écrou.)*



Harry J. Buell, Fort Waynes, Indiana, U.S.A., 5th April, 1897; 6 years. (Filed 18th March, 1897.)

*Claim.*—1st. The combination with the screw threaded bolt having one or more longitudinal grooves in the threaded portion thereof, of a nut fitting said bolt and having a recess or countersink in the outer face thereof surrounding the bolt opening and adapting to receive a metallic washer, and an annular washer having upon its inner perimeter one or more interlocking flanges adapted to register with said grooves of the bolt, and provide on its outer perimeter with a plurality of serrations adapted to impinge upon the said nut, as described, and thereby prevent its rotation by a binding friction therewith. 2nd. In the nut lock the combination of a screw threaded bolt having one or more longitudinal grooves in the threaded portion thereof, a nut fitting said bolt, recessed upon its outer face to form a seat for a fixed washer, and provided with one or more radial slots 8 for the purpose specified, a washer 6 having one or more ribs or flanges 7 adapted to form an interlocking engagement with said grooves and provided upon its perimeter with a series of serrations adapted to prevent the rotation of said washer by forming a binding friction therewith as described, and a spring plate 13 adapted to secure the said washer against displacement by an interlocking engagement with the said nut, all substantially as described. 3rd. In a nut-lock a metallic washer 6 adapted to form a locked engagement with the threaded bolt, and having its perimeter provided with a plurality of serrations adapted to secure the nut fitting said bolt against rotation by a binding friction therewith, substantially as described. 4th. The combination with the grooved bolt of the nut having an annular recess surrounding the bolt-aperture, and a washer provided with an inwardly projecting tongue, or tongues, and peripheral teeth, substantially as shown and for the purpose set forth. 5th. In a nut-lock, the combination, of a grooved bolt, a nut having an annular recess surrounding the bolt-aperature and a transverse opening at one side communicating with said recess, together with a washer having tongues and peripheral teeth, substantially as shown and for the purpose set forth. 6th. In a nut-lock, the combination with the grooved bolt of a nut, having an annular recess surrounding the bolt-aperature, teeth projecting into said recess and a transverse opening, as shown, together with a washer having inwardly projecting tongues and peripheral teeth $c^1$, said teeth being adapted to interlocking with the teeth on the nut and engage therewith by friction contact.

**No. 55,510. Package Handle.** *(Poignée pour paquets.)*



Alexander Walker Beers, Bayonne, New Jersey, U.S.A., 5th April, 1897; 6 years. (Filed 18th March, 1897.)

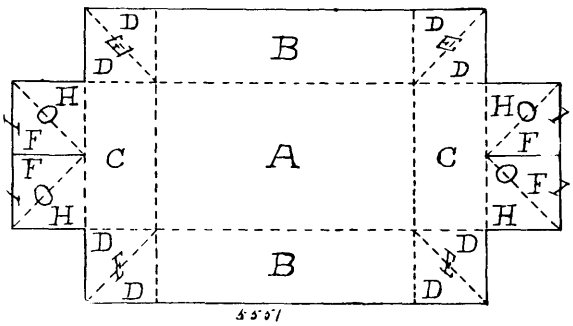
*Claim.*—1st. A handle for packages, consisting of a body portion, and end portions adapted to be bent at an angle thereto, said end portions being provided with slots into which the string or cord with which the package is bound is inserted, substantially as shown and described. 2nd. A handle for packages, comprising a body portion and end portions adapted to be bent at right angles thereto, said end portions being provided with slots, into which the string or cord with which the package is bound may be inserted, substantially as shown and described. 3rd. A handle for packages, comprising a body portion and end portions adapted to be bent at right angles thereto, said end portions being provided on one side with notches or recesses, and with slots formed in said notches or recesses which extend into said end portions and are directed backwardly and outwardly, substantially as shown and described. 4th. A handle for packages, comprising a body portion and end portion adapted to be bent at right angles thereto, said end portions being provided on one side with notches or recesses, and with slots formed in said end portions, and are directed backwardly and outwardly, said handle being composed of two separate similar parts which are secured together, and between the ends of which are packed strengthening strips, substantially as shown and described.

**No. 55,511. Infold, Outfold, Card Board, etc.**

*(Boite pliante.)*

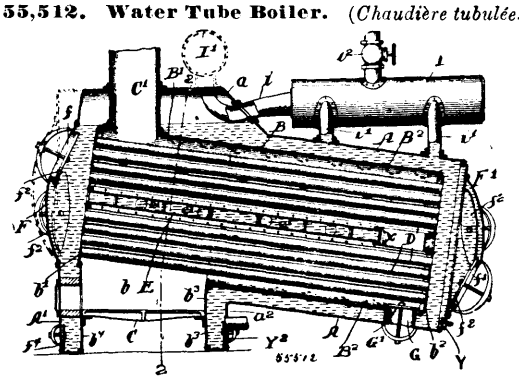
Thomas Grayson Bell, Ottawa, Ontario, Canada, 5th April, 1897; 6 years. (Filed 18th March, 1897.)

*Claim.*—1st. The herein described improvement in folding boxes, consisting of a single blank formed with bottom, sides and ends, as set forth, triangular corner sections that are infolded or outfolded and overlapping, and locking flaps formed as extensions of the end




sections of the box, having triangular sections to interlock with said triangular overlapping corner sections. 2nd. A folding box, consisting of the bottom A, sides B, B, ends C, C, triangular corner sections D, D, adapted to fold in or out, upon and overlapping each other, as set forth, and the triangular in and outfolded sections F, F, of the flaps I, I, pushed under or behind triangular corner sections D, D.

**No. 55,512. Water Tube Boiler.** *(Chaudière tubulée.)*

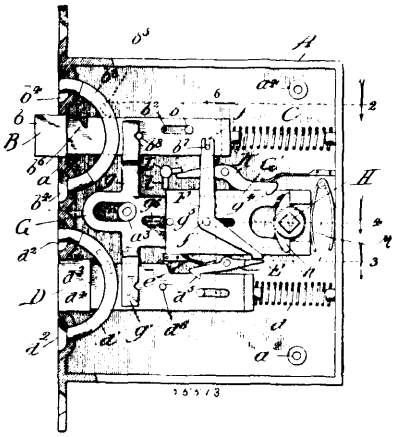


Andrew Wildman, Henry Wildman and William Wildman, all of Chicago, Illinois, U.S.A., 5th April, 1897; 6 years. (Filed 18th March, 1897.)

*Claim.*—1st. In a water tube boiler, the combination with a flue chamber for the passage of the products of combustion, water tubes therein and a water jacket around said chamber, of a water box within said flue chamber connected with the water jacket, and having an opening near the rear of said chamber, substantially as described. 2nd. In a water tube boiler, the combination with a flue chamber for the passage of the products of combustion, water tubes therein and a water jacket around said chamber, of a water box extending across said flue chamber and opening at the sides and front into the water jacket, substantially as described. 3rd. In a water tube boiler, the combination with a flue chamber for the passage of the products of combustion, water tubes therein and a water jacket around said chamber, of a water box separating the upper from the lower portion of the flue chamber except at the rear, and connected with the water jacket around the flue chamber and a series of openings in the outer casing approximately in line with the water box, substantially as described. 4th. In a water tube boiler the combination with a flue chamber for the passage of the products of combustion, water tubes therein and a water jacket around said chamber, of a water box separating the upper from the lower portion of the flue chamber except at the rear, and connected with water jacket around the flue chamber and a series of flues connecting the inner with the outer casing, substantially as described. 5th. In a water tube boiler, the combination with a flue chamber for the passage of the products of combustion, water tubes therein and a water jacket around said chamber, of boiler heads riveted to the ends of the outer casing, man holes located in said boiler heads and in suitable numbers to facilitate easy access to all of the flues and offset with respect to each other at the opposite ends of the boiler, substantially as described. 6th. In a water tube boiler, the combination with a flue chamber for the passage of the products of combustion, water tubes therein and a water jacket around said chamber, of a water box separating the upper from the lower half of the flue chamber except at the rear end, and a man hole connecting the bottom of the inner casing with the outer casing, substantially as described 7th. In a water tube boiler, the combination with a flue chamber for the passage of the products of combustion, water tubes therein, a water jacket around said chamber, and a water box separating the upper from the lower portion of the flue chamber except at the rear end and connected with the water jacket, of a heat retaining covering composed of a layer of non-conducting material, a wire screen and a series of blocks separating the same from the casing, substantially as described. 8th. The combination with a boiler, of a heat retain

ing covering consisting of a series of struts resting against the exterior of the boiler shell, a wire screen resting upon the outer ends of the struts and a jacket of non-conducting material covering the wire screen, substantially as described.

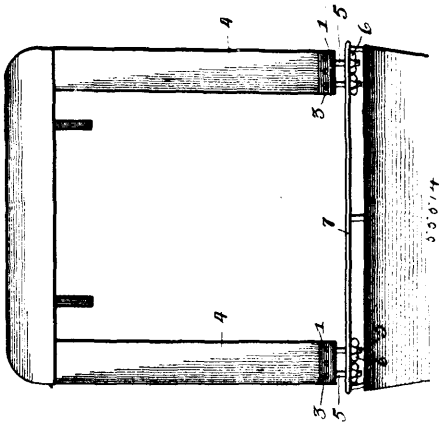
**No. 55,513. Lock.** (*Serrure.*)



Arthur Fleischmann, Chicago, Illinois, U.S.A., 5th April, 1897; 6 years. (Filed 18th March, 1897.)

*Claim.*—1st. In a compound lock, the combination of a primary locking bolt, and a second locking bolt arranged to be placed in a locking position by the movement of the primary locking bolt, substantially as described. 2nd. In a compound lock, the combination of a primary locking bolt, a second locking bolt, spring mechanism adapted to normally hold both of the locking bolts in their locking position, latch mechanism arranged to hold the second locking bolt in its unlocked position, and means interposed between primary locking bolt and the second locking bolt, whereby the second locking bolt is released by the movement of the primary locking bolt, substantially as described. 3rd. In a compound lock, the combination of a primary locking bolt, a second locking bolt, spring mechanism for normally holding the locking bolts in their locking position, a slide arranged to withdraw the bolts from their locking position, latch mechanism for holding the second locking bolt in its unlocked position, and a lever pivoted to the slide and engaged by the primary locking bolt, whereby the second bolt is released by the independent movement of the primary locking bolt only and not disturbed when the primary locking bolt is moved by the slide, substantially as described. 4th. In a compound lock, the combination of a primary locking bolt, a second locking bolt, spring or similar mechanism for normally holding the locking bolts in their locking position, latch mechanism for holding the second locking bolt in its unlocked position, a compound slide arranged to withdraw the bolts from the locking position, a lever pivoted to the main portion of the slide and engaging with the latch mechanism and with the primary bolt, whereby the latch mechanism of the second bolt is released by the independent movement only of the primary bolt, latch mechanism for preventing the movement of the second portion of the compound slide, a knob and turn-bolt arranged to operate the main slide from one side of the door and the supplemental or second slide from the opposite side of the door, and key mechanism for releasing the latch of the supplemental slide, substantially as described.

**No. 55,514. Buggy Top.** (*Joint de couverture de voiture.*)



Robert Capital Bartlett, Eads, Tennessee, U.S.A., 5th April, 1897; 6 years. (Filed 18th March, 1897.)

*Claim.*—1st. The herein described connection for fastening carriage tops in place, the same consisting of a body or plate having openings for the reception of fasteners and provided with bolts or stems projecting from one edge thereof and spaced apart, the said bolts or stems being threaded to receive nuts, substantially as and for the purpose described. 2nd. The herein described connection for fastening carriage tops in place, consisting of a substantially rectangular body portion provided with openings for the reception of suitable fasteners, integrally formed bolts or stems projecting from one edge of said body, and spaced apart, and thumb-nuts secured upon said bolts or stems, substantially as and for the purpose described. 3rd. The combination with a vehicle body and top, of connecting devices secured to the stays of the top, each of said devices consisting of a plate having provision for its securement to one of the stays, and threaded bolts or stems projecting from and formed integrally with said plate the said bolts or stems being spaced apart and adapted to receive the nuts substantially as described.

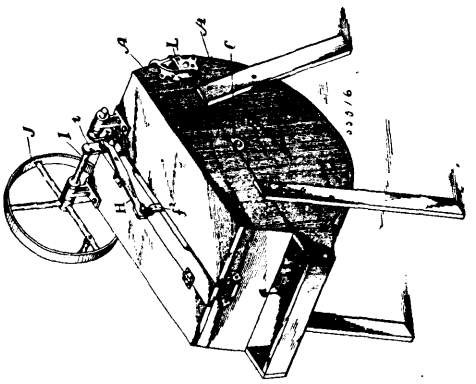
**No. 55,515. Squeak Preventing Compound for Shoes.**

(*Composition pour empêcher les chaussures de crier.*)

Abisha Lawton Thompson, Rock Creek, Ohio, U.S.A., 5th April, 1897; 6 years. (Filed 20th March, 1897.)

*Claim.*—1st. A composition of matter comprising, French chalk, yellow ochre and pulverized orris-root, for the purpose described. 2nd. A composition of matter, comprising French chalk, an earthy substance, and an odorous powder, substantially as described.

**No. 55,516. Washing Machine.** (*Machine à laver.*)

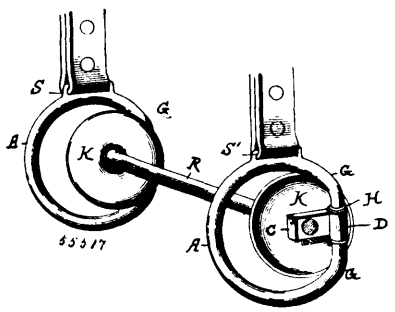


Conrad Dietz, West Covington, Kentucky, U.S.A., 5th April, 1897; 6 years. (Filed 19th March, 1897.)

*Claim.*—1st. In a washing machine, the combination with a casing, an oscillatory receptacle therein, a vibratory dasher within said receptacle and co-operating therewith, of an operating crank, a pitman connecting said crank and dasher and a rod connecting said crank and receptacle, substantially as set forth. 2nd. In a washing machine, the combination with a casing, a receptacle pivotally mounted in said casing, a cover on said casing and a dasher pivotally mounted in bearings in the cover, of a crank-shaft, a pitman pivotally connecting the crank-shaft and dasher and a rod pivotally connected at one end to one end of the receptacle and detachably connected at its other end to the crank-shaft, substantially as set forth. 3rd. In a washing machine, the combination with a casing, a receptacle pivotally mounted in said casing, a cover attached to the casing, closed elongated bearings secured to the inner face of the sides of the cover and a dasher having journals adapted to be mounted in said bearings, of a crank shaft journalled in bearings carried by the cover, a pitman connecting the crank-shaft and dasher, a rod detachably connected at one end to one end of the receptacle and detachably connected at the other end to the crank-shaft or pitman, substantially as set forth. 4th. In a washing machine, the combination with a casing, a cover mounted thereon, a receptacle pivotally mounted in the casing, and a dasher pivotally mounted in bearings carried by the cover, of a crank-shaft, a pitman connecting the crank and dasher, plates each having a stud and horn, each latter being in a plane adjacent to the free end of its stud, one of said plates being secured to the receptacle and the other to the pitman, and a rod mounted at its ends on said studs and retained against accidental disengagement by the horns, substantially as set forth. 5th. In a washing machine, the combination with a casing, a ribbed receptacle pivotally mounted in said casing, a cover mounted on the casing and a dasher pivotally mounted in elongated bearings in the cover, of a pitman connected at one end to the dasher, a rod detachably connected at one end to one end of the receptacle, and a crank for connecting and actuating the pitman and rod, substantially as set forth. 6th. In a washing machine, the combination with a casing, cover, an oscillatory receptacle mounted in said casing, a vibratory dasher carried in bearings in said cover, and a crank-shaft connected to said dasher and receptacle substantially as set forth and for the purpose specified. 7th. In a washing machine, the combination of the casing, a cover secured thereto, an oscillatory receptacle detachably mounted in said casing, vibratory dasher mounted in bearings in the cover, a rod detachably connect-

ing the receptacle and actuating mechanism and a pitman connecting the dasher to said actuating mechanism, substantially as set forth. 8th. In a washing machine, the combination of the casing and cover, an oscillatory receptacle pivotally and detachably mounted in said casing, and a vibratory dasher mounted in vertical elongated bearings in said cover, a pitman pivotally connected to said dasher at one end, of a crank-shaft having a drive wheel mounted thereon a rod detachably connecting said receptacle and pitman, substantially as set forth. 9th. In a washing machine, the casing, clothes receptacle, cover, dasher, pitman, detachable connecting rod, crank-shaft, and wheel, all combined and adapted to operate, substantially as set forth. 10th. In a washing machine, a lever provided at one end with a serrated band adapted to receive the handle and be secured therein by forcing the projections on said band into the handle, substantially as set forth. 11th. A lever having a crank at or near one end provided with a stud and retaining horn or shield, said lever having near its centre a similar stud and shield substantially as set forth and for the purpose specified. 12th. In a washing machine the combination of the casing, an oscillatory receptacle mounted therein, a vibratory dasher mounted within the cover, an operative lever pivotally and detachably connected to said dasher and receptacle, substantially as set forth. 13th. In a washing machine, the casing, cover, receptacle, dasher, pitman, lever, crank and detachable connecting rod, all combined and adapted to operate, substantially as set forth. 14th. In a washing machine, the combination of the casing, cover, receptacle, dasher, pitman, detachable connecting rod and actuating mechanism, all combined and adapted to operate, substantially as set forth. 15th. In a washing machine, the combination of the casing and cover with a stop-hinge, one part of which is a hook *l* and the other part a lateral stud *l'*, said hook and stud being adapted to engage with each other to limit the backward movement of the cover, substantially as set forth. 16th. In a washing machine, a bearing having closed outer and open inner top in combination with a journal having a shoulder on one side, said shoulder being adapted to enter said open top when the journal is inverted to allow the journal to be moved laterally and attached or detached, as desired, substantially as set forth. 17th. In a washing machine, a bearing having closed outer and open inner top and lower inner flange in combination with a journal having a shoulder upon one side adapted to abut against said lower flange and hold the journal in engagement with the closed outer top and when inverted to enter said open top and permit the journal to be detached in the manner specified, substantially as set forth. 18th. In a washing machine, the combination of a bearing having closed outer and open inner top and mounted in the top of one side of the casing, a journal having a shoulder upon one side and mounted upon or near the top of one side of the clothes receptacle, said journal being adapted to enter said bearing and be held in engagement therewith by contact with the outer closed end of said bearing or detached therefrom in the manner specified, in combination with a suitable co-operating bearing and journal in the opposite side of said casing and receptacle, respectively, substantially as set forth. 19th. In a washing machine, a bearing having closed outer and open inner top and lower inner flange, mounted in the top edge of one side of the casing, in combination with a journal rigidly mounted upon or near the top of one side of the clothes receptacle, said journal having a shoulder upon one side adapted to abut against said bearing flange and retain said journal in engagement with the outer closed top of said bearing while said receptacle is in its operative position, and be detached therefrom by inverting the journal until said shoulder is out of contact with said flange and free to enter said open top and be moved sidewise until the opposite journal is free to be lifted out of its bearings and the receptacle removed from the casing, substantially as set forth. 20th. In a washing machine, the combination of a casing and clothes receptacle detachably connected by a pair of bearings provided with closed outer and open inner tops and a pair of journals provided with shoulders or raised portions whereby said journals are held in the closed ends of the bearings and readily removed from said bearings when the journals are inverted and moved laterally and upwardly, substantially as set forth.

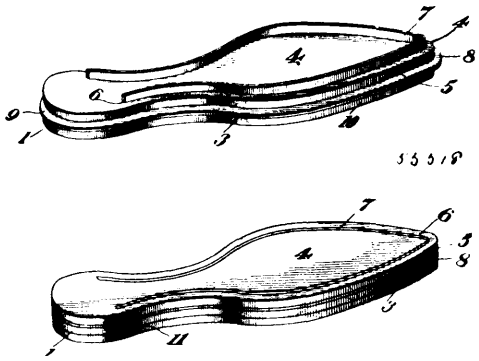
**No. 55,517. Bridle-Bit.** (*Mors de bride*)




Charles H. Falls, Clarksville, Iowa, U.S.A., 5th April, 1897; 6 years. (Filed 18th March, 1897.)

*Claim.*—As an improved article of manufacture, a bridle-bit consisting of a hollow mouthpiece having outwardly flanged portions with an outwardly extending flange about the end of the aperture in said mouthpiece, combined with a bit-ring A the ends of which are held within the member D, and adapted to turn over the flanged portions of the mouthpiece, and the rod F having screw-threaded ends designed to be inserted in the aperture of the mouthpiece and its end screwed into the members D, the said member C being adapted to abut against the small flange about the aperture of the piece R, substantially as and for the purpose described.

**No. 55,518. Insole.** (*Fausse-semelle.*)



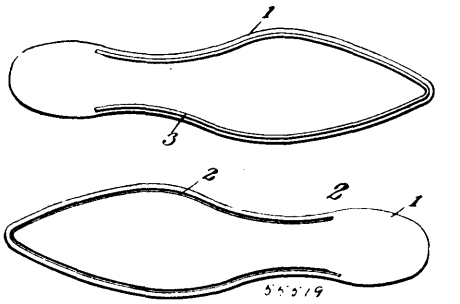




George William Sleeper, Detroit, Michigan, U.S.A., 5th April, 1897; 6 years. (Filed March 18th, 1897.)

*Claim.*—1st. The method of manufacturing insoles for shoes, which consists in providing a pair of mould members having contour lines of required size and shape, one of the members being provided with a channel, and the other with a corresponding die, placing the material to be formed between the flat opposing surfaces of the members, drawing it taut and smooth between the same, confining it in place, driving the die into the channel, thereby forming a rib defining groove in the material confined between the members, and finally trimming the edges of the confined material flush with the surface of the contour edges of the mould members, substantially as set forth. 2nd. In insole forming apparatus, the combination with a mould member and channel therein, of a second mould member and kerf therein, conforming in shape and position to the channel in the first-named member and a die movable transversely through the kerf into the channel, substantially as set forth. 3rd. In apparatus for forming an insole, the combination with a pair of mould members having their exterior edges shaped to correspond with the shape of the insole to be manufactured thereon, of a channel in one member, a correspondingly located jerf in the other member, and a die movable transversely through the kerf in one member into the channel 2 in the other member by which the parts are united, substantially as set forth. 4th. In insole forming apparatus, the combination with one mould member and a transversely movable die therein, of another mould member, the second mould member being composed of two plates, one of the plates being provided with a transverse channel adapted to receive the die, and mechanism for detachably uniting the two plates of the second member, substantially as set forth.

**No. 55,519. Boot and Shoe.** (*Chaussure.*)

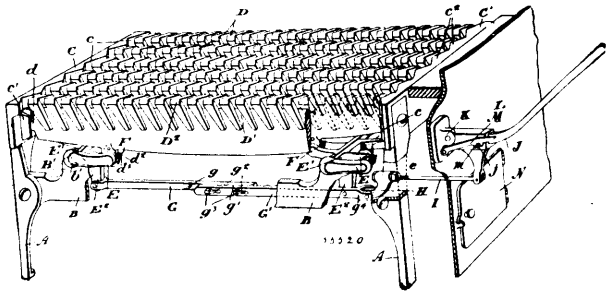



George William Sleeper, Detroit, Michigan, U.S.A., 5th April, 1897; 6 years. (Filed 18th March, 1897.)

*Claim.*—1st. The method of manufacturing shoes, which consists in forming in one side of the insole a channel that defines upon the opposite side thereof a rib, uniting the upper and welt thereto by stitches which pass entirely through both walls of the rib, and completing the shoe in the ordinary manner, substantially as set forth. 2nd. The method of manufacturing shoes, which consists in forming in one side of the insole a groove or channel that defines on the other side thereof a rib, securing the grooved side of the insole to a re-inforcing piece, and stitching the welt and upper to the rib by stitches passing entirely through both walls thereof, substantially as set forth. 3rd. The combination with an insole provided with a rib defining groove, a re-inforcing piece, and means for securing the re-enforcing piece to the grooved side of the insole, substantially as set

forth. 4th. An insole consisting of the combination of two parts, one provided with a rib defining groove and the other a flat piece united to the grooved side thereof, and two rows of stitching, one on each side of the rib, said stitches passing entirely through both parts of the insole, substantially as set forth. 5th. In a shoe, the combination with an insole provided with a rib defining groove, of a filling of cork, or other material, located between the walls of the rib and having its surface flush, or nearly flush with the top of the rib, substantially as set forth.

**No. 55,520. Grate.** (*Grille.*)

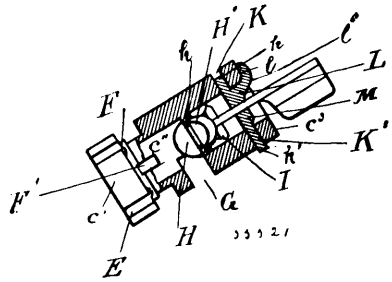


Henry Truesdell and Walter Redpath, both of Toronto, Ontario, Canada, 5th April, 1897; 6 years. (Filed 22nd March, 1897.)

*Claim.*—1st. A grate for stoves, furnaces and heaters, comprising a plurality of grate bars suitably supported and having a series of wings at the upper part of the longitudinal portion of the bar extending from end to end thereof, projecting laterally from each side and above the top of the bar, connected across the tops in the centre, and arranged so that the wings extend obliquely from top to bottom towards the front of the grate, as and for the purpose specified. 2nd. A grate for stoves, furnaces and heaters, comprising a plurality of grate bars suitably supported and having a series of wings at the upper part of the longitudinal portion of the bar flat at the top and each broad V-shaped in plan extending from end to end thereof, projecting laterally from each side and above the top of the bar, connected across the tops in the centre, and arranged so that the wings extend obliquely from top to bottom towards the front of the grate, as and for the purpose specified. 3rd. A grate for stoves, furnaces and heaters, comprising a plurality of grate bars suitably supported and having a series of wings at the upper part of the longitudinal portion of the bar extending from end to end thereof, projecting laterally from each side and above the top of the bar, connected across the tops in the centre, and tapered from top to bottom so as to be narrower at the bottom and form enlarged tapered openings between the wings on each side of the bar with the broadest portion at the bottom, the wings being arranged to extend obliquely from top to bottom towards the front of the grate, as and for the purpose specified. 4th. In combination, the grate bars suitably supported upon the rocking bars journalled in the frame, the broad V-shaped wings forming the top of the grate bars, the back end bar of the frame provided with V-shaped notches and the front end bar of the frame provided with V-shaped projections, all arranged as and for the purpose specified. 5th. In combination, the grate bars suitably supported upon the rocking bars journalled in the frame, the broad V-shaped wings forming the top of the grate bars, the back end bar having the vertical guides into which the back end of the grate bar extends and has vertical movement, and the front end bar having guides into which the front end of the grate bars extend and has vertical movement, as and for the purpose specified. 6th. In combination, the grate bars suitably supported upon the rocking bars journalled in the frame, the broad V-shaped wings forming the top of the grate bars, the back end bar of the frame provided with V-shaped notches, the guides situated beneath the centre of the notches, the front end bar of the frame having V-shaped projections and the guides situated beneath the apex of such projections, as and for the purpose specified. 7th. The combination with the grate bars having downwardly extending lugs, the rocking bar and rocking arms arms suitably journalled in the frame, the trunnions formed in the end of the rocking arms and the gravity hook held on the lugs of the grate bar and designed to drop and swing beneath the trunnions so as to hold the bars in position, as and for the purpose specified. 8th. In combination, the grate bars, the rocking bar and oppositely set rocking arms for each alternate pair of grate bars, the downwardly extending arms from the rocking arms, the connecting rods having corrugated inner edges, one of the arms baving slots and bolts extending through such slots into the other arm, as and for the purpose specified. 9th. In combination, the grate bars, the rocking bars and the oppositely set rocking arms for each alternate pair of grate bars, the downwardly extending arms from the rocking arms, the connecting rod for the downwardly extending arms, the forward extension to the connecting rod, the crank operating arm suitably pivoted on the front, the pin on such arm and the pivoted locking arm having a jaw designed to straddle such pin and thereby lock the grate bars in position, as and for the purpose specified.

**No. 55,521. Non-Refillable Bottle.**

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



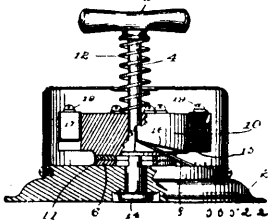
James Joseph Moran, Loretto, Ontario, Canada, 5th April, 1897; 6 years. (Filed 23rd March, 1897.)

*Claim.*—1st. In a non-refillable bottle, a valve seat within the neck passage, a gravity actuated valve revolubly mounted on the valve seat, and adapted to maintain its gravity position during the turning of the bottle when inverted, substantially as specified. 2nd. In a non-refillable bottle a valve seat within the neck passage, a gravity actuated valve revolubly mounted on the valve-seat in combination with a gravity actuated follower located within the neck passage and adapted to engage the valve when the bottle is inverted, to maintain the valve in its gravity position during the turning of the bottle, substantially as specified. 3rd. In a non-refillable bottle the combination of a valve-seat within the neck passage, and a gravity actuated valve revolubly mounted on the valve-seat, consisting of a plate to close the passage throngh the valve seat, and a weight to normally hold the plate against the valve-seat, and to maintain the valve in its gravity position during the turning of the bottle, substantially as specified. 4th. In a non-refillable bottle, a valve seat within the neck passage, a gravity actuated valve revolubly mounted on the valve-seat, consisting of a plate to close the passage through the valve-seat, and a weight depending from the plate in combination with a gravity actuated follower to engage the weight, substantially as specified. 5th. In a non-refillable bottle, a valve-seat within the neck passage, a gravity actuated valve revolvably mounted on the valve-seat, consisting of a plate to close the passage through the valve-seat, a weight depending from the plate in combination with a gravity actuated follower to engage the weight, to hold the weight under the valve-seat when the bottle is in its upright position, and to maintain the valve in its gravity position when the bottle is inverted, substantially as specified. 6th. In a non-refillable bottle, a valve-seat within the neck passage, a gravity actuated valve revolvably mounted on the valve-seat, consisting of a plate to close the passage through the valve-seat, a weight depending from the plate in combination with a movable follower to engage the weight, consisting of a shank, a skeleton frame at the upper end of the shank embracing the valve weight, and a weight attached to the opposite end of the shank, to follow the centre of gravity during the turn of the bottle, substanti illy as specified. 7th. In a non-refillable bottle, a stopper consisting of a plug having a central bore, a circumferential groove at the upper end of the plug opening from the bore to the groove, a cap for the plug, peripheral channels in the cap communicating with the groove, and a gravity actuated valve within the bore, substantially as specified. 8th. In a non-refillable bottle, a stopper consisting of a plug having a central bore, a circumferential groove formed at the upper end of the plug, openings from the bore to the groove, a cap for the plug, peripheral channels in the cap communicating with the groove, a valve-seat within the bore, and a gravity actuated valve revolvably mounted on the valve-seat, substantially as specified. 9th. In a non-refillable bottle, a stopper consisting of plug having a central bore, a gravity actuated valve revolvably mounted on the valve-seat, a weight depending from the valve engaging the under side of the valve-seat when the bottle is in an upright position, a gravity actuated follower within the bore below the valve, consisting of a shank, a skeleton frame at the upper end of the shank to engage the valve weight, and a gravity weight at the lower end of the shank to follow the turning of the bottle when inverted, substantially as specified. 10th. In a non-refillable bottle a stopper consisting of a plug, having a central bore, a circumferential groove in the top of the plug, openings from the bore to the groove, a cap for the plug, peripheral channels in the cap communicating with the groove, a valve-seat within the bore, a gravity actuated valve revolvably mounted on the valve-seat, consisting of a plate to close the passage through the valve-seat, and a weight depending from the plate to hold it against the valve-seat, a gravity actuated follower longitudinally movable within the bore, consisting of a shank, a skeleton frame at one end of the shank to engage the valve weight, and a gravity weight at the opposite end of the shank to follow the centre of gravity during the turning of the bottle when inverted, substantially as specified. 11th. In a non-refillable bottle, a stopper consisting of a plug having a central bore, a circumferential groove in the top of the plug, openings from the bore to the groove, a cap for the plug, pheripheral channels in the cap communicating with the groove, a valve-seat within the bore, a gravity actuated valve revolvably mounted on the valve-seat, consisting of a plate to close the passage through the

valve-seat, and a weight depending from the plate to hold it against the valve-seat, a gravity actuated follower longitudinally movable within the bore, consisting of a shank, a skeleton frame at one end of the shank to engage the valve weight, a gravity weight at the opposite end of the shank to follow the centre of gravity during the turning of the bottle when inverted, an arm connected to the lower end of the plug embracing the shank, and serving as a key to lock the plug in the neck passage, substantially as specified.

### No. 55,522. Multiple Fuse Block and Switch.

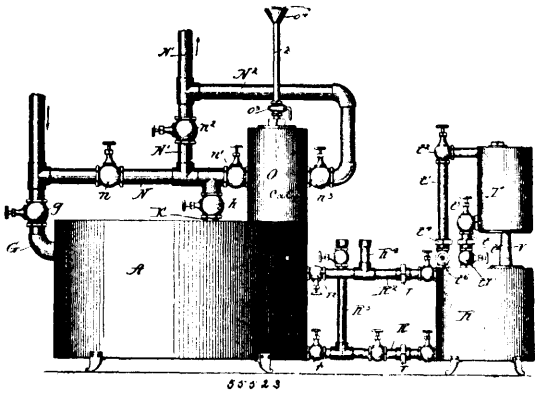
(*Bloc de fusée multiple et commutateur.*)



Edwin Heber Montgomery and Mathias Thommes, both of St. Paul, Minnesota, U.S.A., 5th April, 1897; 6 years. (Filed 4th November, 1896.)

*Claim.*—1st. In a multiple fuse block and switch, the combination of the base, the annular ring at the centre thereof connected to one terminal, the spring contact at one edge connected to the other terminal, the rotary block fitted to said base, its annular ring bearing upon the first-named annular ring, the ratchet steps or teeth adapted to be engaged by the spring contact, the series of contact strips upon the inclines of alternate teeth, and the fuses severally connecting said strips with the annular ring upon said block. 2nd. In a multiple fuse block and switch, the combination with the fixed and rotary parts, of their constantly bearing contacts, the contact upon the fixed part being connected to one of the line terminals, the contact spring also upon the fixed part connected to the other line terminal, the circumferentially arranged notches or sockets upon said rotary part, the series of contacts arranged in the alternate notches or sockets, and adapted to be engaged by said contact spring, and the fuses severally connecting said circumferentially arranged contacts with the constantly bearing contacts. 3rd. In a multiple fuse block and switch, the combination with the base and the rotary block fitted thereto, of the constantly bearing contacts arranged respectively upon said base and block, the contact upon said base being connected to one of the line terminals, the teeth arranged upon said rotary block, the series of contact strips upon alternate teeth, the fuses connecting said strips with said constantly bearing contact upon said block, and the contact arranged upon said base and connected to the other line terminal, and adapted to successively engage said contact strips in the rotation of the block.

### No. 55,523. Apparatus for Increasing the Candle Power of Gas. (*Appareil pour augmenter le pouvoir éclairant du gaz.*)

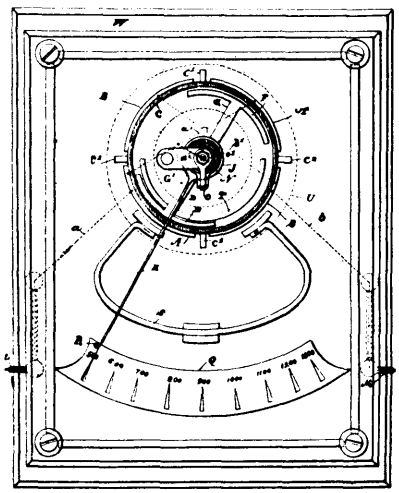


John Wesley Crow, assignee of Robert Southworth Lawrence, both of Chicago, Illinois, U.S.A., 6th April, 1897; 6 years. (Filed 15th January, 1897.)

*Claim.*—1st. A carburetor comprising a central chamber and an outer chamber to retain a volume of hydro-carbon, and an intermediate chamber communicating at its bottom with the central and outer chambers but closed at its top and containing the entire mass of fibrous material whereby the hydro-carbon is raised by capillary attraction, said intermediate chamber being provided with suitable gas inlet and outlet ports, substantially as described. 2nd. A carburetor comprising a central chamber and an outer chamber to retain a volume of hydro carbon, and an intermediate chamber communicating at its bottom with the central and outer chambers but closed at its top and containing the entire mass of fibrous material whereby the hydro-carbon is raised by capillary attraction, said intermediate chamber being provided with suitable gas inlet and outlet ports, and being provided also with a vertical division wall upon opposite sides whereof the inlet and outlet ports are arranged, substantially as described. 3rd. A carburetor comprising a central chamber and an outer chamber to retain a volume of hydro-carbon, and an intermediate chamber communicating at its bottom with the central and outer chambers, but closed at its top and containing the fibrous material whereby the hydro-carbon is raised by capillary attraction, said intermediate chamber being provided with suitable gas inlet and outlet ports and comprising also an atomizing chamber extending across said above-mentioned chambers and provided with the atomizing pipe having a series of jets, said jets being arranged to cause currents issuing therefrom to impinge directly against each other as they issue into the atomizing chamber and a discharge pipe leading from said atomizing chamber, substantially as described. 4th. A carburetor comprising the central chamber, the outer chamber and the intermediate chamber connected together at their bottoms, an atomizing chamber extending across the tops of said several chambers, an atomizing pipe connected with the carburetting chamber and arranged within but around the exterior of said atomizing chamber and provided with inwardly facing discharge ducts or jets, and a pipe leading from said atomizing chamber, substantially as described. 5th. A carburetor comprising the combination with a chamber containing fibrous material whereby the hydro-carbon will be raised by capillary attraction, said chamber being provided with suitable admission and discharge openings, of an atomizing chamber, an atomizing pipe arranged around the exterior of said atomizing chamber and provided with inwardly discharging jets, and a perforated discharge pipe leading from the central portion of said atomizing chamber, substantially as described. 6th. An apparatus for increasing the brilliancy of gas, comprising the combination of a casing having suitable admission and discharge pipes leading thereto and therefrom, of a perforated or foraminous receptacle within said casing for containing calcium-carbide and interposed between said pipes, a removable cover through which said receptacle can be withdrawn and a water supply pipe leading through said cover and provided with a controlling valve, substantially as described. 7th. The combination with a carburetor, of a chamber for carbide of calcium, a pipe for supplying gas to the carburetor, a pipe connecting the carburetor with the chamber for the carbide of calcium, a pipe leading from said carbide chamber to the main discharge pipe, a branch pipe connecting the main supply pipe with the main discharge pipe and with the carbide chamber and suitable cocks interposed in said several pipes whereby the gas from the supply pipe may be caused to flow direct to the discharge pipe, or to the carburetor and thence to the discharge pipe, or to the carburetor and to the carbide chamber and thence to the discharge pipe, or to the carbide chamber and thence to the discharge pipe.

### No. 55,524. Electrical Measuring Apparatus.

(*Appareil électrique à mesurer.*)



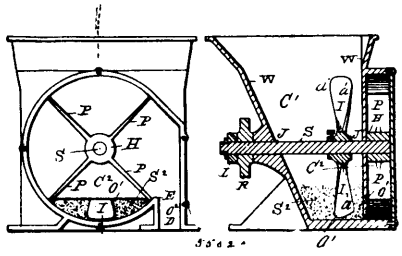
John F. Kelly and Cummings C. Chesney, both of Pittsfield, Mass., U.S.A., 6th April, 1897; 6 years. (Filed 22nd February, 1897.)

*Claim.*—1st. In a measuring and indicating instrument, the combination of a vibrating needle and stationary quadrants separated from each other by a wall of insulating material, substantially as described. 2nd. In a static measuring and indicating instrument, the combination of stationary quadrants and a vibrating needle, the combination of stationary quadrants and a vibrating needle, the quadrants and the vanes of the needle being segments of cylinders, with a cylindrical wall of insulating material placed between them, substantially as described. 3rd. In a static measuring and indicating instrument, the combination of stationary quadrants and a vibrating needle, the quadrants and the vanes of the needle being

segments of cylinders, with a permanent magnet whose lines of force lie in the path of the needle's vane, and substantially at right angles thereto, substantially as described. 4th. In a static measuring and indicating instrument, the combination of fixed quadrants, and a vibrating needle having vanes in close proximity to said quadrants, with a separating insulating dielectric between said needle and quadrants and a permanent magnet whose lines of force cross the path of one of the vanes of the vibrating needle, substantially as described. 5th. In a static measuring and indicating instrument, the combination of a vibrating needle having vanes, and fixed quadrants in close proximity to said vanes, the vanes and quadrants being in the form of segments of cylinders, with a cylindrical insulating dielectric having its wall between the vanes of said needle and said quadrants and a permanent magnet and armature, said armature and the poles of said magnet being on opposite sides of the path of said needle, substantially as described.

**No. 55,525. Sand-Box for Cars.**

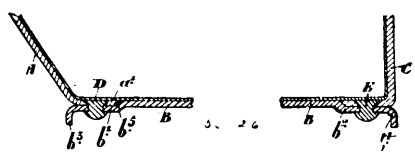
(*Boîte à sable pour chars.*)



Trojan Button Fastener Company Incorporated, Troy, assignee of Albert William Ham, Lansingburg, both of New York, U.S.A., 6th April, 1897 ; 6 years. (Filed 8th March, 1897.)

*Claim.*—1st. The combination with a chamber adapted to receive and contain sand, of a sand distributing-chamber arranged upon one side of a receiving-chamber, and connecting with said receiving-chamber by means of a passage-way formed in the latter, a duct or chute leading from the distributing-chamber, and a shaft constructed to journal in said receiving-chamber to pass through the latter and the distributing-chamber, conveyers arranged on said shaft within the receiving-chamber, and paddles arranged on said shaft within the distributing-chamber whereby as said shaft is partially rotated sand will be by the conveyer-blades forced from the receiving-chamber into the distributing-chamber, and by the paddles forced from the receiving-chamber into the distributing-chamber, and by the paddles forced from the latter to enter the duct leading to the track, substantially as shown and described. 2nn. The combination of a sand-receiving-chamber and a sand distributing-chamber arranged side-by-side, connecting by means of a passage-way in their intermediate side near the bottom of the latter, a duct leading downwardly from the distributing-chamber, a shaft having bearings in which to journal, and arranged to pass through both chambers horizontally, conveyer-blades on said shaft within the receiving-chamber, paddles on said shaft within the distributing-chamber, a ratchet-wheel on the outer end of said shaft, a lever pivoted to said shaft, and provided with a pawl, whereby said shaft may be operated to move part of a turn at each full oscillatory movement of the lever and pawl, and when so turning to operate the conveyer blades to force sand into the distributing-chamber and the paddle to force sand into the duct or chute, substantially as shown and described. 3rd. The combination with the receiving-chamber $C^1$, of the distributing chamber $C^2$, provided with the duct D, and connecting with the receiving chamber by means of the opening $O^1$, of the shaft S, passing horizontally through the receiving and the distributing-chambers, the conveyer-blades I, arranged on said shaft within the receiving-chamber, and the paddles P, arranged upon said shaft within the distributing-chamber constructed and arranged to be operated, substantially as and for the purposes set forth.

**No. 55,526. Bath Tub.** (*Baignoire.*)

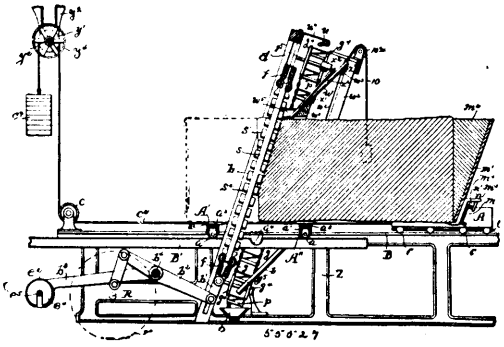


The Toronto Steel Clad Bath and Metal Company, assignee of George Booth, both of Toronto, Ontario, Canada, 6th April, 1897 ; 6 years. (Filed 15th March, 1897.)

*Claim.*—1st. As an improved article of manufacture, a bath tub composed of a smooth sheet metal casing made in sections, overlapping joints suitably secured to each other and connecting the sections together, and an inner unbroken lining of enamel or other vitreous material fused over the entire interior surface of the sections and covering the joints, as and for the purpose specified. 2nd. As an improved article of manufacture, a bath tub composed of a smooth sheet metal casing made in head, central and foot sections, depressed flanges formed at the ends of the central sections having their surfaces parallel to the cross sectional contour of the central section and forming a longitudinal extension thereof, the head and foot sections with flanges formed at the inner edge thereof adapted to lie upon the depressed flanges of the central section, and means for securing the overlapping sections together so as to form a smooth crackless joint, as and for the purpose specified. 3rd. As an improved article of manufacture, a bath tub composed of a smooth sheet metal casing made in head, central and foot sections, depressed flanges formed at the ends of the central sections having their surfaces parallel to the cross sectional contour of the central section and forming a longitudinal extension thereof, the head and foot sections with flanges formed at the inner edge thereof adapted to lie upon the depressed flanges of the central section, means for securing the overlapping sections together so as to form a smooth crackless joint, and rivets extending through the inwardly extending flanges of the head and foot sections and the depressed flanges of the central sections, the inner end of the rivets being countersunk in the inner flanges, as and for the purpose specified. 4th. As an improved article of manufacture, a bath tub composed of a smooth sheet metal casing made in head, central and foot sections, depressed flanges formed at the ends of the central sections having their surfaces parallel to the cross sectional contour of the central section and forming a longitudinal extension thereof, the head and foot sections with flanges formed at the inner edge thereof adapted to lie upon the depressed flanges of the central section, means for securing the overlapping sections together so as to form a smooth crackless joint, and outwardly turned flanges formed at the outer edge of the depressed flanges, as and for the purpose specified. 5th. As an improved article of manufacture, a bath tube composed of a smooth sheet metal casing made in head, central and foot sections, inturned flanges formed on the head and foot sections adapted to lie upon the ends of the central sections, means for connecting the sections together and an inner unbroken lining of enamel or other vitreous material fused over the entire interior surface of the sections and covering the joints, as and for the purpose specified.

**No. 55,527. Stone-Sawing Machine.**

(*Machine à scier la pierre.*)

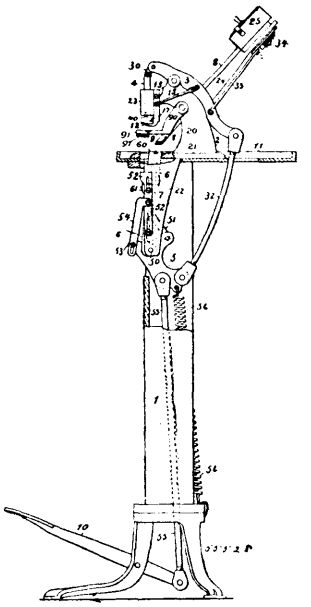


The Rapid Stone Saw Company, assignee of George T. Harris, assignee of James Peckover, all of Philadelphia, Pennsylvania, U.S.A., 6th April, 1897 ; 6 years. (Filed 2nd March, 1897.)

*Claim.*—1st. In a stone-sawing machine, the combination with the two trackways of different height and width, the lower and narrower of said ways being between the rails of the higher and wider one, of the middle and front cars arranged to travel on said lower and narrower way, and a rear car mounted to travel on the higher of said ways and adapted to pass over and by the said middle car, substantially as described. 2nd. In a stone-sawing machine, the combination with a frame having two trackways of different height and width, of front and middle cars arranged to travel on the lower and narrower of said ways, a rear car mounted to travel on the higher and wider trackway and adapted to pass said middle car, cables attached to said rear car, bearings for said cables, and counterweights attached to the cables, substantially as specified. 3rd. In a stone-sawing machine, the combination with the two trackways of different height and width, and with the front and middle cars arranged to travel on the lower and narrower of said ways, of a rear car mounted to travel on the higher and wider trackway and adapted to pass the said middle car, a cable attached to said rear car, a rotary shaft having a bearing over which the said cable passes, a weight or weights attached to the free end of said cable, and means whereby power may be applied to said shaft independently of said weights, substantially as specified. 4th. In a stone sawing machine, the frame having two trackways of different height and width, the front, middle and rear cars, the rear car being mounted on the higher and wider of said trackways and the front and middle cars upon the lower one, the rails of said lower trackway having depressions therein to receive the rollers of the middle car, adjustable dogs for securing the stone to the rear car, and fastening devices for said dogs, substantially as specified. 5th. In a stone-sawing machine, the combination of the reciprocating saw frame, the driving shaft, the rock-shaft journalled intermediately of the

driving shaft and the saw-frame, the lever attached to said shaft and operatively connected at one end to the driving shaft and at the other end to the saw frame, and a counter weight applied to said rock-shaft and acting through the same and through the said lever to balance the saw frame, substantially as specified. 6th. In a stone-sawing machine, the combination of the reciprocating saw frame, the driving shaft, its balance wheel, the rock-shaft, the lever attached to said shaft and operatively connected to both the balance wheel and the saw frame, the arms or rods also connected to said rock-shaft, and the adjustable weights carried thereby, substantially as specified. 7th. In a stone-sawing machine, the combination with the rear car having the inclined rear end portion, of the parallel slab $m_1$ in front of said end wall, the series of stone-holding dogs adapted to be held between said slab and end-wall, and means for adjusting and securing the dogs, substantially as specified. 8th. In a stone-sawing machine, an endless carrier arranged to travel around the stone and having a series of plates or buckets arranged to receive the abrading material discharged from the saws and to convey the same back for reuse, said plates or buckets having inclined bottom portions and open at their lowest sides, substantially as specified. 9th. In a stone-sawing machine, the combination with the pair of endless bands, the obliquely journalled shafts which carry the same, and means for imparting the motion thereto, of a series of buckets suspended from said bands and arranged to receive the abrading material discharged from the saws and to carry the same above the stone for re-use, together with means for causing the gradual discharge of the material from said buckets at the proper time, substantially as specified. 10th. In a stone-sawing machine, the combination with a pair of endless bands, the obliquely journalled shafts which carry the same, and means for imparting motion thereto, of a series of buckets suspended from said bands and arranged to receive the abrading material discharged by the saws and to discharge the same above the stone for re-use, of means for adjusting the inclination of said buckets during a portion of their travel, substantially as specified. 11th. In a stone-sawing machine, the combination with a stone-carrying and supporting car, of an endless carrier arranged to travel around the stone on the car, a series of buckets suspended from said carrier and open their lowest sides, an inclined plate arranged to convey the abrading material discharged from the saws to the buckets at the lower transverse portion of said carrier, said plate having its lower edge extending diagonally across the line of said buckets, and means for causing the discharge of the material from said buckets at points above the stone, substantially as specified. 12th. The combination with a stone-carrying car, of an endless carrier arranged to travel around the stone when on said car, said carrier having a series of buckets, a plate arranged to carry the abrading material discharged from the saws to the lower line of said buckets, a tank or receptacle below such line of buckets, and means for causing the discharge of the material from said buckets at points above the stone, substantially as specified. 13th. In a stone-sawing machine, the combination with an endless carrier having a series of buckets arranged to collect the abrading material discharged from the saws, and to convey the same back over the stone, said buckets being arranged to discharge at one side, of a water pipe extending diagonally above the upper line of said buckets and arranged to discharge water thereon, substantially as specified. 14th. In a stone-sawing machine, the combination with an endless carrier having a series of buckets arranged to collect the abrading material discharged from the saws and to carry the same to points above the stone, said buckets being arranged to discharge at one side thereof, of a water pipe above the upper line of buckets and having discharge openings in its lower side, a series of shields $n^3$ fitted to said pipe, and a series of rubber bands held in said shields and adapted to close the said discharge openings, substantially as specified. 15th. In a stone-sawing machine, the combination with the endless carrier having the buckets arranged to discharge abrading material at points above the stone, of a water pipe having discharge openings in its under side, and arranged to discharge water upon the said buckets, and movable bands held on said pipe and operating to control the said openings, substantially as specified. 16th. In a stone-sawing machine, the vertically movable frame above the stone, guides in which said frame is supported to move in a plane parallel with the saw frame, a series of channels or troughs supported on said frame and having each a receiver adapted to rest on the stone, said receivers having openings at one side to permit the saws to play therethrough, and counterbalancing weights applied to said frame, substantially as specified. 17th. The combination in a stone-sawing machine, with means for supplying abrading material to the saws, of a series of receivers for such material, said receivers being open at one side to permit the saws to play therethrough, and means for vertically adjusting the said receivers, substantially as specified. 18th. The combination with the endless carrier having a series of endless buckets arranged to discharge abrading material at points above the stone, of a series of pockets arranged to receive the material discharged from the said buckets, a series of conducting channels movably connected to the said pockets, a second series of channels into which the first named series are arranged to discharge, and receivers which catch the material from said channels and supply it to the saws, substantially as specified. 19th. The combination with a horizontally movable car A, and with the saw-frame mounted to reciprocate in an inclined plane, of the slab $m^1$ at the rear portion of said car and parallel with the saw-frame, a series of wedge-shaped blocks adapted to fit between the said slab and the rear end of the stone on the car to form narrow spaces between them for the reception of the abrading material, substantially as specified. 20th. In a stone-sawing machine, the slotted stone clamp having a hook portion at one end and having its slot closed at the opposite end, a series of blocks adapted to be inserted through said slot, and a wedge or key also adapted to be driven through said slot, substantially as and for the purpose described. 21st. In a stone-sawing machine, the saw-frame having slotted end bars, parallel screw-rods seated in opposite sides of the slots thereof, half-nuts adapted to engage the threads of said rods, and also grooved to receive the saw-blades, substantially as described. 22nd. The saw-frame having a pair of parallel threaded rods at each end portion, a series of saws whose end portions are adapted to fit between the said rods, and half-nuts fitted to engage the end portions of the saws, each of said end portions being held between a pair of said half-nuts, substantially as specified. 23rd. In a stone-sawing machine, the saw-frame having slotted or split end-bars, the slots whereof have laterally offset grooves or recesses, a threaded rod seated in each of said recesses, and half-nuts fitted to engage the said rods and slotted to receive the end portion of the saw-blades, substantially as specified. 24th. In a stone-sawing machine, the combination with the saw-frame having the slotted or split end-bars, the slots whereof are provided with opposite laterally offset recesses, of the screw-rods seated in said recesses, the half-nuts engaging said rods and placed opposite to each other on each pair of the rods, and the saw-blades having thickened central portions whose ends engage grooves in the said nuts, said blades also having thinner portions at each side, each of which is notched to form a saw, substantially as specified.

**No. 55,528. Machine for Attaching Buttons to Garments.** (*Machine pour attacher les boutons aux vêtements.*)



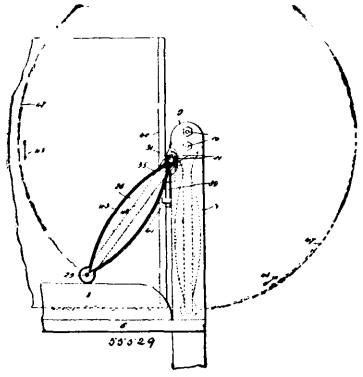
Flagg Brothers, Assignees of Daniel A. Carpenter, all of New York, New York, U.S.A., 6th April, 1897; 6 years. (Filed 8th March, 1897.)

*Claim.*—1st. In a machine for attaching buttons to garments, the combination of a guide-block pivoted to the frame and having a projection 61, the lever 5, anvil 7, link 51, cam 52, and link 54, substantially as described. 2nd. In a machine for attaching buttons to garments, the combination of the guide-block 6 having a projection 61, the lever 5, the pin forming a common pivot for the block and lever, the anvil 7, link 51, cam 52, link 54, and a spring tending to throw the upper end of the block backward, substantially as described. 3rd. In a machine for attaching buttons to garments, the combination of the guide-block 6 and lever 5 secured by a common pivot in the frame, the anvil 7, link 51, a cam adapted to throw the upper end of the guide-block forward, and means whereby the cam is actuated, substantially as described. 4th. In a machine for attaching buttons to garments, the combination of a chute adapted to supply fasteners, an anvil adapted to move upward and take fasteners from the chute, a plunger provided with a needle, and a table interposed between the guides of the anvil and plunger and having slides 92 with notches at their inner ends and with beveled surfaces 94 and with a spring or springs tending to force the slides together, substantially as described. 5th. In a machine for attaching buttons to garments, the combination of a chute adapted to supply fasteners, an anvil having a pin 70 and adapted to move upward under the chute with the pin projecting into the chute, means whereby the anvil is thrown forward clear from the chute, a plunger

provided with a needle, and a table interposed between the guides of the plunger and anvil and having movable plates with notches at their inner ends and with beveled surfaces 94 and with a spring or springs tending to force the plates together, substantially as described. 6th. In a machine for attaching buttons to garments, the combination with an anvil and plunger of the lever 3, the button-holder pivoted to the frame and having the foot 12 provided with the slot open at one end and adapted to receive the hub of the button, the button-holder being arranged with the foot 12 projecting into the path of the plunger when the plunger is in the position in which it normally rests, a spring 16 tending to keep the button-holder in the path of the plunger, and a rod 15 connected to the button-holder and to the lever 3 and adapted to retract the holder simultaneously as the plunger advances, substantially as described.

**No. 55,529. Head Rests for Car Seats.**

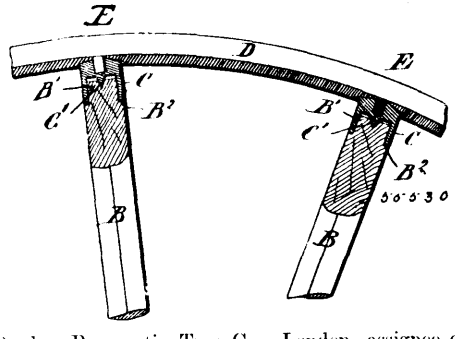
(*Appui-tête pour sièges de chars.*)




Joseph Baerman Strauss and Edwin Baerman Tuteur, both of Chicago, Illinois, U.S.A., 6th April, 1897; 6 years. (Filed 16th March, 1897.)

*Claim.*—1st. The combination with the end of the frame of a car seat, of a head rest supported therein and adapted to be moved so as to act as a support for the head, substantially as shown and described. 2nd. The combination with the frame of a car seat, of a head rest pivotally supported between the tops of suitable uprights and adapted to be adjusted so as to support the head, substantially as shown and described. 3rd. The combination with the frame of the end of a car seat, of a head rest pivotally supported therein and suspended from the arm of the seat, by which said head rest is adapted to be set, substantially as shown and described. 4th. The combination with the frame of the end of a car seat, of a head rest pivotally supported therein and adapted to be turned so as to act as a support for the head, said head rest consisting of a frame which is suspended between the end posts of the seat frame and which is adapted to be turned upon its supports and to be fixed in any desired position, and said frame being provided with a pillow or cushion, substantially as shown and described. 5th. The combination with the frame of the end of a car seat, of a head rest pivotally supported therein and adapted to be turned so as to act as a support for the head, said head rest consisting of a frame which is suspended between the end posts of the seat frame, and which is adapted to be turned upon its supports, and by means of an arm or piece mounted upon said posts, and in operative connection with said frame, to be locked in any desired position, and said frame being provided with a pillow or cushion, and said pillow or cushion being adapted to be inflated with air, substantially as shown and described. 6th. The combination with the frame of the end of a car seat, provided with the usual upright posts, of upright plates secured to the tops of said posts, a cross plate mounted between said plates and provided at each end with an upwardly directed flange or head, said flanges or heads being bolted to the upright plates on the posts, and a revoluble arm mounted between said upright flanges or heads, a head rest frame mounted between the end posts of the seat on trunnions supported by bolts which connect the end plates on the posts with said upright flanges or heads of the cross plate, and said frame and said arm being in operative connection, and the said frame being adapted to be turned on its supports, substantially as shown and described. 7th. The combination with the frame of the end of a car seat, provided with the usual upright posts, of upright plates secured to the tops of said posts, a cross plate mounted between said plates and provided at each end with an uprightly directed flange or head, said flanges or heads being bolted to the upright plates on the posts, and a revoluble arm mounted between said upright flanges or heads, a head rest frame mounted between the end posts of the seat on trunnions supported by bolts which connect the end plates on the posts with said upright flanges or heads of the cross plate, and said frame and said arm being in operative connection, and the said frame being adapted to be turned on its supports, and means for locking said head rest in any desired position with reference to the car seat, substantially as shown and described. 8th. The combination with the frame of the end of a car seat, provided with the usual upright posts, of upright plates secured to the tops of said posts, a cross plate mounted between said plates and provided at each end with an upwardly directed flange or head, said flanges or heads being bolted to the upright plates on the posts, and a revoluble arm mounted between said upright flanges or heads, a head rest frame mounted between the end posts of the seat on trunnions supported by bolts which connect the end plates on the posts with said upright flanges or heads of the cross plate, and said head rest frame being adapted to be turned on its supports, and said arm being in operative connection with toothed locking discs adapted to engage with corresponding teeth in said head rest frame and to lock it in any desired position with reference to the car seat, and said head rest frame being provided with a pillow or cushion, which is connected therewith, and said pillow or cushion being adapted to be inflated, substantially as shown and described. 9th. The combination with the frame of a car seat, of a head rest consisting of suitable side posts, trunnions or supports connected with said posts, a cross-piece in operative connection with said trunnions or supports and sustaining them in position, a head rest frame pivotally supported by said trunnions or supports and adapted to be turned about them, and means for locking said head rest frame in any desired position to said trunnions or supports, substantially as shown and described. 10th. The combination with the frame of a car seat, of a head rest consisting of adjustable side posts, means for locking said posts in one or more positions, trunnions or supports connected with said posts, a cross-piece in operative connection with said trunnions or supports and sustaining them in position, a head rest frame pivotally supported by said trunnions or supports, and adapted to be turned about them, means for locking said head rest frame in any desired position to said trunnions or supports, said head rest frame being provided with a suitable pillow or cushion, and said pillow or cushion being provided with an auxiliary renewable covering, substantially as shown and described. 11th. The combination with the end of the frame of a car seat provided with an adjustable head rest, as herein described, of a supplemental head rest supported within said frame, substantially as shown and described. 12th. The combination with the end of the frame of a car seat provided with a head rest, of a supplemental head rest supported within said frame, said supplemental head rest being adjustable, substantially as shown and described. 13th. The combination with the end of the frame of a car seat, of main supplemental head rests, said head rests being both separately and jointly adjustable, and being connected with the end frame of the seat, substantially as shown and described. 14th. The combination with the end of the frame of a car seat, of a head rest consisting of movable side posts, movable supporting pieces connected therewith, movable head rest frames attached to said supporting pieces, pillows detachably connected with said head rest frames, and means for locking any and all of the parts in position, independently or coincidently, substantially as shown and described. 15th. The combination with the frame of a car seat of one or more head rest adjustably connected therewith, each adapted to be fixed in one or more positions, and to serve as a support for the head, substantially as shown and described. 16th. The combination with the end of the frame of a car seat of a head rest supported within said frame in any convenient manner, so as to afford a yielding support for the head, substantially as shown and described.

**No. 55,530. Method of Securing Metal Rims or Felloes to the Spokes of Vehicle Wheels.** (*Méthode d'assujétir les jantes métalliques aux rais de roues.*)

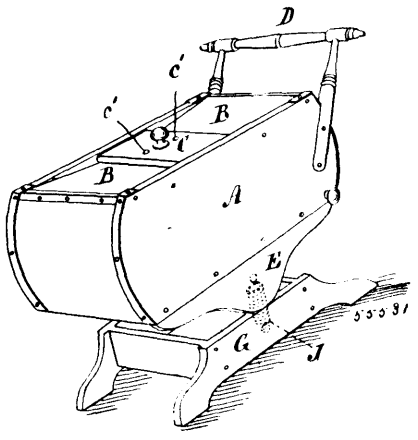



The Dunlop Pneumatic Tyre Co., London, assignee of Charles Kingston Welch, Coventry, Warwick, both in England, 6th April, 1897; 6 years. (Filed 20th March, 1897.)

*Claim.*—1st. The method of securing a metal rim or felloe to the spokes of a wheel by means of sockets having convex ends fitting into corresponding cavities or recesses in the inner circumference of the rim or felloe and contracting the rim or felloe upon the ends of such sockets. 2nd. The sockets C, adapted to be driven on the end of the spokes and having a convex end as a bearing surface against the wheel rim D, as set forth. 3rd. A vehicle wheel consisting of a pneumatic tyre, a metal rim or felloe having on its inner circumference a series of depressions, spokes radiating from a hub or central box and fitted at their outer ends with metal sockets shaped at the ends to fit the said depressions in the rim or felloe, the said rim or felloe spokes and hub being held together by the contraction of the rim or felloe all substantially as described. 4th. A vehicle

wheel having its rim secured to the spokes by a socket C, driven on the end of the spokes and having a convex end bearing by compression against the wheel rim D, as set forth.

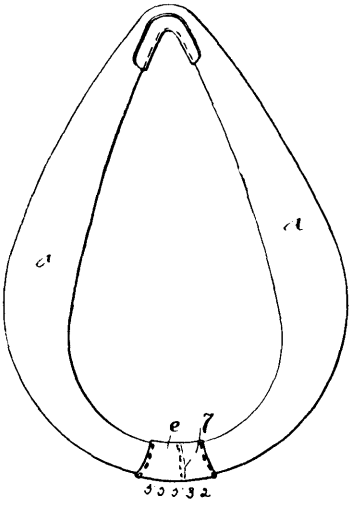
**No. 55,531. Churn.** (*Baratte.*)




Frank Sanford & Co., assignee of William H. Church, both of Fenelon Falls, Ontario, Canada, 6th April, 1897; 6 years. (Filed 22nd March, 1897.)

*Claim.*—1st. A churn comprising an oblong box A, having partially rounded ends and a down wardly converging top B, provided with cover C, having ventilating holes $c^1$, $c^1$, mounted on irregular curved rockers E, E, a stand or platform G, on which said rockers rock, and spirally coiled wire springs J, J, connecting the rockers and stand at opposite sides of the churn, as set forth. 2nd. The combination of the oblong box A, having internally a breaker frame H, irregular curved rockers E, E, stand G, on which said rockers rock, and spirally coiled wire springs J, J, connecting the rockers and stand at opposite sides, as and for the purpose set forth.

**No. 55,532. Horse Collar.** (*Collier de cheval.*)

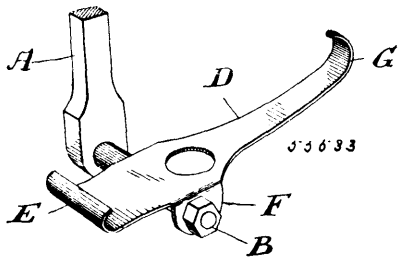



Henry Lawrence Gulline, assignees of William Schwegel and John Connolly, all of Granby, Quebec, Canada, 6th April, 1897; 6 years. (Filed 17th March, 1897.)

*Claim.*—1st. A horse collar, the body halves of which are seamless throughout the liner portion, and also throughout the back up to the junction of the straight and crook portions thereof, and at such junction covered by a chafe-piece the outer edge of which is located adjacent to but does not reach or overlap said liner portion, for the purpose set forth. 2nd. A horse collar, the leather body halves of which are each formed of a single piece of elbow-form, notched on the convex edge thereof, folded longitudinally and having the edges of the notch secured together and the convex and concave edges of the piece secured together to produce a complete body free from points or knobs, as set forth. 3rd. A blank for a horse collar body half, comprising an integral straight section, crook section, intermediate back section, and liner section, the straight and crook back sections being separated by a notch, substantially as and for the purpose set forth.

**No. 55,533. Spring Pedal and Toe Clip.**

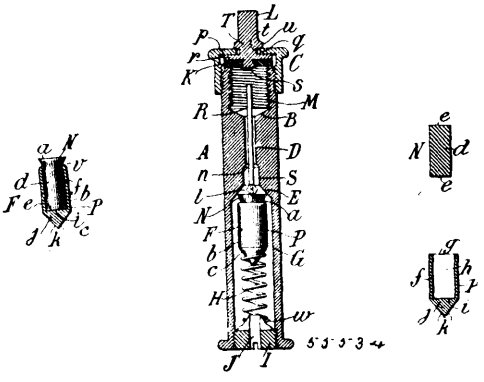
(*Pédale à ressort et attache de bouts de pieds.*)




Marmaduke Matthews and Agnes Jardine, both of Brasondale, Ontario, Canada, 6th April, 1897; 6 years. (Filed 10th October, 1895.)

*Claim.*—1st. In a pedal and in combination with the spindle thereof, a plate having a flange turned up at one end and a toe clip or gripping piece at the other, substantially as and for the purpose specified. 2nd. In a pedal and in combination with the spindle thereof, two plates each having a flange at one end and a toe clip or gripping piece on the other end, said plates being secured one on each side of said spindle, and with the toe clip or gripping piece of one plate against the flange of the other, substantially as and for the purpose specified.

**No. 55,534. Valve.** (*Soupape.*)

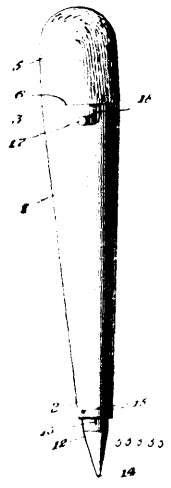



G. H. F. Schrader, New York, State of New York, U.S.A., 6th April, 1897; 6 years. (Filed 22nd February, 1897.)

*Claim.*—1st. In tire valves and the like, a casing having a valve chamber and a seat, in combination with a valve proper within said chamber, having an imperforate cylindrical body, a seating face at its one end engaging said seat, and a tapering part at its other end, and a spring within said chamber embracing the tapering end of said valve proper and holding it toward said seat. 2nd. In tire valves and the like, a valve casing a valve chamber and a seat, in combination with a valve proper in said chamber, freely movable therein and unconnected to said casing, consisting of an elongated imperforate substantially cylin'rical body having a seating face of soft packing material at one end engaging said seat, and having a tapering metallic point at its other end and a coiled spring in said chamber surrounding and embracing the tapering end of said valve proper and holding it toward said seat. 3rd. For tire valves and the like, a casing having a valve chamber and a tapering valve seat, in combination with a valve proper consisting of an unguided body freely movable laterally against the side walls of said chamber, and having an elongated cylindrical imperforate bar of packing material having a yielding seating face at one end, and a metallic casing surrounding and embracing the periphery at the other end of said material, and preserving the shape of said bar and protecting the latter against contact with said walls, substantially as and for the purpose set forth. 4th. For tire valves and the like, a free and loose valve proper consisting of an inner elongated imperforate cylinder of packing material of greater length than diameter, and an outer cup-shaped metallic casing embracing the periphery and one end of said cylinder, and preserving the shape of and protecting the sides of said bar, said cylinder and casing united together, unconnected to any other part, and constituting a complete and operative valve proper for freely and loosely entering a valve chamber and engaging a valve seat. 5th. For tire valves and the like, a casing having a valve chamber and a contracting valve seat, in combination with a valve proper in said chamber and freely movable against the side walls thereof, and consisting of an inner elongated cylindrical imperforate bar of rubber having a seating face at one end, and an outer hollow metallic cylinder having a socket of less depth than the length of said bar and receiving the latter, an annular wall embracing the sides of said bar, and a solid head beneath said socket protecting the inner end of said bar, said bar projecting at its seating face be-

yond said cylinder, there entering and compressed in said seat, and beyond the seat reinforced by said cylinder, said cylinder preserving the shape of said bar, and protecting the latter against contact with and wear from the side walls of said chamber, substantially as and for the purpose set forth. 6th. In tire valves and the like, a casing having a valve chamber, a seat and a conduit beyond said seat, an a valve proper in said chamber seating on said seat opposite said conduit, in combination with a deflater in and passing through said conduit opposite said valve proper, unconnected to and movable independently of the latter, and unseating the latter when moved thereagainst, said deflater having an outer end beyond said conduit by which it can be overated, and means preventing the withdrawal of said deflater from said casing, substantially as and for the purpose set forth. 7th. In tire valves and the like, a casing having a valve chamber G, a seat E at the end thereof, a conduit D leading from said seat, a chamber S between said seat and conduit, a shoulder *n* between said chamber and conduit, and a socket M beyond said conduit, in combination with a valve proper in said chamber engaging said seat, and a deflater for moving said valve proper, unconnected thereto, having a stem passing through said conduit and projecting into said socket at its outer end and into said chamber S at its inner end, and having an enlarged head on its inner end opposite said valve proper, of greater projection than the diameter of said conduit, movable against the valve proper to unseat the latter, and immovable outwardly past said shoulder *n*, substantially as and for the purpose set forth. 8th. In tire valves and the like, a tubular casing A, having an externally screwthreaded outer end, in combination with a cap C having an internal screwthread and screwing on said end to close the casing, a washer K carried by said cap, a stud T carrying said washer and having a disc *r* within and engaging the inner face of said cap, a spindle *t* above said disc and a shoulder *u* projecting laterally above said spindle, said cap having a smooth top face *p* receiving said disc and a central aperture *q* surrounding said spindle, whereby said cap can rotate independently of said washer, substantially as and for the purpose set forth. 9th. For tire valves and the like, a free and unguided valve proper consisting of an inner elongated imperforate bar N of packing material having a substantially cylindrical periphery *d* and faces *e* at its ends, and an outer protecting casing applied to and holding said bar and consisting of a thin annular metallic wall *f* traversed by a cylindrical socket *h*, said bar fitting into said socket, and said wall embracing the periphery of said bar and preventing distortion of and protecting the latter, said bar and casing connected and moving together and constituting a valve proper adapted to be inserted and used loosely and unguided in the valve chamber of a valve. 10th. In a valve, a valve casing having an internal conduit, a valve seat and a valve chamber, in combination with a valve proper N in said chamber and engaging said seat, and consisting of a passive and freely movable imperforate cylindrical body, of compressible packing material, unconnected to said casing, substantially as and for the purpose set forth.

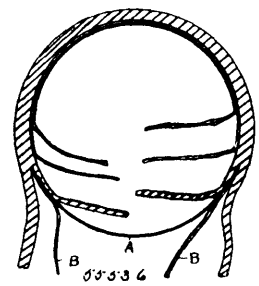
**No. 55,535. Tire Repairing Device.**
(*Appareil à réparer les bandages.*)



David Haxten Cox, jr., Elizabeth, New Jersey, U.S.A., 6th April, 1897; 6 years. (Filed 2nd March, 1896.)

*Claim.*—1st. A tire repairing device comprising a conical sleeve, a body adapted for insertion therein, and a cap detachably connected to the body and adapted when the body is in the sleeve to project beyond the smaller end of the sleeve, said cap having a pointed end adapted for insertion in a puncture to be plugged, substantially as set forth. 2nd. A tire repairing device comprising a conical sleeve, a body adapted for insertion therein and having a reduced extension and a cap having a recess in one end adapted to receive the reduced extension of the body, said cap being adapted when the body is in place in the sleeve, to project beyond the smaller end of the sleeve, said cap having its projecting end pointed and adapted for insertion in a puncture to be plugged and having its recessed end slotted transversely through its recess, substantially as set forth.

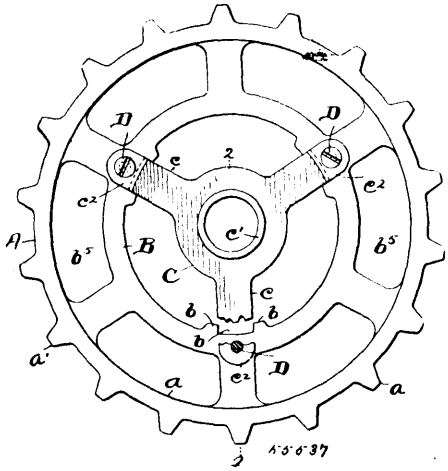
**No. 55,536. Pneumatic Tire.** (*Bandage pneumatique.*)




Francisco Toni, Sydney, New South Wales, Australia, 6th April, 1897; 6 years. (Filed 18th February, 1897.)

*Claim.*—1st. Inserting in a pneumatic tire or tire-cover in the manner set forth curved flexible shield plates arranged *en echelon* and each of sufficient width to protect the thread, as described with reference to the accompanying drawings. 2nd. A non-puncturable tire or tire-cover in the rubber portion whereof are embedded flexible shield plates sufficient in width to protect the thread, curved to the required shape and attached *en échelon* to a tape, as described with reference to the accompanying drawings.

**No. 55,537. Sheet Metal Sprocket Wheel.**
(*Roue dentée en feuille de métal.*)




Richard M. Corcoran, Cleveland, Ohio, U.S.A., 6th April, 1897; 6 years. (Filed 23rd February, 1897.)

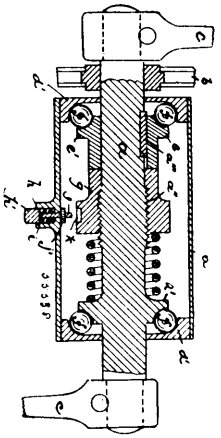
*Claim.*—1st. A sprocket wheel having its outer portion composed wholly of a single piece of sheet metal, and comprising a single thick web part and a double thick rim part, from which the teeth are formed, the loops which connect the two thicknesses of the rim being at the outer edges of the teeth, substantially as and for the purpose specified. 2nd. In a sprocket wheel, an outer portion composed wholly of a single piece of sheet metal, and comprising a single thick web part and a double thick rim part, from which the teeth are formed, the two thicknesses of the rim being in close contact and united by loops at the outer edges of the finished teeth, combined with a spider connected with said web part, substantially as and for the purpose specified. 3rd. In a sprocket wheel, an outer portion consisting wholly of a single piece of sheet metal, and comprising a single thick web part having notches in its inner periphery, and a double thick rim part in which the teeth are formed, the two thicknesses of the rim being in close contact and united by loops at the outer edges of the finished teeth, combined with a spider, the arms of which enter the notches in said web and have offset ends which lie against and are secured to the sides of the web, substantially as and for the purpose specified.

**No. 55,538. Adjustable Roller Bearings for Bicycles, etc.** (*Coussinet anti-frottant pour bicycles, etc.*)

William Henry King, Newark, New Jersey, U.S.A., 7th April, 1897; 6 years. (Filed 25th February, 1897.)

*Claim.*—1st. The combination with the barrel, hub or box having at its opposite ends bearings for the rollers, of a shaft having a feather and outside of said box means for transmitting power, a sliding sleeve arranged on said shaft within said box and positively held from turning on said shaft by said feather and having a cone, balls or rollers and a threaded collar engaging the sleeve to move the

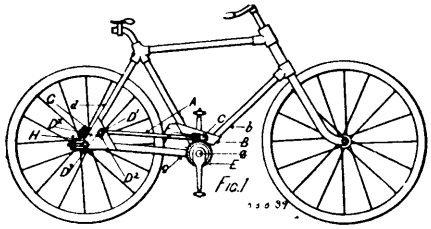
same longitudinally upon the shaft to effect an adjustment, substantially as set forth. 2nd. The combination with the barrel, hub



or box having roller bearings at its opposite ends and a shaft extending through said ends, of a longitudinally sliding sleeve positively held from rotating upon said shaft and having a cone, balls or rollers, a collar engaging said sleeve and having at its outer side a recess, and a finger piece, stop or detent arranged in bearings formed at one side of said box or barrel and adapted to enter said recess, substantially as set forth. 3rd. The combination with the box, shaft, collar, balls and sleeve, the collar serving to adjust the sleeve in its relation to the balls, of a stop or hand piece adapted to engage said sleeve to prevent the same from turning and adapted to slide in bearings formed in the box, and a spring normally holding said hand piece or stop away from said sleeve, substantially as set forth.

### No. 55,539. Driving Mechanism for Cycles, etc.

(*Mécanisme conductuer pour cycles etc.*)



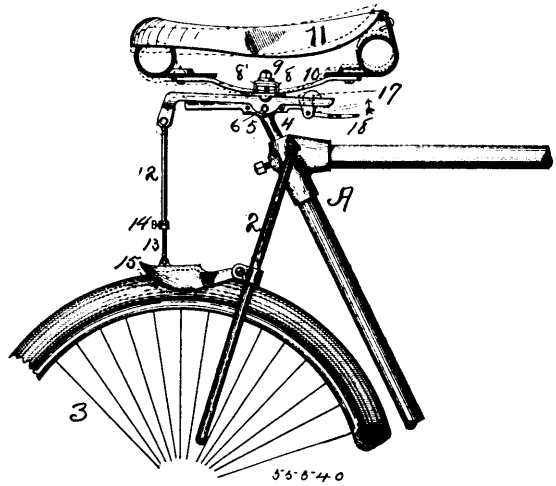

James Welch, King street, Newcastle, assignee of John Dredge, King street, Newtown, both in New South Wales, Australia, 7th April, 1897; 6 years. (Filed 25th February, 1897.)

*Claim.*—1st. Improved driving mechanism for cycles and the like, consisting of two sets of frusto-helical or screw wheels, one each of which wheels are upon the driving spindle and the axle of the driving wheel of the cycle or the like respectively, while the other two are upon either end of a longitudinally set gear spindle conveniently affixed to the frame of said cycle or the like, substantially as herein described and explained. 2nd. In a cycle or the like the combination and arrangement with a driving spindle having a frusto-helical or screw wheel thereon such as E, and a driving axle having a similar frusto-helical or screw wheel thereon such as H, of a gear spindle such as A, in bearings such as C and D adjustibly affixed to the frame of the cycle or the like, and frusto-helical or screw pinions or wheels such as F and G on said gear spindle such as A, substantially as herein described and explained and as illustrated in the drawings. 3rd. In a cycle or the like, the combination and arrangement with the driving mechanism as set out in the preceding (second) claiming clause of the bearings C and D, having screw ends or tangs such as $C^1$ and $D^1$, and slots such as $B^1$ and $D^2$ in the frame or in angle pieces or forgings such as B and D and on or forming part of said frame, substantially as herein described and explained and as illustrated in the drawing.

### No. 55,540. Bicycle Brake. (*Frein de bicycles.*)

Charles William Hudson, and Fred Morehouse Harrington, both of Weedsport, New York, U.S.A., 7th April, 1897; 6 years. (Filed 2nd March, 1897.)

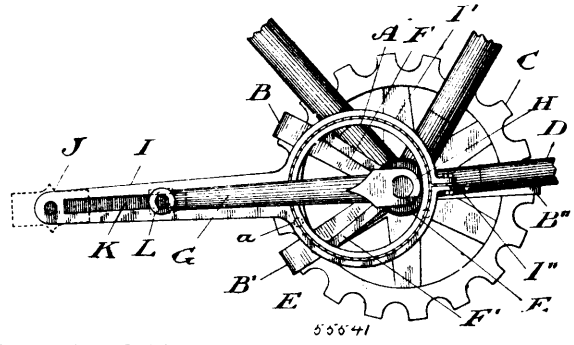
*Claim.*—1st. The combination with a cycle wheel, a saddle-post and a saddle mounted and adapted to rock upon said saddle-post, in combination with a brake shoe hung upon the cycle frame, and a rod connecting it to the saddle whereby the brake is applied to the wheel, or removed therefrom by the rocking of the saddle. 2nd The combination with a cycle frame, a wheel mounted therein, and a saddle-post mounted in said frame, of a rocker mounted upon the saddle-post, a saddle mounted upon said rocker, a brake shoe hung upon said frame, and a rod connecting said shoe to said rocker, whereby the swinging of said rocker applies the brake to or removes it from the wheel, and means to lock or release said rocker. 3rd.



The combination with a cycle wheel, or a saddle-post a saddle mounted thereon and a brake connected to said saddle and adapted to be applied to or released from said wheel by the rocking of the saddle.

### No. 55,541. Cycle Driving Gear.

(*Mécanisme conducteur de cycles.*)



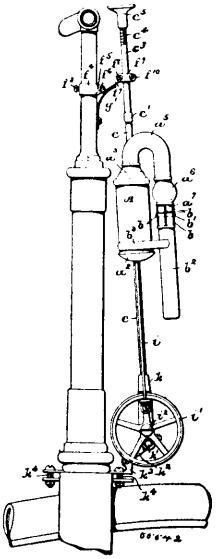
Thomas Harry Belch and George Reginald Gray, both of Coldwater, Ontario, Canada, 7th April, 1897; 6 years. (Filed 20th February, 1897.)

*Claim.*—1st. In a cycle driving-gear, the combination of a bearing suitably held in position eccentric to the crank axle, a supplemental pedal-crank adapted to move on the eccentric bearing, a crank connected to the crank-axle, and means for slidingly connecting the supplemental pedal-crank to the outer end of the crank, substantially as described and for the purpose specified. 2nd. In a cycle driving-gear, the combination of a circular-bearing suitably held in operative position forward of the crank-axle and eccentric thereto, a supplemental pedal-crank adapted to move on the circular bearing so that the pedal may describe a circle concentric with the eccentric circular-bearing, a crank connected to the crank-axle, and means for slidingly connecting the supplemental pedal-crank to the outer end of the crank, substantially as described and for the purpose specified. 3rd. In a cycle driving-gear, the combination of a circular bearing, braces connecting the circular bearing to the crank-axle bracket in such a manner that it may be held in operative position forward of the crank-axle and eccentric thereto, a supplemental pedal-crank provided with a ring adapted to engage with and move over the circular bearing, a crank connected to the crank-axle, means for slidingly connecting the supplemental pedal-crank to the outer end of the crank, and a chain sprocket-wheel attached to the axle, substantially as described and specified. 4th. In a cycle driving-gear, the combination of a circular bearing, braces connecting the circular bearing to the crank axle bracket in such a manner that it may be held in operative position forward of the crank axle, and eccentric thereto, a supplemental pedal-crank provided at its outer end with a slide and at its inner end with a ring adapted to engage with and move over the circular bearing, a crank connected to the crank-axle, a slide-block fitted within the slide and pivotally connected to the outer end of the crank, substantially as described and specified. 5th. In a cycle driving-gear, the combination with the eccentric circular-bearing A, of the looped connections B, $B^1$, $B^{11}$, bridging the sprocket-wheel C, and the crank-axle bracket E, substantially as described and specified. 6th. In a cycle driving-gear, the combination with the eccentric circular bearing A, suitably grooved and held in position forward of the crank-axle H, of

the supplemental pedal crank I, provided with ring $I^1$, grooved at *i*, so as to form when in operative position on the circular bearing A, a race-way for the balls *a*, substantially as specified. 7th. In a cycle driving-gear, the combination with the eccentric circular bearing A, suitably grooved and held in operative position forward of the crank-axle H, of the supplemental pedal-crank I, provided with ring $I^1$, split and flanged at $I^{11}$, to receive a bolt and grooved at *i*, forming with the grooved circular bearing A, a race-way for the balls *a*, the pedal J, the slide K, formed at the outer end of the supplemental pedal-crank I, the crank-axle H, journalled in the crank-axle-bracket E, the crank G, and the slide-block L, pivotally connected to the outer end of the crank G, and engaging with the slide K, and the chain sprocket-wheel C, fixed to the crank-axle H, substantially as specified.

**No. 55,542. Alarm or Signalling Device.**

(*Indicateur ou appareil de signal.*)

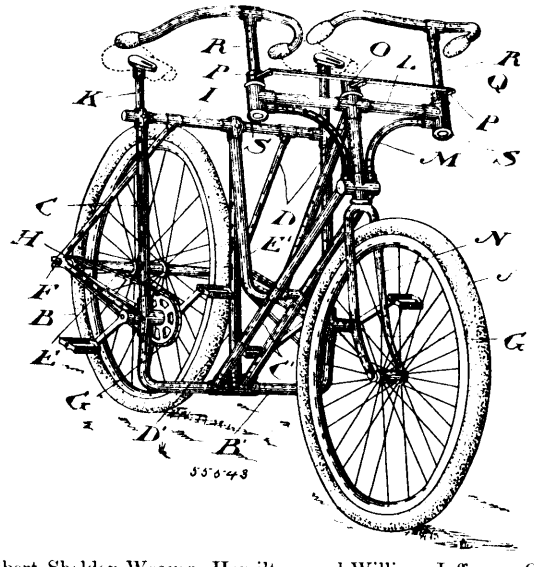


George F. Hall and Henry L. Leibe, both of Newark, New Jersey, U.S.A., 7th April, 1897; 6 years. (Filed 1st March, 1897.)

*Claim.*—1st. In combination with the frame of a vehicle, of a signalling device connected with said frame, comprising a cylinder, an air chamber on said cylinder, and a whistle-portion connected with said air chamber, and means connected with said device for causing the operative engagement of a plunger-mechanism with one of the wheels of the vehicle, whereby a signal or alarm is sounded, substantially as and for the purposes set forth. 2nd. In combination with the frame of a vehicle, of a signalling device connected with said frame, comprising a cylinder, an air chamber on said cylinder, and a downwardly-extending whistle-portion connected with said air-chamber, and means connected with said device for causing the operative engagement of a plunger-mechanism with one of the vehicle wheels, whereby a signal or alarm is sounded, substantially as and for the purposes set forth. 3rd. In combination with the frame of a vehicle, of a signalling device connected with said frame, comprising therein a cylinder, an air chamber on said cylinder, and a whistle-portion connected with said air-chamber, a plunger or piston in said cylinder, a rod *c* connected with said cylinder, a friction wheel on the lower end of said rod, and a connecting rod connecting said friction wheel with the plunger or piston in the cylinder, means for connecting said device to the frame of the vehicle, and means connected with said rod *c* for causing the frictional and operative engagement of said friction wheel with the vehicle wheel, substantially as and for the purposes set forth. 4th. In combination with the frame of a vehicle, of a signalling device connected with said frame, comprising therein a cylinder, an air chamber on said cylinder, and a whistle-portion connected with said air chamber, a plunger or piston in said cylinder, a rod *c* connected with said cylinder, a spring-actuated rod $c^3$ adjustably secured to said rod *c*, a friction wheel on the lower end of said rod *c*, and a connecting rod connecting said friction wheel with the plunger or piston in the cylinder, means for connecting said device with the frame of the vehicle, and means connected with said rod $c^3$ for causing the frictional and operative engagement of said friction wheel with the vehicle wheel, substantially as and for the purposes set forth. 5th. In combination with the frame of a vehicle, of a signalling device connected with said frame, comprising therein a cylinder, an air chamber on said cylinder, and a whistle-portion connected with said air-chamber, a plunger or piston in said cylinder, a hollow rod *c* connected with said cylinder, a spring-actuated rod $c^3$ adjustably secured in said rod *c*, a friction wheel on the lower end of said rod *c*, and a connecting rod connecting said friction wheel with the plunger or piston in the cylinder, means for connecting said device with the frame of the vehicle, consisting essentially of a clamp or clip adapted to be secured to the frame of the vehicle, and having a perforated arm in which said rod $c^3$ is adapted to reciprocate, a clip $k^3$, and a link pivotally connected with said clip and the lower end of said rod *c*, substantially as and for the purposes set forth. 6th. In a bicycle or other vehicle, a signalling device mounted upon the frame thereof, a friction roller forming a part of the signalling device, a piston operatively connected with the said friction roller, and a cylinder in which said piston is adapted to reciprocate, the said cylinder being connected with a whistle which is operated whenever the said piston is rapidly reciprocated, substantially as and for the purposes set forth. 7th. An alarm or signalling device, comprising therein a cylinder, an air chamber on said cylinder, a whistle or alarm connected with said air chamber, a plunger or piston in said cylinder, and means for causing a reciprocal movement of said plunger or piston in said cylinder, substantially as and for the purposes set forth. 8th. An alarm or signalling device, comprising therein a cylinder, an air chamber on said cylinder, a whistle or alarm connected with said air chamber, a plunger or piston in said cylinder, and means for causing a reciprocal movement of said plunger or piston, consisting essentially of a connecting rod, and a friction wheel connected with said rod, substantially as and for the purposes set forth. 9th. An alarm or signalling device, comprising therein a cylinder, an air chamber on said cylinder, and a whistle or alarm connected with said chamber, a plunger or piston in said cylinder, a rod *c* to which said cylinder is secured, a wheel on the lower end of said rod, and a connecting rod connecting said plunger or piston with said wheel, substantially as and for the purposes set forth. 10th. An alarm or signalling device, comprising therein a cylinder, an air chamber on said cylinder, and a whistle or alarm connected with said chamber, a plunger or piston in said cylinder, a tubular rod *c* to which said cylinder is secured, a wheel on the lower end of said rod, a connecting rod connecting said plunger or piston with said wheel, and a rod $c^3$ adjustable in said rod *c*, and provided with means for operating the same, substantially as and for the purposes set forth. 11th. An alarm or signalling device, comprising therein a cylinder, having an opening in the top, tube-like portion $a^5$ connected therewith forming an air chamber, a discharge opening in said tube-like portion, and a whistle-portion connected with said discharge opening, substantially as and for the purposes set forth.

**No. 55,543. Two Side Seated Bicycle.**

(*Bicycle à deux sièges.*)



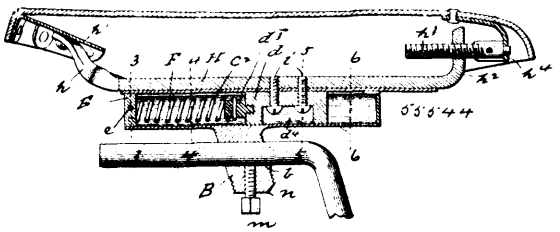
Albert Sheldon Weaver, Hamilton, and William Jefferson Goold, Toronto, both in Ontario, Canada, 7th April, 1897; 6 years. (Filed 4th March, 1897.)

*Claim.*—1st. In a bicycle, the combination of a frame single from the crank hangers forward and double thence rearwardly, a front wheel having its fork journalled in the single portion of the frame, a gear-wheel journalled in the double portion of the frame, driving gear for the rear wheel, and steering gear connected with the said fork stem, substantially as and for the purpose specified. 2nd. In a bicycle, the combination of a rear frame comprising two parts connected together by cross-bars and the axle of the rear wheel, a wheel suitably journalled on said axle, driving mechanism for the said wheel on each half of the frame, the single front portion of the frame comprising a head, suitable stays and braces connecting the head with the cross-bars of the double rear portion of the frame, a fork having its stem journalled in the said head, a front wheel journalled in said fork, and steering gear connected with the said fork stem, substantially as and for the purpose specified. 3rd. A frame for bicycles, comprising the rear portions C and D, the cross-bars I and $B^1$, the standard $D^1$, the head M, one or more stays $C^1$, and the brace $E^1$ connecting directly or otherwise the head M, and the

cross-bar I, substantially as and for the purpose specified. 4th. A frame for bicycles, comprising the rear portions C and D, the cross-bars I and $B^1$, the standard $D^1$, the head M, the cross-bar L, carrying the heads S, one or more stays $C^1$, and the brace $E^1$, connecting directly or otherwise the head M, and the cross-bar I, substantially as and for the purpose specified.

**No. 55,544. Bicycle Saddle Carriage.**

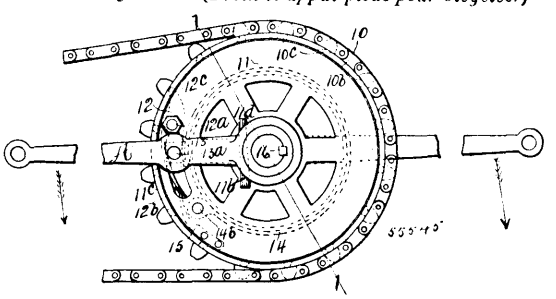
(*Monture pour selle de bicycle.*)



Charles Elbert Vail, Salt Lake, Utah, U.S.A., 7th April, 1897; 6 years. (Filed 26th February, 1897.)

*Claim.*—1st. A bicycle saddle carriage adapted to impart to the saddle a sliding or yielding movement only in a plane parallel with the line of travel of the bicycle, said movement being also in a plane at an obtuse angle to that in which power is applied to the pedals, substantially as set forth. 2nd. A bicycle saddle carriage, comprising a fixed member located in an approximately horizontal plane, and at an obtuse angle to that in which power is applied to the pedals, and a yielding member adapted to carry the saddle, and having a sliding movement in a direct longitudinal plane with relation to the fixed member, substantially as set forth. 3rd. A bicycle saddle carriage, comprising an approximately horizontally-disposed member, a longitudinally-yielding member carried thereby and supporting the saddle, said yielding member having a sliding movement in a longitudinal plane with relation to and parallel with the line of travel only, in contradistinction to a downward movement, and means for controlling the movement of said yielding member, substantially as set forth. 4th. A bicycle saddle carriage, comprising an approximately horizontally-disposed member, a member adapted to yield or slide only in a longitudinal plane relatively thereto, such movement being in a longitudinal plane with relation to and parallel with the line of travel, in contradistinction to a downward movement, and a spring for controlling the movement of said yielding member, substantially as set forth. 5th. A bicycle saddle carriage, comprising an approximately horizontally-disposed cylinder or barrel, a member received thereby, one of said members having a sliding movement in a longitudinal plane with relation to and parallel with the line of travel of the bicycle, and means for controlling said movement, substantially as set forth. 6th. A bicycle saddle carriage, comprising an approximately horizontally-disposed rigid member, a member adapted to slide longitudinally relatively thereto, and a detachable and removable controlling spring for said sliding member, substantially as and for the purpose set forth. 7th. A bicycle saddle carriage, comprising a plate or member provided with a knob or projection, a cylinder or barrel receiving said knob or projection, and having a longitudinal slot and an open end, a spring or cushion mounted within the cylinder with relation to said knob or projection, and a detachable cap-piece or end closure mounted at the open end of the cylinder, one of the first-mentioned or main members being adapted to slide or yield longitudinally with relation to the other member and in a longitudinal plane with relation to the line of travel, said yielding member carrying the saddle, and the other member having a fixed position, substantially as and for the purpose set forth. 8th. A bicycle saddle carriage, comprising a plate or member provided with a knob or projection, a cylinder or barrel receiving said knob or projection and provided with a longitudinal slot and an open end, a spring or cushion mounted in the cylinder with relation to said knob or projection, a detachable cap-piece or end closure mounted at the open end of the cylinder, one of the first-mentioned or main members having a sliding or yielding movement with relation to the other member, and in a longitudinal plane with relation to the line of travel, and the other member having a fixed position, devices carried by said yielding member for the attachment of the saddle, and a stem projecting from said fixed member for attachment to a saddle-post, substantially as and for the purpose set forth. 9th. As an improvement in bicycles, a supporting stem for the saddle having a transverse opening, said stem being adapted for connection with either a straight saddle-post, or with the arm of an angular saddle-post, substantially as and for the purpose set forth. 10th. A bicycle saddle carriage, comprising a cylinder or barrel, a member received thereby, one of said members having a sliding movement in a longitudinal plane with relation to the other member, and a spring located in the cylinder or barrel between one end of the same and the other member, and respectatively connected therewith at its ends, substantially as and for the purpose set forth. 11th. A bicycle saddle carriage, comprising a cylinder or barrel having a longitudinal slot or slide-way and an open end, a plate or member provided with a knob or projection received by said cylinder, one of said members having a fixed position and the other member having a sliding or yielding movement in a longitudinal plane with relation to the line of travel, a detachable cap-piece or end closure adapted to be secured at the open end of the cylinder, and a controlling spring having its ends respectively connected to the detachable end piece of the cylinder, and to the knob or projection of the other member, substantially as and for the purpose set forth. 12th. A bicycle saddle carriage, comprising a cylinder or barrel, a plate or member having a knob or projection received by said cylinder and relatively mounted so that its normal position within the cylinder is some distance from the front of the latter, and a controlling spring mounted in the cylinder in the space in rear of said knob or projection and having its ends respectively connected to the end portion of the cylinder and to said knob or projection, one of said main members having a fixed position, whereby the other member has a sliding or yielding movement in a longitudinal plane with relation to the line of travel and in both a forward and rearward direction, said yielding movement being controlled by the spring, and the latter acting to return the yielding member to normal position from either direction, substantially as and for the purpose set forth. 13th. A bicycle saddle carriage, comprising a barrel or cylinder having a slot or slide-way and an open end, a plate or member provided with a knob or projection received by said cylinder, a detachable cap-piece or end closure mounted at the open end of the cylinder, and a detachable spring having one end connected with said end piece, and the other end detachably connected with said knob or projection, substantially as and for the purpose set forth.

**No. 55,545. Combined Brake and Foot-Rests for Bicycles.** (*Frein et appui-pieds pour bicycles.*)

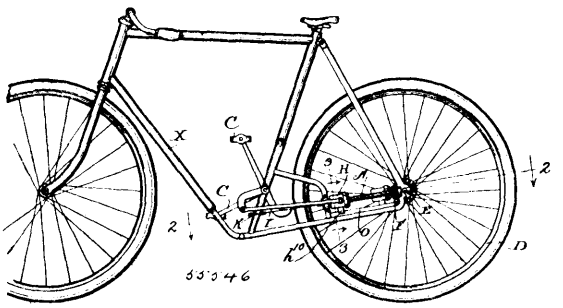


Reinhard Hoffmeister, Vancouver British Columbia., Canada, 7th April, 1897; 6 years. (Filed 26th February, 1897.)

*Claim.*—1st. In a bicycle brake and foot-rest, the combination of a plate or disc having a cylindrical hub fixed to a crank shaft a crank loosely mounted upon one end of the said cylindrical hub, a sprocket wheel having a deep recess around one side near its periphery, notches in one side of the recess and an obtuse angled groove on the other, and a pall which is engaged by a stop on the loosely mounted pedal crank, whereby the loosely mounted sprocket wheel is rotated in one direction, as specified. 2nd. In a brake and foot-rest for bicycles, combining a loosely mounted sprocket wheel having a deep recess around one side near its periphery, and a fixed disc having a cylindered hub, the combination of a pall 12, pivotally fixed near the arm on the inner side of the said disc, of an obtuse angled spring 14 whose circle comes just within the position of the said pall, one end of the said obtuse angled spring being secured to the plate or disc and the other end being secured to the loose pedal crank A through a slot 11*a* in the disc, the said pedal crank being loosely mounted on the cylindered hub of the said disc, substantially as specified. 3rd. A brake and foot-rest incorporated in the drive mechanism of a bicycle, the combination of a circular plate having a cylindered hub 11*a*, a pedal crank loosely mounted thereon, of an obtuse angled spring 14 on the opposite side of the said plate, the one end thereof being connected to the pedal crank by a stop 13 passing through a slot 11*c* in the said plate, and the opposite end being secured to the said plate in proximity to the said slot, of a pall 12 pivotally fixed near the rim of the said plate and means for holding the engaging end thereof beyond the rim of the said plate, of a sprocket wheel loosely mounted in a close proximity to the said plate having a deep circular recess on the side, next the plate into which the obtuse angled spring 14 and the pall 12 are received, the said spring engaging a similar angled groove in the recess on the wheel, and the pall engaging notched recesses on the opposite side thereof, substantially as specified. 4th. In a brake and foot-rest for bicycles, the combination of a sprocket wheel loosely mounted in close proximity to a circular plate having a cylindered hub which is rigidly secured on a crank shaft, of a deep circular recess around and near the rim of the said wheel on the side next the plate, an obtuse angled groove around one side of the said recess, and of notches directly beneath the sprocket teeth on the other, of an obtuse angled spring encircling the said groove, the one end being rigidly fixed to the said plate and the other end having a stop passing through a slot therein and secured to a loose pedal crank on the opposite side of the plate, and of a pall pivoted to the plate the end of which engages in the notches opposite the sprocket teeth, whereby the said sprocket may be forced one way, substantially as specified. 5th. In an improved foot-rest and brake for bicycles, the combination of an obtuse angled spring secured to a fixed circular plate, a pall

pivotally fixed near the rim of the said plate, a spring 15 engageing the end of said pall, whereby its opposite end is normally positioned beyond the edge of the said plate, of a stop 13 connecting the loose end of the spring 14 and a loosely mounted pedal crank through a slot in the side of the plate, of a sprocket wheel 10 loosely mounted having a deep circular recess around and near its rim which receives the spring 14 and the pall 12 having the recess 12*d* wherein the stop 13 is nested, so that when forward motion is imparted to the pedal cranks the pall will be engaged in the notches 10*e* and force the wheel forward, and when back pressure is applied on either pedal the wheel will slide around unrestrained, substantially as specified. 6th. In a foot-rest and brake for bicycles, a plate having a cylindered hub and a loose sprocket wheel in close proximity thereto, in combination with a pall secured near the rim of the said plate its end engaging notches in a deep recess in the said sprocket wheel, and of an obtuse angled spring 14 secured at one end to the plate and at the other to the loosely mounted pedal crank and means for clamping it in the recess on the sprocket wheel, substantially as and for the purpose hereinbefore set forth.

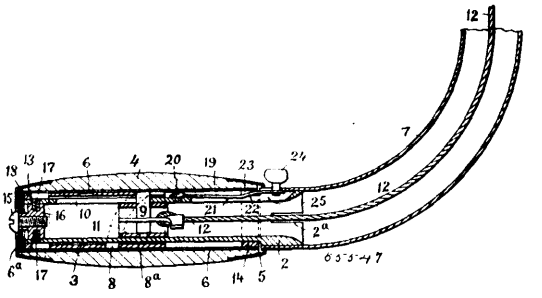
**No. 55,546. Chainless Bicycle.** (*Bicycle sans chaînes.*)



William Henderson Russell, Chicago, Illinois, U.S.A., 7th April, 1897; 6 years. (Filed 1st March, 1897.)

*Claim.*—1st. In a bicycle, the combination of a spiral shaft mounted in ball bearings to the frame of a bicycle, a sliding sleeve on the spiral shaft, such sleeve comprising a cylinder fitting loosely over the spiral shaft and having holes therethrough corresponding with the threads on the spiral shaft, a second cylinder fitting closely to the first named cylinder, balls in the pockets formed by the holes in the first named cylinder engaging with the threads on the spiral shaft, and an outer cylinder, with ball bearings interposed between it and the inner cylinders, and means for moving the sleeve reciprocally on the spiral shaft, substantially as described. 2nd. In a bicycle, the combination of a spiral shaft mounted in ball bearings to the frame of the bicycle, a sliding sleeve on the spiral shaft, projecting arms or lugs on the sleeve, a guide way on the bicycle frame between the arms, balls interposed between the arms and the guide way, a crank, a connection between the crank and the sliding sleeve, and engaging bevelled gears on the spinal shaft and the hub of the bicycle, substantially as described. 3rd. In a bicycle, the combination of a spiral shaft mounted in ball bearings to the frame of the bicycle, a sliding sleeve on the spiral shaft, such sleeve comprising a cylinder fitting loosely over the spiral shaft, with holes in the cylinder corresponding with the threads on the spiral shaft, a second cylinder fitting closely over the first named cylinder, balls in the pockets formed by the holes in the first named cylinder, an outer cylinder, ball bearings interposed between the outer cylinder and the cylinders containing the balls, a connection between the outer cylinder and the inner cylinders whereby such inner cylinders may revolve in one direction independently of the outer cylinder, and means for moving the sleeve longitudinally, substantially as described. 4th. In a bicycle, the combination of a spiral shaft mounted in ball bearings to the frame of the bicycle, a sliding sleeve on the spiral shaft, such sleeve comprising a cylinder fitting loosely over the spiral shaft and having holes therein corresponding with the threads on the spiral shaft, a second cylinder fitting closely over the first named cylinder, balls in the pockets formed by the holes in the first named cylinder, an outer cylinder and a ball bearing interposed between the outer cylinder and the inner cylinders, a ratchet and a pawl fitting therein to between such outer cylinder and the inner cylinders, and means for moving the sleeve longitudinally on the spiral shaft, substantially as described. 5th. In a vehicle, having a spiral shaft rotatably mounted on ball bearings and bevelled gears connecting such shaft with the driving wheels of the vehicle, a sleeve mounted on the spiral shaft to move reciprocally thereon, such sleeve consisting of a cylinder fitting loosely over the spiral shaft and having holes therein corresponding with the threads on the shaft, balls engaging with the spiral shaft set in the holes, a second cylinder fitting closely over the first named cylinder to form therewith a single cylinder, an outer cylinder and adjustable ball bearings interposed between such outer cylinder and the combined cylinder fitting loosely therein, means for locking the outer cylinder and the inner cylinders together when the sleeve is moved in one direction on the spiral shaft, and means for moving the sleeve reciprocally on the shaft, substantially as described. 6th. In a bicycle having a spiral shaft with a gear thereon engaging with a corresponding gear on the driving wheel of the bicycle and a sleeve mounted on the spiral shaft to move reciprocally thereon and rotate the same when the sleeve is moved in one direction, the combination thereof with a crank shaft, cranks on the shaft, connections between the cranks and the reciprocally movable sleeves, and cranks extending outward from the first named cranks on the outside of the connections, with pedals on the last named cranks, such pedal cranks having the pedal thereon at an angle of ninety degrees from the connection cranks, substantially as described. 7th. In a vehicle, the combination of a spiral shaft, a bevelled gear secured rigidly thereon, a bevelled gear on the driving wheel of the vehicle intermeshing with the bevelled gear on the spiral shaft, roller bearings in which the spiral shaft is rotatably mounted, a guide way parallel with the spiral shaft, a sliding sleeve on the spiral shaft engaging with the guide way, with bells interposed between the sliding sleeve and the guide way, and such sliding sleeve engaging with the spiral shaft by means of balls interposed between the sleeve and the spiral shaft and engaging therewith, the portion of the sleeves engaging with the balls interposed between it and the spiral shaft rotatable in one direction relative to the remaining portion of the sleeve and not rotatable in the other direction, and means for moving the sleeve reciprocally on the shaft, substantially as described.

**No. 55,547. Vehicle Handle Bar.**
(*Poignée de barre de véhicule.*)



Edward Spencer Hall, New York, State of New York, U.S.A., 7th April, 1897; 6 years. (Filed 1st March, 1897.)

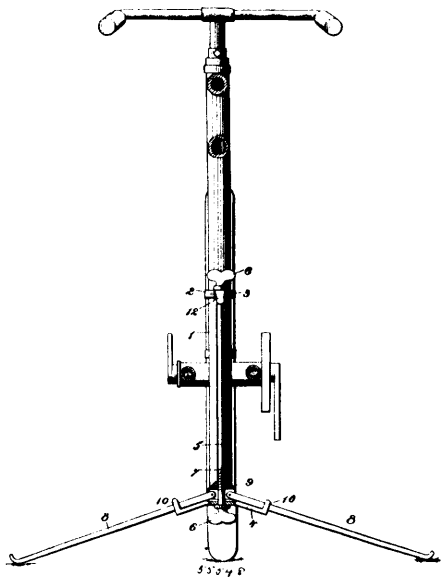
*Claim.*—1st. A vehicle handle bar provided with an attached stub end adapted to receive a revoluble grip operating a brake or other mechanism of the vehicle. 2nd. A vehicle handle bar comprising a main handle, a tubular stub-end fixed thereto, a slide at the stub-end, means connected with the slide and operating a brake or other mechanism of the vehicle, a revoluble grip journalled on the stub-end, and a screw or worm in said grip actuating the stub end slide. 3rd. A vehicle handle bar comprising a main handle, a tubular stub end adapted thereto and having a larger part 2 fixed to the main handle and a smaller part 3, a slide fitted to the part 3, means connected with the slide and operating a brake or other mechanism of the vehicle, a revoluble grip journalled on the stub-end and having a part overlapping and concealing the joint between the main handle and stub-end, and a screw or worm in said grip actuating the slide. 4th. A vehicle handle bar comprising a main handle, a tubular slotted stub-end fixed thereto, a slide in the stub-end, means connected with the slide and operating a brake or other mechanism of the vehicle, a revoluble grip on the stub-end, a screw or worm in said grip actuating the slide, and a spring held to the stub-end and entering its slot for lateral support and engaging the grip to lock same when it is not to be rotated. 5th. A stub-end adapted for attachment to a vehicle handle bar after the bar is bent to the desired form, and also adapted to receive a revoluble grip operating a brake or other mechanism of the vehicle. 6th. A stub-end adapted for attachment to a vehicle handle bar after the bar is bent to the desired form, and also adapted to receive a revoluble grip operating a brake or other mechanism of the vehicle, said stub-end having a slot, and a spring held at one end to the stub and entering its slot and adapted for automatically locking the applied grip.

**No. 55,548. Bicycle Support.** (*Support de bicycle.*)

Henry Harmer, Newark, New Jersey, U.S.A., 7th April, 1897; 6 years. (Filed 5th March, 1897.)

*Claim.*—1st. The combination with the frame of a bicycle, of a supporting piece having guide openings at its lower end, and sliding blocks mounted upon said supporting pieces and carrying legs situated within said guide openings. 2nd. The combination with a bicycle, of an upright rod secured thereto and provided at its lower ends with guide openings, and a sliding block mounted upon said rod and provided with legs situated within said guide openings. 3rd. The combination with a bicycle, of an upright rotatable rod mounted thereon and provided at its lower end with a screw-threaded portion, and a screw-threaded sliding block mounted upon said rod and provided with legs situated within said guide openings. 4th. The combination with the frame of a bicycle, of a supporting piece having an upper overhanging projection provided with a spring catch, a lower saddle having guide openings, a rotatable

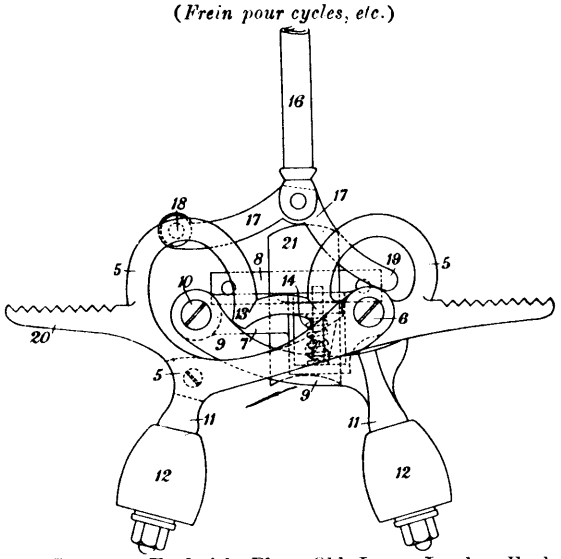
guide rod mounted upon said projection and saddle and having a screw-threaded lower end portion, and a screw-threaded sliding



block mounted upon said rod and provided with pivoted legs situated within said guide openings.

**No. 55,549. Brake for Cycles, etc.**

(*Frein pour cycles, etc.*)



George Baxter, 1 Fredericks Place, Old Jewry, London, England, 7th April, 1897; 6 years. (Filed 4th March, 1897.)

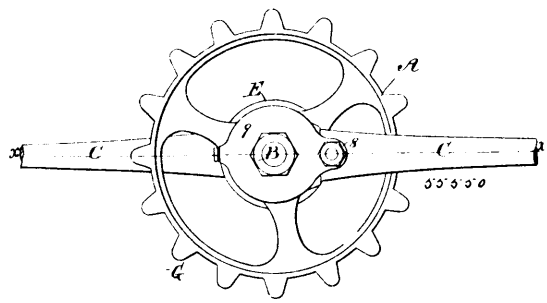
*Claim.*—1st. The improved brake for cycles and other road vehicles, consisting of the frames 5, 9 pivoted at 6 and 10, respectively, to the support 7, the frames being provided with contact rollers 12, 12 and footrests, the spring 14 fitted in the support, and clamp 8 with or without the means for adjustment, substantially as set forth. 2nd. In combination with the frames 5, 9, carrying rollers 12, 12, the application of the lever 17 pivoted to the frame 5, at 18 operated by the plunger rod 16 from the handle bar, substantially as set forth. 3rd. In a cycle or other analogous brake, the application and use of a clamp 8 provided with a bearing plate 21 and recesses 22, support 7 and screw 23 for adjustably supporting the brake action, substantially as hereinbefore described. 4th. In combination with the hereinbefore brake, the attachment of a connecting rod and foot plate with the operating footrest, substantially as described. 5th. The new and improved brake for cycles and other road vehicles, constructed, arranged and operating substantially in the manner as hereinbefore described.

**No. 55,550. Propelling Mechanism for Cycles.**

(*Mécanisme de propulsion pour cycles, etc.*)

Gerard Beckman, New York, State of New York, U.S.A., 7th April, 1896; 6 years. (Filed 4th March, 1897.)

*Claim.*—1st. In a cycle, the combination with a driven element, of a rotary structure comprising two pedal cranks and a shaft or other means of supporting said cranks in substantially opposite projection from one another upon their axis of rotation, said structure



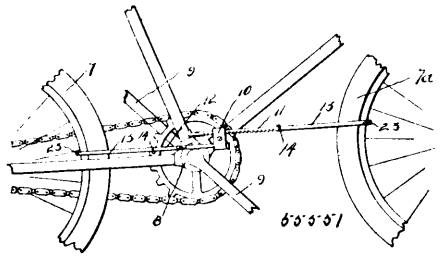
having one or more points of flexure arranged whereby the pedal extremities of said cranks may have a limited arc movement with relation to one another in the direction of rotation of said cranks when the rider's feet are pressed thereon, and clutch mechanism operated by the flexure of said structure whereby to engage with said driven element. 2nd. In a cycle, the combination with a driven element, of two flexible cranks rigidly connected with relation to each other in substantially opposite radial positions upon their axis of rotation, and clutch mechanism operated by the flexure of said cranks whereby to engage with said driven element. 3rd. In a cycle, the combination of a rotary pedal actuated driving part, a rotary driven part, the one having a round grip surface or surfaces, the other having a crank capable of flexure from its normal radius in either a forward or backward rotary direction, grip members operatively connected with said crank whereby they are rendered active by said flexure, and elastic means tending to resist motion of said flexure in either direction, and to support the crank at an intermediate position of flexure whereby the grip members are released. 4th. In a cycle propelling mechanism, the combination of a rotary driven member, driving means and clutch mechanism thereon intermittently engaging with said driven member, rotary crank supports, pedal cranks flexibly mounted on said supports and engaging said clutch mechanism so as to actuate the same by the flexure of said cranks, and connecting means through the axis of rotation of the crank supports rigidly connecting said supports together whereby the cranks are maintained in substantially opposite relation. 5th. In a cycle propelling mechanism, the combination of a rotary driven member, rotary driving means and clutch mechanism thereon intermittently engaging with said driven member, pedal cranks movably mounted on said rotary driving means upon a centre of flexure eccentric to the axis of rotation thereof and engaging said clutch mechanism so as to actuate the same by the flexure of said cranks in either direction, and elastic means tending to resist motion of said flexure in either direction and to support each crank at an intermediate position of flexure. 6th. In a cycle, the combination of a rotary driven part having an annular flange or other round grip surface, and driving mechanism comprising annular grip members engaging by diametric movement in any direction with said flange or surface and a pedal crank movably connected to said grip members so as to actuate them in opposed directions simultaneously by an initial movement of flexure of said crank in either a forward or backward rotary direction, and suitable means whereby said crank is supported to revolve upon its axis of rotation. 7th. In a bicycle, the combination of a driven rotary part on a fixed axis, having an annular flange, a diametrically movable internal grip member and shaft within said flange, a pedal crank fulcrumed on a pivot eccentric to said shaft and connected thereto, an annular grip member external to said flange, projections on said crank near its fulcrum engaging with said external grip member, elastic means for centreing said shaft, and elastic means for pressing said external grip member against the projections of the crank and thereby releasing said grip member and also centering the crank at a normal intermediate position of movement or flexure about its pivot. 8th. In a propelling mechanism for cycles, the combination of a driven shaft having an annular flange at each end, a pedal shaft elastically journalled within said driven shaft, pedal cranks eccentrically pivoted on each extremity of the pedal shaft, grip members on said pedal shaft internal to said flanges having operative connection to said pedal cranks, said parts arranged whereby rotative force applied to said pedal cranks shall cause the grip members to clutch both sides of said flanges.

**No. 55,551. Bicycle Lock.** (*Serrure de bicycle.*)

Augustus Robert Sewell, Detroit, Michigan, U.S.A., 7th April, 1897; 6 years. (Filed 1st March, 1897.)

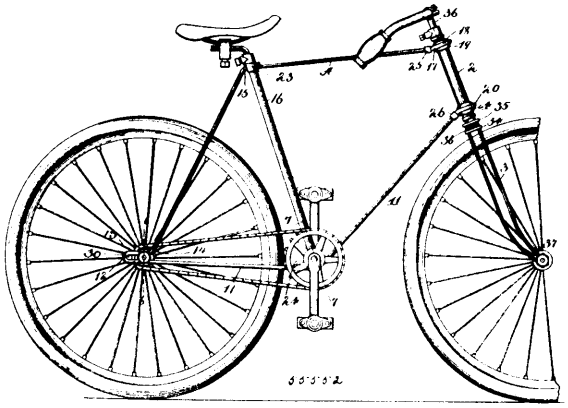
*Claim.*—1st. A lock for bicycles and similar vehicles, the same comprising a box or casing, locking bars which are longitudinally movable therein, the opposite ends of said bars being provided with a hinged section, each of which is provided with a hook, and said bars being adapted to be adjusted in said box or casing, and to be locked in the desired position therein, substantially as shown and described. 2nd. A lock for bicycles and similar vehicles, comprising a box or casing, two longitudinally movable and parallel locking bars mounted therein, one of which is provided with ratchet teeth,

said bars being provided at their opposite ends with a hinged section, each of which is provided with a hook, and said box or casing



being also provided with a key operated lock, which is adapted to operate in connection with the ratchet teeth on one of said bars, substantially as shown and described. 3rd. A lock for bicycles and similar vehicles, comprising a box or casing, two longitudinally movable and parallel locking bars mounted therein, one of which is provided with ratchet teeth, said bars being provided at their opposite ends with a hinged section, each of which is provided with a hook, and said box or casing being also provided with a key operated lock, which is adapted to operate in connection with the ratchet teeth on one of said bars, said bars being also cylindrical in form for a portion of their lengths, and each being provided at the end thereof opposite the hinged extension with a lug or projection, substantially as shown and described. 4th. The herein described lock for bicycles and similar vehicles, the same consisting of a rectangular box or casing in which are mounted two longitudinally movable parallel bars, the main portions of which are angular in cross section, and the openings in said box or casing through which said bars are passed being also angular in form, said bars being provided at their opposite ends with a hinged extension, each of which is provided with a hook said bars being also provided with a cylindrical portion, and with lugs or projections at the ends thereof opposite the hinged extension, substantially as shown and described.

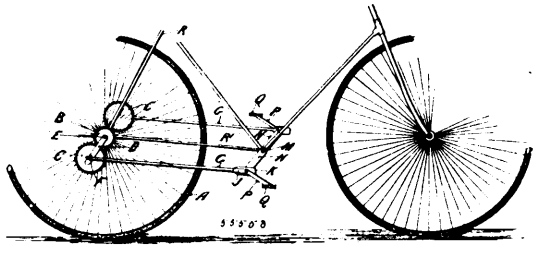
**No. 55,552. Bicycle.** (*Bicycle.*)



Henry W. Henneberg, Chicago, Illinois, U.S.A., 7th April, 1897 6 years. (Filed 8th March, 1897.)

*Claim.*—1st. In a bicycle or velocipede, a frame composed of wire bent to form loops at its forward ends to receive the pivot of the fork, and loops at its lower middle portion to receive the bearing for the crank shaft. 2nd. In a bicycle or velocipede, a frame composed of wire bent to form loops at its forward ends to receive the pivot of the fork, and upwardly extending loops at its lower middle portion to receive the bearing for the crank shaft. 3rd. In a bicycle or velocipede, a frame composed of wire bent to form upwardly extending spiral loops at its lower middle portion to receive the bearing for the crank shaft. 4th. In a bicycle or velocipede, a frame composed of wire bent to form upwardly extending spiral loops at its lower middle portion to receive the bearing for the crank shaft and having its rear end portion bent to form guide slots in which the shaft of the rear wheel may be adjustibly secured. 5th. In a bicycle or velocipede, a frame composed of a single piece of wire bent to form loops at its forward end to receive the pivot of the fork, bent at its lower middle portion to form upwardly extending loops to receive the bearing for the crank shaft, and bent at its rear end to form guide slots in which the shaft of the rear wheel may be adjustibly secured. 6th. In a bicycle or velocipede, a frame composed of wire bent to form loops at its lower middle portion to receive the bearing for the crank shaft, a T coupling mounted upon said bearing between said loops, and a seat post secured at its lower end to said T coupling. 7th. In a bicycle or velocipede, a frame composed of wire bent to form upwardly extending spiral loops at its lower middle portion to receive the bearing for the crank shaft, and means for holding said loops against lateral movement consisting of a T coupling mounted between the same against the ends of which said loops abut, and a clip adjacent said T coupling adapted to hold said loops in contact with said T coupling. 8th. In a bicycle or velocipede, a frame composed of a single piece of wire bent to form guide slots at its rear end in which the shaft of the rear wheel is adapted to be adjustibly secured, bent at its lower middle portion to form upwardly extending loops in which the bearing for the crank shaft is adapted to be secured, and means for holding said loops against lateral movement consisting of a sleeve mounted between the same against the ends of which said loops abut, and a clip for holding said loops in contact with said ends of said sleeve mounted adjacent the same. 9th. In a bicycle or velocipede, a frame composed of a single piece of wire bent to form guide slots at its rear end in which the shaft of the rear wheel is adapted to be adjustly secured, bent at its lower middle portion to form upwardly extending loops in which the bearing for the crank shaft is adapted to be secured, and a T coupling mounted between said loops and adapted to receive the end of the seat post. 10th. In a bicycle or velocipede, a frame composed of a single piece of wire bent to form guide slots at its rear end in which the shaft of the rear wheel is adapted to be adjustably secured, bent at its lower middle portion to form upwardly extending loops in which the bearing for the crank shaft is adapted to be secured, a T coupling mounted between said loops and adapted to receive the crank shaft bearing and the end of the seat post, and means for holding said loops against lateral movement consisting of a clip mounted adjacent said T coupling and adapted to hold said loops in contact with the ends of said T coupling. 11th. In a bicycle or velocipede, a frame composed of a single piece of wire bent to form upwardly extending loops at its lower middle portion to receive the bearing for the crank shaft, bent at its rear end portion to form horizontal guide slots in which the shaft of the rear wheel may be adjustably secured, and a seat post mounted on said frame and secured near its upper end to the upper portion of the frame by means of a clip provided with an opening to receive said post and having its ends bent around said frame. 12th. In a bicycle or velocipede, a frame composed of wire bent to form guide slots at its rear end portion in which the shaft of the rear wheel is adapted to be adjustably secured. 13th. In a bicycle or velocipede, a frame composed of wire bent to form upwardly extending spiral loops at its lower middle portion, and a seat post mounted in said frame secured at its lower end in the stem of a T coupling mounted between said loops in said frame and secured to the frame at its upper end by means of a clip provided with an opening to receive said seat post and having its ends bent around said frame. 14th. In a bicycle or velocipede, a frame composed of wire bent to form upwardly extending loops at its lower middle portion to receive the bearing for the crank shaft, loops at its forward end to receive the pivot of the fork, and a fork pivotally mounted in said frame and composed of wires bent to form loops at their lower ends to receive the shaft at the front wheel. 15th. In a bicycle or velocipede, a frame composed of wire bent to form upwardly extending loops at its lower middle portion to receive the bearing for the crank shaft, bent at its rear end portion to form guide slots in which the shaft of the rear wheel is adapted to be adjustably secured, loops at its forward end to receive the pivot of the fork, and a fork pivotally mounted in said frame and composed of wires bent to form loops at their lower ends to receive the shaft of the front wheel. 16th. In a bicycle or velocipede, a fork comprising a shaft having perforated plates secured at its lower end, and wires bent to form loops at their lower ends to receive the shaft of the front wheel mounted at their upper ends in said perforated plates.

**No. 55,553. Chainless Driving Gear for Cycles, etc.**
(*Roue d'engrenage pour cycles, etc.*)

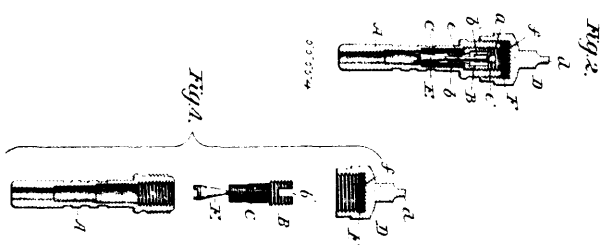


Charles Lancelot Garland, assignee of Thomas Andrew, both of Sydney, New South Wales, 7th April, 1897 ; 6 years. (Filed 14th December, 1896.)

*Claim.*—1st. Mechanism for driving a sun and planet gearing attached to the rear wheel of a cycle, consisting of connecting rod G, suitably secured at one end to the toothed-wheel C, of the sun and planet gearing, and at the other end pivotally attached to the circular projection O, the pedal axle M, the crank N, the circular projection O, the pedal crank P, and pedal Q, substantially as described and specified. 2nd. Mechanism for driving a sun and planet gearing attached to the rear wheel of a cycle, consisting of connecting rod G, secured at one end to the toothed-wheel C, of the sun and planet gearing and passing through the crank pin F, and secured by means of collar H, and the nut I, while its other end is

provided with ball bearings and pivotally attached to the circular projection O, the pedal axle M, the crank N, the circular projection O, the pedal crank P, and pedal Q, substantially as described and specified. 3rd. In driving gear for cycles and like vehicles, the combination of the pedal crank P, the circular projection O, and crank N, secured to the pedal axle M, substantially as specified.

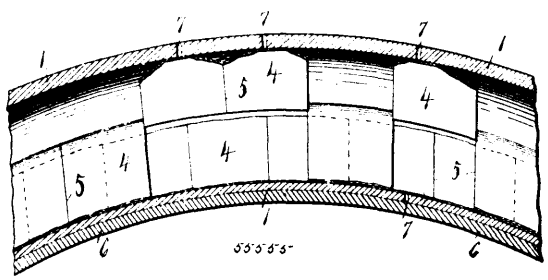
**No. 55,554. Valve.** (*Soupape.*)



Charles Henry Clark, Rochester, New York, U.S.A., 7th April, 1897; 6 years. (Filed 13th March, 1897.)

*Claim.*—1st. A pneumatic valve comprising a casing, such as A, a plug, such as B, a rubber tube on the plug, and a conical valve operating in the rubber tube. 2nd. A pneumatic valve comprising a casing, such as A, a plug, such as B, screwed into the casing, an extension on the plug, a rubber tube on the extension, and a conical valve having a stem passing up through the tube and plug and provided with a head. 3rd. A pneumatic valve, comprising a casing A, a cap D, and a removable plug to which the valve E and tube C are connected.

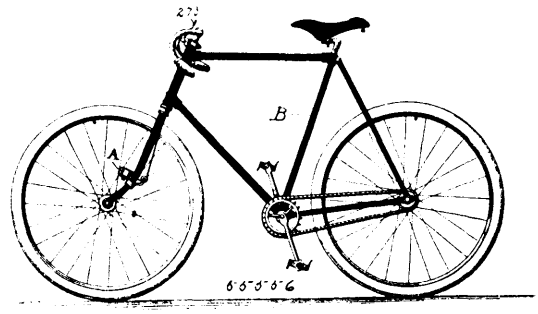
**No. 55,555. Pneumatic Tire.** (*Bandage pneumatique.*)



Thomas Wheatley, Syracuse, New York, U.S.A., 7th April, 1897; 6 years. (Filed 13th March, 1897.)

*Claim.*—1st. A pneumatic tire having a strip or strips of thin rubber arranged within the tire and attached by one edge to the inner wall of the tire, substantially as described and shown. 2nd. A pneumatic tire having a strip or strips of thin rubber arranged longitudinally within the tire and attached by one edge each, to the inner wall of the tire on opposite sides, substantially as described and shown. 3rd. In a pneumatic tire, a strip or strips of thin rubber of the length of the tube attached to its inner wall on one side between the tread and the rim by one edge, the remainder of the strip or strips hanging free and adapted to be drawn against one side or the other to patch a puncture, substantially as described and shown. 4th. In a pneumatic bicycle tire, two strips of thin rubber attached each along one edge to the interior wall of the tire at opposite sides, their wider uncemented portions hanging free in the interior of the tube, one overlying the other and unaffected by the air pressure, substantially as described and shown. 5th. In a pneumatic bicycle tire, two strips of thin rubber attached each along one edge to the interior wall of the tire at opposite sides, one overlying the other and their wider free portions hanging free in the interior of the tube, unaffected by the air pressure, and thrown toward the tread-side of the tube by the centrifugal force, when the wheel is revolving, substantially as described and shown. 6th. In a pneumatic bicycle tire, two strips of thin rubber of the length of the tire attached each by one edge to the interior wall of the tire on opposite sides, each strip having its wider attached portion hanging free in the tube and divided into distinct flaps, substantially as described and shown. 7th. In a pneumatic bicycle tire, two strips of the length of the tire attached each by one edge to the interior wall of the tire on opposite sides, each strip having its wider unattached portion hanging free in the tube and cut by slits from the margin into distinct flaps, the strips overlying each other so that the flaps of one strip cover the slits in the other, substantially as described and shown. 8th. The combination with a pneumatic or hollow vehicle tire of two longitudinal bands of thin rubber attached to the interior wall of the tire on opposite sides each by one edge, said bands having their widest portions hanging free in the interior of the tube unaffected by the air pressure, said free portions being of sufficient width to cover at least one-half of the inner surface of the tube when drawn against it.

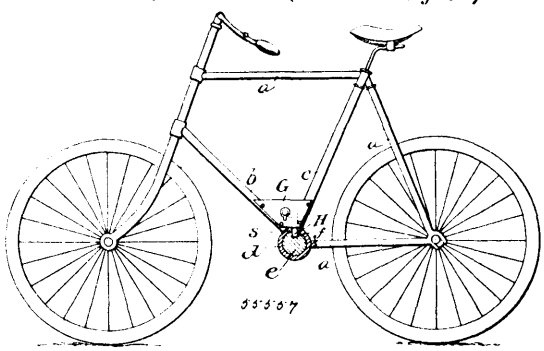
**No. 55,556. Measuring Device for Bicycles.**
(*Chronomètre pour bicycles.*)



David Harrington, Worcester, Massachusetts, U.S.A., 7th April, 1897; 6 years. (Filed 15th March, 1897.)

*Claim.*—1st. A combined chronometer and odometer for use in connection with bicycles, as herein described. 2nd. A combined odometer and chronometer comprising a hand for registering time and a hand for registering distance, said hands being located in adjacent, comparable relations, and being driven substantially as herein described. 3rd. A combined odometer and chronometer comprising a distance hand, means for driving said distance hand, a hand for registering time, a chronometric train for actuating said distance hand, and means for automatically winding up the main spring of the chronometric train, substantially as described. 4th. A combined odometer and chronometer comprising a hand for registering distance, means for driving said hand, a hand for registering time, a chronometric train for driving the time hand, means for automatically winding up the main spring of the time train, and a relief for preventing excessive tension being placed upon the main spring of the chronometric train, substantially as described. 5th. A bridge for use in chronometric constructions comprising arms for carrying both jewels or bearings of a shaft, the arms of said bridge being adjustable to take up the end shake or play of the shaft, and the bridge being bodily adjustable to secure proper depthing or mesh of the gearing, substantially as described. 6th. A combined chronometer and odometer comprising a hand for registering distance, a hand for registering time, a chronometric train for driving said time hand, and a starting, stopping and resetting mechanism comprising a brake for the distance hand, and a wiper arranged to engage the balance wheel of the chronometric train to stop the chronometric train and to positively start the same in operation, substantially as described. 7th. A combined odometer and chronometer comprising a hand for registering distance, a hand for registering time, a starting, stopping and resetting mechanism, and a cyclometer for registering the total distance covered by a bicycle independent of the action of the starting, stopping and resetting mechanism, substantially as described.

**No. 55,557. Bicycle Lock.** (*Serrure de bicycles.*)



Frederick J. Hoyt, Chicago, Illinois, U.S.A., 7th April, 1897; 6 years. (Filed 13th March, 1897.)

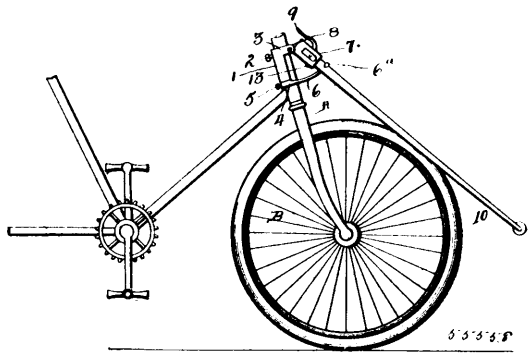
*Claim.*—In a bicycle provided with tubular arms, the combination therewith of the pedal casing to which the lower converging ends of the arms are connected, a pedal shaft having its bearings in said casing, a detachable locking case located between and attached to the converging ends of the said arms and adapted to brace said arms, said locking case provided with a bolt, and said pedal casing and shaft each provided with an aperture to receive said bolt, and a suitable key, substantially as described.

**No. 55,558. Bicycle Support.** (*Support de bicycles.*)

Andrew Almon Ames, Dover, New Hampshire, U.S.A., 8th April, 1897; 6 years. (Filed 15th March, 1897.)

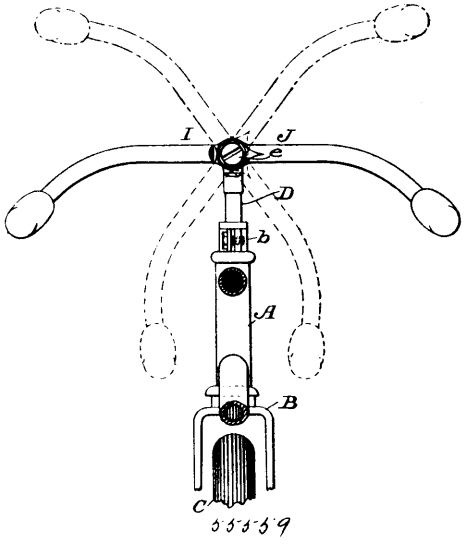
*Claim.* 1st. In a bicycle support, the combination with the bicycle frame, of a casing or housing hinged thereto, supporting legs pivoted to the casing, a spreader for spreading said legs when

they are forced thereon, adjustable slides adapted to engage with the legs and prevent the latter from spreading too far, and means for



locking the slides in adjusted position, substantially as described. 2nd. In a bicycle support, the combination with a casing or housing hinged to the bicycle frame, of a pair of supporting legs pivoted to the casing, a spring for keeping the free ends of said legs normally together, and a spreader adapted to open or spread the legs when they are made to straddle it, said spreader being formed into hooks which receive the legs and hold them in raised position and out of engagement with the spreader when the support is not used.

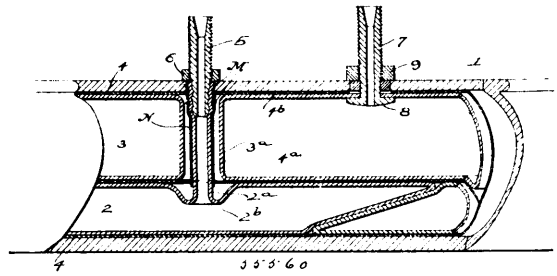
**No. 55,559. Handle Bar for Bicycles.**
(*Poignée de barre pour bicycles.*)



William E. Kelly, Cleveland, Ohio, U.S.A., 8th April, 1897; 6 years. (Filed 19th March, 1897.)

*Claim.*—1st. In a handle bar, the combination of the post with a head composed of a single flattened disc and the two sections of the bar with corresponding discs at their inner ends, the contacting surfaces of all the discs being provided with interlocking serrations, and a pivot bolt to clamp the three discs together, the axis of the bolt lying at right angles to the post and to the handle bar, substantially as set forth. 2nd. In a handle bar, the combination of the post, having a head composed of a single flattened disc, the handle divided in two sections which are pivotally mounted at their inner ends on the stud bolt, a clamping nut on the stud bolt, the contacting surfaces of the post-disc and the ends of the handle bars being provided with interlocking serrations, substantially as hereinbefore set forth. 3rd. In a handle bar, the post having a head composed of a single flattend disc with a stud bolt made integral with and projecting from one side of the head, the handle made in two sections which are pivotally mounted on the stud bolt, the axis of which is at right angles to the post and to the handle, interlocking serrations on the contacting surfaces of the post and the handle sections and a clamping nut on the end of the stud bolt, substantially as set forth. 4th. In a handle bar, the combination of the post with its flattened head and side projecting stud bolt made integral therewith, the handle made in two sections which are pivotally mounted on the stud bolt, interlocking serrations on the contacting surfaces of the head and handle sections, a clamping nut on the end of the stud bolt and a spring washer lying between the clamping nut and the face of the adjacent surface of the handle section, substantially as set forth.

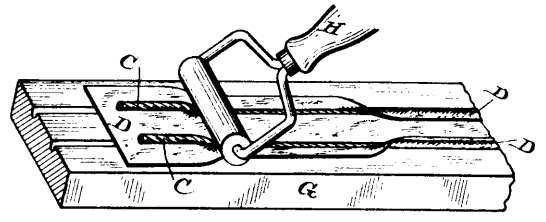
**No. 55,560. Pneumatic Tire.** (*Bandage pneumatique.*)



Wilhelm Heyden, Hallau, Switzerland, 8th April, 1897; 6 years. (Filed 16th March, 1897.)

*Claim.*—1st. A pneumatic tire, comprising two tubular pneumatic sections placed one outside the other, and an outer flexible shell, substantially as described. 2nd. A pneumatic tire, comprising an outer shell, an outer pneumatic tread section of reduced area, an inner pneumatic cushion section of greater area contained within said shell placed one outside the other, substantially as described. 3rd. A pneumatic tire, comprising a pneumatic tread section, a pneumatic cushion section to bear upon and press within the said tread section, an outer shell containing both of said sections and a lining made of woven fabric to surround said pneumatic sections, substantially as described. 4th. A pneumatic tire, comprising a pneumatic tread section, a pneumatic cushion section, a double compartment lining section to separately surround each of said pneumatic sections and a containing shell or tire, substantially as described. 5th. A pneumatic tire, comprising a pneumatic tread section, a pneumatic cushion section having a radial conduit section and a nipple conduit section carried through said radial conduit section and connected to the pneumatic tread section by a funnel-shaped neck, substantially as described.

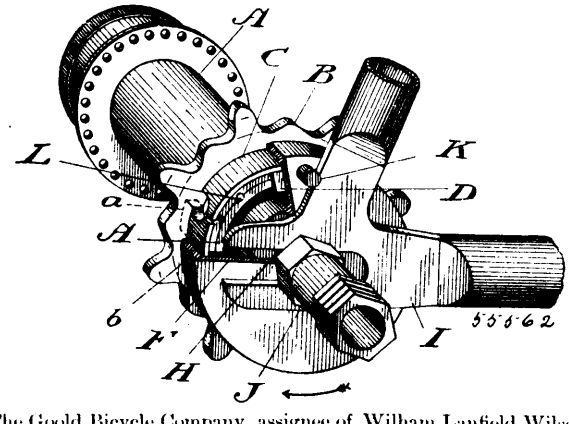
**No. 55,561. Means for Preventing Tires from Becoming Punctured.** (*Moyen d'empêcher les bandages de se trouer.*)



Archibald J. Robertson, Chicago, Illinois, U.S.A., 8th April, 1897; 6 years. (Filed 13th March, 1897.)

*Claim.*—In a puncture proof band for inflated tires for wheels, the combination of band A, covering B, cord C, adhesive material D, constructed as shown and described.

**No. 55,562. Brake for Bicycles.** (*Frein de bicycles.*)

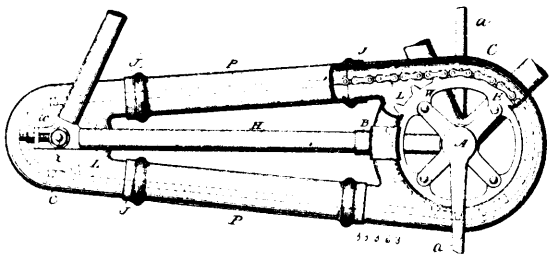


The Goold Bicycle Company, assignee of Wilham Lanfield Wilson, both of Brantford, Ontario, Canada, 8th April, 1897; 6 years. (Filed 1st February, 1897.)

*Claim.*—1st. In a brake for bicycles and similar vehicles, a stationary friction drum carried by the axle of the rear wheel, in combination with a divided friction band supported by the hub, a sprocket-wheel loose on the hub and connected to a portion of the divided band, and rollers lying partly in recesses in the hub and adapted to be moved up inclined planes by the action of back pedalling so as

to produce friction against the inside surface of the drums, substantially as and for the purpose specified. 2nd. In a brake for bicycles and similar vehicles, a stationary friction drum carried by the axle of the rear wheel, in combination with a divided friction band supported by the hub, a sprocket-wheel loose on the hub and connected to a portion of the divided band, and rollers lying partly in recesses in the hub and adapted to be moved up inclined planes by the action of back pedalling so as to produce friction against the inside surface of the drum, and to lock the band and the hub together when the machine is being driven, substantially as and for the purpose specified. 3rd In a brake for bicycles and similar vehicles, a stationary friction drum carried by the axle of the rear wheel, in combination with a divided friction band supported by the hub, a sprocket-wheel loose on the hub and connected with the said friction band, projections formed on or inserted in the inner surface of the friction band, and each adapted to enter a recess out in the surface of the hub to form a shoulder and inclined plane, substantially as and for the purpose specified. 4th. In a bicycle, an axle and a stationary drum carried by the said axle, in combination with a hub and a divided friction band supported by the hub, a sprocket-wheel loose on the hub and connected with the said friction band, and one or more rollers lying partly in recesses in the said friction band and partly in recesses in the hub, and inclined plane being formed leading from the bottom of each recess in the hub to its surface, substantially as and for the purpose specified. 5th. In a bicycle, an axle and a stationary drum carried by the said axle and provided with a pin adapted to engage with a portion of the frame, in combination with a hub and a divided friction band supported by the hub, a sprocket-wheel loose on the hub and connected with the said friction band, and one or more rollers lying partly in recesses in the said friction band and partly in recesses in the hub, an inclined plane being formed leading from the bottom of each recess in the hub to its surface, substantially as and for the purpose specified. 6th. In a bicycle, an axle and a stationary drum carried by the said axle, in combination with a hub and a divided friction band supported by the hub, a flanged washer screwed within the hub and adapted to retain the said band upon the hub, a sprocket-wheel loose on the hub and connected with the said friction band, and one or more rollers lying partly in recesses in the said friction band and partly in recesses in the hub, an inclined plane being formed leading from the bottom of each recess in the hub to its surface, substantially as and for the purpose specified. 7th. In a bicycle, an axle and a stationary drum carried by the said axle, and provided with a pin adapted to engage with a portion of the frame, in combination with a hub and a divided friction band supported by the hub, a flanged washer screwed within the hub and adapted to retain the said band upon the hub, a sprocket-wheel loose on the hub and connected with the said friction band, and one or more rollers lying partly in recesses in the said friction bands and partly in recesses in the hub, an inclined plane being formed leading from the bottom of each recess in the hub to its surface, substantially as and for the purpose specified.

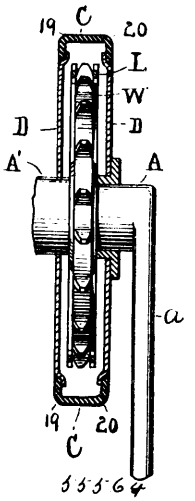
**No. 55,563. Cases for the Driving Gear of Wheeled Vehicles.** (*Boîte pour roues de commande de voitures.*)



Warren Herbert Frost, New York, State of New York, U.S.A., 8th April, 1897; 6 years. (Filed 16th March, 1897.)

*Claim.*—1st. In a wheeled vehicle the combination of a chain and a sprocket wheel having a hub or projection and a flexible case for the wheel surrounding the edge and making flexible contact with opposite faces between the hub and the periphery, substantially as described. 2nd. In a wheeled vehicle the combination with a gear wheel of a casing therefor surrounding the periphery, its inner edges making flexible rubbing contacts with the surface of the wheel, substantially as described. 3rd. In a wheeled vehicle the combination with a gear wheel of a casing therefor surrounding the periphery, the inner edge making flexible rubbing contact with the surface of the wheel, substantially as described. 4th. In a wheeled vehicle the combination with a gear wheel of a casing therefor composed of soft rubber surrounding the periphery of the wheel, the interior edge of said casing making flexible rubbing contact with the surface of the wheel, substantially as described. 5th. In a wheeled vehicle the combination with a gear wheel of a case for the periphery composed of soft, elastic rubber, suitably supported and apertured for the driving connection, substantially as described. 6th. In a wheeled vehicle the combination of gear wheels forming part of the driving gear of said vehicle, a chain connecting said gear wheels and a casing enclosing the periphery of said wheels and said chain, composed in part of soft, flexible, elastic material, substantially as described.

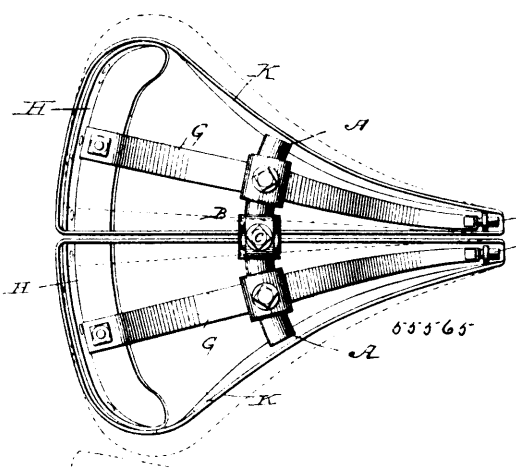
**No. 55,564. Cases for the Driving Gear of Wheeled Vehicles.** (*Boîte pour roues de commande de voitures.*)




Warren Herbert Frost, New York, State of New York, U.S.A., 8th April, 1897; 6 years. (Filed 16th March, 1897.)

*Claim.*—1st. In a wheeled vehicle the combination with the driving gear of a case for a gear wheel consisting of two discs located upon opposite sides of the wheel and a strip of soft elastic rubber having its edges stretched over and supported upon the edges of said discs in proximity to the periphery of said wheel, said case being suitably apertured for the driving connection of said gear, substantially as described. 2nd. In a wheeled vehicle, the combination with a gear wheel constituting part of the driving gear of said vehicle, of a casing enclosing said gear wheels, the peripheral portion of said casing being composed of a strip of soft elastic rubber stretched over and supported by the rigid parts thereof, said casing being suitably apertured for the driving connection of said gear, substantially as described. 3rd. In a wheeled vehicle the combination with the driving gear of cases for the gear wheels, each case consisting of two independent rigid discs located upon opposite sides of a wheel and a strip of soft, elastic rubber having its edges stretched over and supported upon the edges of said discs in proximity to the periphery of said gear wheel, said casing being suitably apertured for the driving connection of said gear, substantially as described. 4th. In a wheeled vehicle the combination with a gear wheel of a case therefor composed in part of soft, elastic rubber, suitably supported, and apertured for the driving connection, substantially as described.

**No. 55,565. Bicycle Saddle.** (*Selle de bicycle.*)



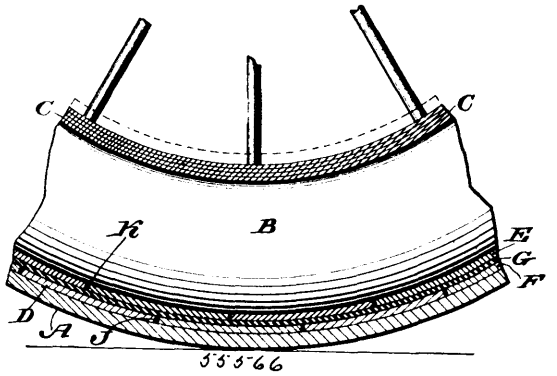

William N. Moore, Washington, Columbia, U.S.A., 7th April, 1897; 6 years. (Filed 22nd March, 1897.)

*Claim.* 1st. A bicycle saddle consisting of a rigid or stationary curved support, two saddle sections mounted upon said support and constructed to have their rear ends spread apart and front ends closed and also capable of lateral, longitudinal and incline adjust-

ments directly on said support. 2nd. A bicycle saddle consisting of a support adapted to be rigidly connected to the frame, two saddle sections mounted upon said support and constructed to be adjusted laterally, longitudinally, and to various inclines upon said support. 3rd. A bicycle saddle consisting of a cylindrical curved support, clamps having transverse openings to fit on the support and longitudinal openings, springs arranged in said openings and carrying the seat sections, whereby by the manipulation of the clamps the seat sections may be adjusted laterally, longitudinally and to various inclines, and may be spread at the rear and closed at the front without moving the support. 4th. A bicycle saddle consisting of a transverse support adapted to be rigidly connected to the frame, two seat sections mounted upon said support and capable of lateral, longitudinal and incline adjustments directly on said support and adjusting devices for making the seat sections yielding or stiff. 5th. A bicycle saddle consisting of a support, two springs mounted upon said support, two seat sections carried by the springs, and clamps surrounding the springs and support constructed to permit each section to be adjusted laterally, longitudinally and to various inclines by manipulation solely of the clamps. 6th. A bicycle saddle consisting of a cylindrical curved support, clamps having transverse openings to fit on said support and longitudinal openings, springs arranged in said openings and carrying the seat sections, and adjusting devices for the sections, whereby the sections may be adjusted longitudinally, laterally, and to various inclines. 7th. A bicycle saddle consisting of a support adapted to be rigidly connected to the frame of a bicycle, and two seat sections mounted independently upon said support capable of every possible adjustment without affecting or moving the support. 8th. A bicycle saddle consisting of the support, clamps adjustable on said support in any and all directions, springs mounted in and carried by said clamps, and seat sections connected to the springs. 9th. A bicycle saddle consisting of a support, springs carrying seat tops or sections, and clamps surrounding the support and springs and permitting the seat sections to be adjusted to any desired position on the support.

### No. 55,566. Guard for Bicycle Tires.

(*Garde pour bandages pneumatiques.*)

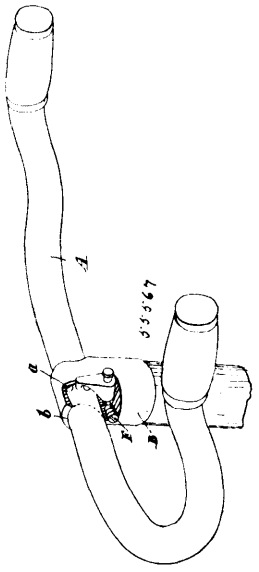



Restore Biddle Lamb, Camden, Edward Zane Callings, Laurel Springs, both in New Jersey, U.S.A., 8th April, 1897; 6 years. (Filed 23rd March, 1897.)

*Claim.*—1st. A non-puncturing guard for a bicycle tire consisting of the strips E and F of tough material, and the piece G of fabric, said strips being on opposite sides of said piece, the latter having its sides extended beyond the edges of said strips forming the attaching ends H, the joints of said strips being broken on opposite sides, and the adjacent edges of the strips abutting, forming a continuity of the strips on both faces, and a uniform thickness of the guard throughout the length of the same. 2nd. A bicycle tire consisting of the outer and inner tubes, the piece G of fabric with its sides secured to said tubes, and strips E and F of tough material secured to said strip on opposite sides thereof, the joints of said strips being broken on opposite faces, the edges of adjacent strips abutting, thereby forming a continuity of the strips on both faces, and a uniform thickness of the guard throughout the length of the same. 3rd. A guard for a bicycle consisting of the strips $F^1$ $G^1$, secured to each other by stitching or other means along a single edge thereof, said guard being adapted to be inserted in the inner and outer tube of a bicycle tire. 4th. A guard for a bicycle tire consisting of strips of leather and cloth or other suitable material stitched or otherwise secured to each other along the edge thereof, and tabs secured to one of said strips for securing the latter in the space between the inner and outer tubes of a bicycle tire. 5th. The combination of the inner and outer tube of a bicycle tire, and a strip of leather or other tough material having fastening tabs on either edge thereof, said leather being adapted to be inserted between the threads of said tire. 6th. The combination of the inner and outer tube of a bicycle tire with a strip of leather of deer-skin, goat-skin or equivalent between said tubes. 7th. The combination of the inner and outer tubes of a bicycle tire, with overlapping strips of deer-skin, goat-skin or their equivalents between said tubes.

### No. 55,567. Handle-bar for Bicycles.

(*Poignée de barre pour bicycles.*)



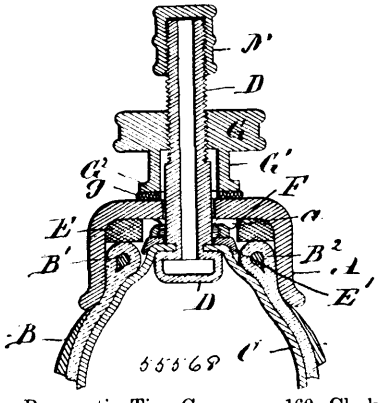

John Cecil Hamilton, Stratford, Ontario, Canada, David Irwin Barnett, Robert Ross Bougara and Arthur Carson McMaster, all of Toronto, Ontario, Canada, 8th April, 1897; 6 years. (Filed 8th March, 1897.)

*Claim.*—1st. An adjustment for handle bars comprising peripherial holes in the centre of the handle bar, the head provided with a crosswise opening through which the handle bar extends, gripping jaws on opposite sides of the handle bar located in correspondingly shaped openings in the head, pins on the upper ends of the jaws designed to extend into the peripherial openings, a spindle extending through the lower ends of the jaws and provided at one end with a right hand thread and at the other end with a left hand thread, means for restraining the spindle from longitudinal while permitting of rotary movement and means for turning the spindle, as and for the purpose specified. 2nd. In an adjustable handle bar, in combination with the handle bar, the peripherial holes in the centre of the handle bar, the head provided with a crosswise opening through which the handle bar extends, gripping jaws on opposite sides of the handle bar located in correspondingly shaped openings in the head, pins on the upper ends of the jaws designed to extend into the peripherial openings, a spindle extending through the lower ends of the jaws and provided at one end with a right hand thread and at the other end with a left hand thread, which fit into correspondingly threaded holes in the jaws, an annular groove in the centre of the spindle, a pin extending through the head into such annular groove and means for turning the spindle, as and for the purpose specified. 3rd. In an adjustable handle bar, in combination the handle bar, the peripherial holes in the centre of the handle bar, the head provided with a crosswise opening through which the handle bar extends, gripping jaws on opposite sides of the handle bar located in correspondingly shaped openings in the head, pins on the upper ends of the jaws designed to extend into the peripherial openings, a spindle extending through the lower end of the jaws and provided at one end with a right hand thread and at the other end with a left hand thread, which fit into correspondingly shaped holes in the jaws, means for restraining the spindle from longitudinal while permitting of rotary movement, a longitudinal hole through the centre of the spindle, a slot at the rear end of the spindle, a pin provided with an enlarged front end, a knob secured to the rear end of the pin and provided with a threaded shank and a corresponding threaded hole in the rear end of the spindle in which such threaded shank is securely held to retain the pin in position, as and for the purpose specified. 4th. In an adjustable handle bar, in combination the handle bar, the head provided with a crosswise opening through which the handle bar extends, gripping jaws on both sides of the handle bar located in correspondingly shaped openings in the head and designed to have their outer surface normally flush therewith, a spindle extending through the lower ends of the jaws and provided at one end with a right hand thread and at the other end with a left hand thread, which fit into correspondingly threaded holes in the jaws, means for restraining the spindle from longitudinal while permitting of rotary movement and means for turning the spindle, as and for the purpose specified. 5th. In an adjustable handle bar, in combination, the handle bar, the head provided with a crosswise opening through which the handle bar extends, gripping jaws on opposite sides of the handle bar located in correspondingly shaped openings in the head, designed to have their outer surface normally flush therewith, and provided with concentric inner portion with convex bosses, a spindle extending through the lower ends of the jaws and provided at one end with a right hand thread and at the

other end with a left hand thread, which fit into correspondingly threaded holes in the jaws, means for restraining the spindle from longitudinal while permitting of rotary movement and means for turning the spindle, as and for the purpose specified. 6th. In an adjustable handle bar, in combination, the handle bar, the head provided with a crosswise opening through which the handle bar extends, gripping jaws on both sides of the handle located in correspondingly shaped openings in the head and means connecting both jaws whereby they may be thrown inwardly simultaneously and outwardly simultaneously, as and for the purpose specified.

### No. 55,568. Pneumatic Tire Valve.

(*Soupape de bandage pneumatique.*)

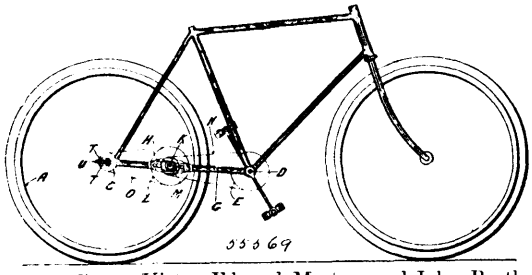



The Dunlop Pneumatic Tire Company, 160 Clerkenwell Road, London, assignee of Charles Kingston Welch, Park House Coventry, Warwick, both of England, 8th April, 1897 ; 6 years. (Filed 20th March, 1897.)

*Claim.*—1st. The tubular valve body provided with flats engaging with the sides of a non-circular hole in the rim to prevent rotation of the valve body, in combination with a washer having upturned sides or shoulders for directing the inflatable tube from the cores or edges of the cover, substantially as described. 2nd. The tubular valve body having a head with flat sides and recesses under said head for giving increased grip on the air tube and a washer having upturned sides or shoulders, all substantially as and for the purposes specified. 3rd. The washer constructed with a non-circular hole, in combination with a filling piece made to engage with the flats formed by the recesses under the head, substantially as and for the purposes specified. 4th. The combination consisting of the valve body, a split washer having upturned sides and engaging with recesses formed in the valve body, and a nut adapted to hold parts of the washer together, substantially as described.

### No. 55,569. Driving Gear for Cycles, etc.

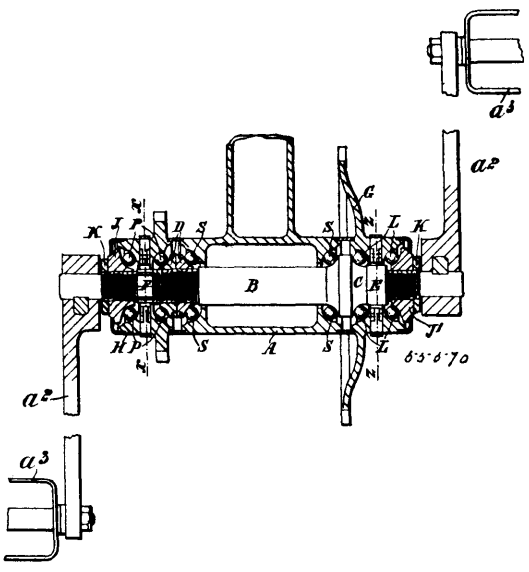
(*Roues de commande pour cycles, etc.*)




Augustus Gross, Victor Edward Masters and John Booth, all of Sydney, New South Wales, Australia, 8th April, 1897 ; 6 years. (Filed 18th March, 1897.)

*Claim.*—1st. A driving gear for cycles and like vehicles, consisting of four sprocket-wheels, two large, and two small ones of each being secured to an independent axle placed between the pedal axle and the axle of the driving-wheel, the smaller one being operated through the intervention of a chain, by a larger sprocket-wheel secured to the pedal axle, while the other through the intervention of a second chain, operates a smaller sprocket-wheel, secured to the hub of the driving-wheel, substantially as herein described, explained and illustrated in the drawing. 2nd. In driving gear for cycles and like vehicles, a chain regulating device, consisting of a block or bess formed in one of the back stays, being provided with a suitable opening, to receive a tube bearing for the axle, to which a sprocket-wheel or wheels are attached, said tube bearing being provided with flanges, in which slots are cut out to permit of studs passing through and nuts to screw on to said studs, and clasp the flanges and bearing, in any desired position, substantially as herein described, explained and illustrated in the drawing. 3rd. In driving gear for cycles and like vehicles, the combination and arrangement of the four sprocket-wheels herein described and illustrated, of two driving chains to operate said sprocket-wheels, of an adjustable bearing carrying an axle to which a small and large sprocket-wheel are secured, said bearing passing through a larger opening in one of the back stays, and having flanges, with slots cut therein to receive studs or bolts for securing same in position substantially as herein described, explained and illustrated in the drawing. 4th. The combination and arrangement of the various mechanical parts herein described, explained and illustrated, altogether forming the improved driving gear for cycles and like vehicles, substantially and for the purposes set forth.

### No. 55,570. Driving and Controlling Mechanism for Velocipedes. (*Mécanisme de commande et contrôleur pour vélocipedes.*)




Henry Symes, Alexandra South, Dunedin, New Zealand, 8th April 1897 ; 6 years. (Filed 22nd March, 1897.)

*Claim.*—1st. In a driving and controlling mechanism for velocipedes, in combination, a driving sprocket wheel provided with ball bearings and spring pawls to operate with a ratchet wheel fixed to or made solid with the pedal shaft,a second sprocket wheel similarly provided with ball bearings, and spring pawls to operate with a ratchet wheel fixed to or made solid with the pedal shaft, a chain taking upon the sprockets of the sprocket wheel and a brake lever fulcrumed upon the frame of the machine and a brake block, substantially as described. 2nd. In driving and controlling mechanism for velocipedes in combination, driving sprocket wheel provided with ball bearings,and spring pawls to operate with a ratchet wheel fixed to or made solid with the pedal shaft,a toothed quadrant wheel similarly provided with ball bearings and spring pawls to operate with a ratchet wheel fixed to or made solid with the pedal shaft, a second quadrant fulcrumed upon the frame of the machine, a brake lever and block, substantially as described. 3rd. In controlling mechanism for velocipedes, the combination and arrangement of parts consisting of ratchet wheels, pawls, sprocket wheels, and chains, or toothed quadrants, whereby the brake is applied by means of the rider's feet when the pedals are revolved in a backward direction, or by the backward movement of the machine, substantially as set forth. 4th. In driving mechanism for velocipedes, in combination, a driving sprocket wheel provided with ball bearings, a grooved friction wheel attached to the sprocket wheel, and an eccentric pawl pivoted to the pedal crank and operating with the grooved wheel, substantially as set forth. 5th. In driving mechanism for velocipedes, in combination, a driving sprocket wheel provided with ball bearings and a pawl or pawls, and a ratchet wheel fixed to or made solid with the pedal shaft as set forth. 6th. The improvements in driving and controlling mechanism for velocipedes consisting of parts constructed, arranged and operating substantially as and for the purposes set forth herein.

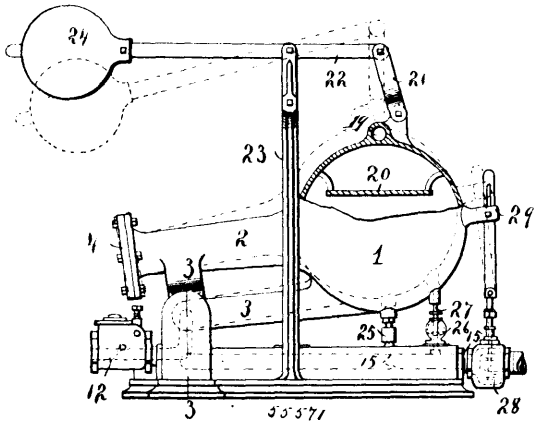
### No. 55,571. Return Steam Trap.

(*Purge de tuyau de vapeur.*)

A. A. Griffing Iron Co., New Jersey, assignee of Edward P. Waggoner, Syracuse, New York, both in the U.S.A., 8th April, 1897 ; 6 years. (Filed 22nd March, 1897.)

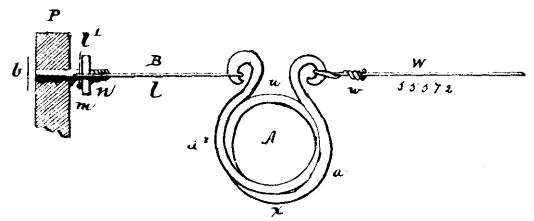
*Claim.*—1st. In a steam trap, a suitably supported receiving chamber 1 oscillating upon and communicating with hollow trunnions 5,6 and communicating with the water inlet and outlet 11,12, an exterior live steam supply 19 oscillating in unison with the receiving chamber 1 and communicating with an extension $18^a$ oscillating in alinement with the trunnions 5, 6, but having no communication there-

with, substantially as and for the purpose described. 2nd. In a steam trap, a receiving chamber 1 provided with a deflector 20 for




the distribution of live steam and oscillating upon hollow trunions 5, 6 and connecting with the water inlet and outlet 11, 12, and an exterior steam supply pipe 19 oscillating in unison with said receiving chamber and not communicating with the trunnions 5 6, substantially as and for the purpose specified. 3rd. In a steam trap, the combination of a receiving chamber 1 oscillating upon and communicating with hollow trunnions 5, 6, with a base for supporting said receiving chamber, a steam supply 15 provided with a valve 28 operated by the said receiving chamber, an exhaust valve 26 communicating with the steam supply 15, a chamber 9 having two compartments, one communicating with the steam supply 15 and one with the water inlet 11, a water outlet 12, said water inlet compartment and water outlet being in direct communication with said receiving chamber, and an exterior oscillating pipe 19 conveying live steam to said receiving chamber for evacuating the same, substantially as and for the purpose set forth.

**No. 55,572. Automatic Tension.** (*Tension Automatique*)

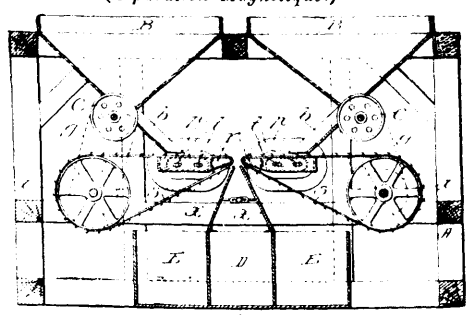



William A. Power and Parliamer M. Thomas, both of Charlotte, Michigan, U.S.A., 9th April, 1897; 6 years. (Filed 5th July, 1894.)

*Claim.*—A Tension Regulating Spring for a stretched wire, consisting of a laterally expanding spring of general circular form comprising the two coils *a a* crossing each other centrally, opposite their ends *c c* which are adapted for the attachment of the wire thereto and are on one side of the spring in direct line with each other, in direction of their lateral expansion, so that tension applied to said ends *c c* will tend to expand said spring laterally without torsion, substantially as set forth.

**No. 55,573. Magnetic Separation.**

(*Séparation Magnétique.*)




John Price Wetherill, South Bethlehem, Pennsylvania, U.S.A., 9th April, 1897; 6 years. (Filed 24th February, 1896.)

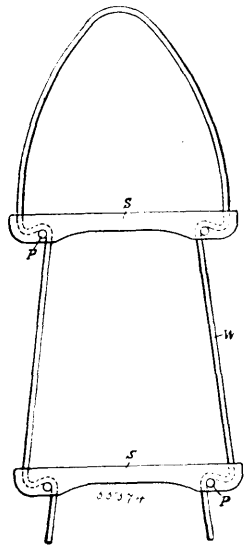
*Claim.*—1st. The herein described method of separating ferruginous materials of inferior magnetic susceptibility or permeability from non-ferruginous materials consisting in bringing the mingled materials into a condensed or concentrated magnetic field and deflecting the ferruginous material while under the influence of said condensed field into a path of movement different from that of the non-ferruginous material. 2nd. The method of magnetically separating substances of relatively very low magnetic susceptibility from a mixture containing them, which consists in establishing a magnetic circuit, concentrating said magnetic circuit across a working area and developing therefrom intense magnet-motive forces sufficient to inductively magnetize particles of such very low magnetic susceptibility, subjecting the mixture to the action of said intense magneto-motive forces and thereby attracting and withdrawing from the mixture the particles to be removed, and progressively removing the withdrawn particles from the field of action of said intense magneto-motive forces. 3rd. The method of magnetically separating, from a mixture, substances of such low magnetic attractability as siderite, hematite, garnet, or the like, which consists in establishing a magnetic circuit, passing the mixture through a part of the circuit condensed to form a concentrated field sufficient to inductively magnetize and withdraw the siderite, hematite, garnet, or the like, from the mixture, and progressively removing the withdrawn minerals from the condensed portion of the magnetic circuit. 4th. The method of separating from a mixture,, substances usually regarded as non-magnetic, which consists of establishing a magnetic circuit having an interval across which the magnetic lines of force extend forming a magnetic field substantially uniform along its length, condensing the magnetic lines at said interval, conveying the substances to be separated into the longitudinal edge portions of said condensed magnetic field, and causing said condensed magnetic field to attract and deflect the attractable particles subjected to its action. 5th. The method of separating from a mixture substances usually regarded as non-magnetic, which consists in establishing a magnetic circuit having an interval across which the magnetic lines of force extend forming a magnetic field substantially uniform along its length, condensing the magnetic lines at said interval, conveying the substances to be separated into the longitudinal edge portions of said condensed magnetic field, and causing said condensed magnetic field to attract and deflect the attractable particles subjected to its action, and continuously removing the particles thus deflected. 6th. The method of separating from a mixture substances usually regarded as non-magnetic, which consists in establishing a magnetic circuit having an interval across which the magnetic lines of force extend forming a magnetic field substantially uniform along its length, condensing the magnetic lines at said interval, conveying the substances to be separated into the strongest part of said condensed magnetic field transversely to the length of the field and without initial velocity due to gravitation and causing said condensed magnetic field to attract and deflect the attractable particles subjected to its action. 7th. The method of magnetically separating from a mixture substances usually regarded as non-magnetic, which consists in establishing a magnetic circuit having an interval across which the magnetic lines of force extend forming a magnetic field, condensing the magnetic lines at said interval, and feeding the mixture at opposite sides of the weaker zone of attraction between the pole pieces, so that the particles to be attracted will pass through the magnetic field through the zones of greatest attraction and avoiding the central weaker zone, whereby the so-attracted material is deflected into a different path of movement. 8th. The method of separating paramagnetic materials of different permeability, from mixtures containing them, which consists in subjecting the mixture to the action of a magnetic field sufficiently concentrated to remove said paramagnetic material and then separating the removed paramagnetic material into its components by subjecting it to the action of a magnetic field reduced in intensity sufficiently to leave the less permeable component, but sufficient to remove the component of higher permeability. 9th. In a magnetic separator, an electro-magnet having a pole piece tapering toward its free end, said free end being of less sectional area than the magnet core so as to highly condense the lines of magnetic force, and a conveyor for withdrawing the attracted material from the magnetic field. 10th. In a magnetic separator, an electro-magnet having a pole piece tapering toward its free end, said free end being of less sectional area than the magnet core so as to highly condense the lines of magnetic force, and a conveyor for withdrawing the attracted material from the magnetic field, the tapering end of the pole piece being arranged transversely to the direction of travel of the conveyor. 11th. In a magnetic separator, an electro-manget having a pole piece tapering toward its free end and having a core substantially equal in breadth to the breadth of the pole piece, and a conveyor passing around the pole piece for introducing the ore into the magnetic field and withdrawing the attracted material from said field. 12th. In a magnetic separator, an electro-magnet having a pole piece tapering toward its free end, said free end being of less sectional area than the magnet core so as to highly condense the lines of magnetic force, an inducing body located opposite the tapering pole end, and a conveyor for withdrawing the attracted material from the magnetic field. 13th. In a magnetic separator, an electro-magnet having a pole piece tapering toward its free end, so as to highly condense the lines of magnetic force, an inducing body located opposite the tapering pole end, said inducing body being itself the pole end of an electro-magnet, and a conveyor for withdrawing the attracted material from the magnetic field. 14th. In a magnetic separator, an electro-magnet having a pole piece tapering toward its free end so as to highly condense the lines of magnetic force, an inducing body located opposite the tapering pole

end and the inducing body, and a conveyor for withdrawing the attracted material from the magnetic field. 15th. In a magnetic separator, an electro-magnet having a pole piece tapering toward its free end in width and thickness, said free end being of less sectional area than the magnet core so as to highly condense the lines of magnetic force, and a conveyor for withdrawing the attracted material from the magnetic field. 16th. A magnetic separator, provided with opposing pole pieces of opposite sign, said pole pieces having tapered ends of less sectional area than their cores and separated from each other by an interval forming a magnetic field, and a lateral conveyor for each pole piece, said conveyor feeding material to be treated laterally into the magnetic field and directly over the surface of the pole pieces so that the particles to be magnetized will approach and enter the magnetic field through the zone of greatest attraction immediately adjacent to each pole piece and will avoid the weaker zone midway of the pole pieces. 17th. A magnetic separator, provided with opposing pole pieces of opposite sign, separated from each other by an interval forming a magnetic field, said pole pieces tapering at their ends, so as to have a sectional area less than that of their cores, and conveyors for the material to be treated, said conveyors passing around the tapering portions of the pole pieces and in close proximity thereto. 18th. A magnetic separator, provided with opposing pole pieces of opposite sign, separated by an interval forming a magnetic field, said pole pieces tapering at their ends toward each other, the form of such taper being in longitudinal section substantially of a right-angled triangle, and conveyors for the material to be treated, said conveyors passing over the surfaces of the pole pieces and in close proximity thereto. 19th. A magnetic separator, provided with opposing pole pieces of opposite sign, separated by an interval forming a magnetic field, said pole pieces tapering at their ends toward each other and having their upper surfaces in substantially the same plane, and conveyors for the material to be treated, said conveyors passing around the pole pieces and in close proximity thereto. 20th. In a magnetic separator, an electro-magnet having two cores and a connecting yoke, said cores being provided with wire wrappings and projecting pole pieces having tapering ends, the sectional area of the pole pieces being substantially equal to that of the cores and yoke, except at the tapering ends of the pole pieces, and conveyors passing around said tapering ends. 21st. A magnetic separator, provided with opposing pole pieces having tapering ends of less sectional area than the cores and separated by an interval forming a magnetic field, conveyors passing over and around said tapering ends, a central receptacle to receive tailings and outer receptacles to receive the withdrawn magnetized particles. 22nd. A magnetic separator, provided with opposing pole pieces having tapering ends of less sectional area than the cores and separated by an interval forming a magnetic field, conveyors passing over and around said tapering ends, a central receptacle to receive tailings and outer receptacles to receive the withdrawn magnetized particles, the entrance to said central receptacle being separated from the outer receptacles by adjustable wings or shutters. 23rd. A magnetic separator, provided with opposing pole pieces having tapering ends and separated by an interval forming a magnetic field, said tapering ends being adjustable toward and from each other, and a conveyor for withdrawing the attracted particles from the magnetic field. 24th. A magnetic separator, provided with opposing pole pieces having tapering ends and with their upper surfaces in substantially the same plane, endless conveyors passing over and around said tapering ends, and means for supplying to each conveyor a layer of material to be separated of substantially the width of the tapering ends. 25th. A magnetic separator, provided with opposing pole pieces, movable toward each other and having tapering ends, and conveyors passing over the tapering ends and feeding the material to be separated laterally toward the interval between the pole pieces. 26th. A magnetic separator, comprising a frame, an electro-magnet mounted therein and having tapering pole pieces adjustable toward and from each other, endless conveyors passing over and around the tapering ends of the pole pieces, hoppers having feed rollers in their outlets for feeding in a layer the material to be separated, and chutes for delivering the material to the conveyors. 27th. A magnetic separator, comprising a frame, an electro-magnet mounted therein and having tapering pole pieces adjustable toward and from each other, endless conveyors passing over and around the tapering ends of the pole pieces, hoppers having feed rollers in their outlets for feeding in a layer the material to be separated, chutes for delivering the material to the conveyors, and separate receptacles for the tailings and separated magnetic particles, the upper portion of the tailings receptacle being provided with adjustable wings or leaves serving to deflect the separated magnetic particles into their receptacles. 28th. A magnetic separator having two electro-magnets presenting two pairs of tapering poles of unlike sign opposite to each other, and conveyors for feeding the material to be separated laterally into the magnetic field from opposite sides of the interval separating them and for withdrawing the attracted particles from the magnetic field.

**No. 55,574. Ladder.** (*Echelle.*)

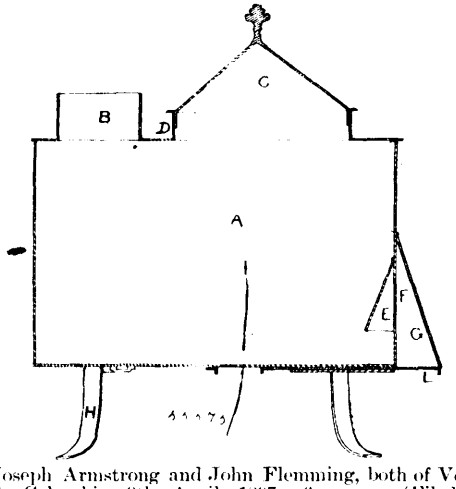
William Reilly, Stephen, Ontario, Canada, 9th April, 1897; 6 years. (Filed 17th August, 1896.)

*Claim.*—1st. A ladder consisting of the steps or rungs S, in which the openings O and recesses R are formed, and which is provided with the shoulders A, the wire or wires W, and the pins P, substantially as and for the purpose set forth. 2nd. The steps or rungs S,




in which the openings O, recesses R and pin holes H are formed, and which is provided with the shoulders A, having the downwardly-projecting point *a* in combination with the wire W looped at L, and the pins P, substantially as and for the purpose set forth.

**No. 55,575. Construction of Stoves for Heating Purposes.** (*Fabrication de poeles de chauffage.*)




William Joseph Armstrong and John Flemming, both of Vernon, British Columbia, 9th April, 1897; 6 years. (Filed 18th December, 1896.)

*Claim.*—As an article of manufacture a sheet-iron stove, comprising a body A, having on its top a pipe-opening B and a removable door C, on its front side, an opening F covered by a wire screen, and which screen is covered on the outside by a half-cone attachment G and on the inside by a smaller half-cone attachment E, a slide or damper L under the front half-cone-shaped attachment G, and legs H, all formed and combined as and for the purpose hereinbefore set forth.

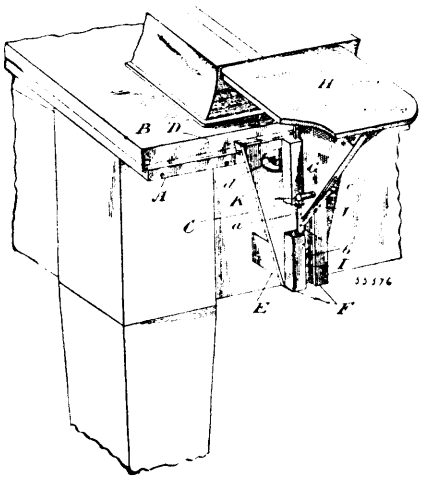
**No. 55,576. Arm Rest for Use by Book-keepers.**

(*Appui-bras pour teneurs de livres.*)

Walter Davidson, Toronto, Ontario, Canada, 9th April, 1897; 6 years. (Filed 25th January, 1897.)

*Claim.*—1st. In an article of the class described, an arm rest connected to a bracket, in combination with a frame and mechanism for adjustably connecting the bracket to the said frame, substantially as and for the purpose specified. 2nd. In an article of the class described, an arm rest connected to a bracket, in combination with a frame and mechanism for adjustably connecting the bracket to the said frame, and a rail or track connected to a desk, upon which track the said frame is adapted to slide, substantially as and for the purpose specified. 3rd. In an article of the class described, the combination of a frame, an arm rest connected to a bracket adapted to slide in guides on the said frame, a spring catch on the bracket, and a series of ratchet teeth on the frame with which the said catch is adapted to engage, substantially as and for the pur-

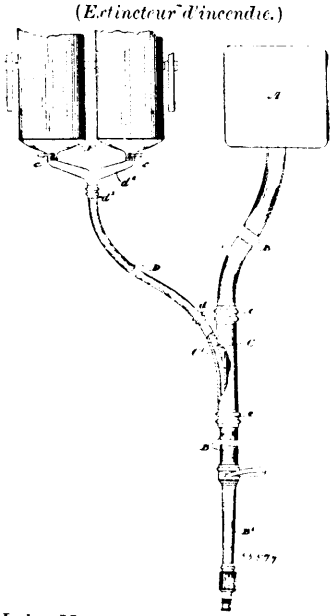
pose specified. 4th. In an article of the class described, the combination of a frame, an arm rest connected to a bracket adapted to



slide in guides on the said frame, a spring catch on the bracket, a series of ratchet teeth on the frame with which the said catch is adapted to engage, and a pin driven through the bracket to afford a grip for the fingers, substantially as and for the purpose specified. 5th. In an article of the class described, the combination of a frame, an arm rest connected to a bracket adapted to slide in guides on the said frame, a spring catch on the bracket, a series of ratchet teeth on the frame with which the said catch is adapted to engage, a pin driven through the bracket to afford a grip for the fingers, a rail or track connected to a desk, and a rail or track connected to the said frame and adapted to engage with the track on the desk, substantially as and for the purpose specified. 6th. In an article of the class described, the combination of a frame, a block connected to the rear of the lower portion of the frame, an arm rest connected to a bracket adapted to slide in guides on the said frame, a spring catch on the bracket, a series of ratchet teeth on the frame with which the said catch is adapted to engage, a pin driven through the bracket to afford a grip for the fingers, a rail or track connected to a desk, and a rail or track connected to the said frame and adapted to engage with the track on the desk, and a stop connected to the back of the frame below the rail or track upon the desk, substantially as and for the purpose specified.

**No. 55,577. Fire Extinguishing Apparatus.**

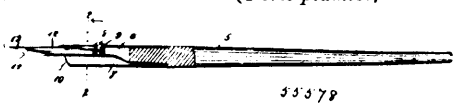
(*Extincteur d'incendie.*)



John Neilson Lake, Hamilton, Ontario, Canada, 9th April, 1897; 6 years. (Filed 3rd February, 1897.)

*Claim.*—An apparatus for extinguishing fire comprising an ordinary water hose, a source of supply for the water for forcing it under pressure through such hose, a pipe suitably coupled in the length of the hose and in alignment therewith, a branch on such pipe, chemical retorts arranged to produce fire extinguishing fluid and hose extending from such retort to the branch pipe forming part of the aligned pipe and suitable couplings for such hose, as and for the purpose specified.

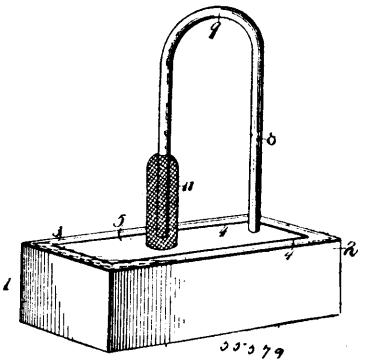
**No. 55,578. Pen-Holder.** (*Porte-plumes.*)



Herbert Edward Jarvis, Huntington, New York, U.S.A., 9th April, 1897; 6 years. (Filed 4th February, 1897.)

*Claim.*—1st. The combination with a tubular pen-holder, having an opening in the back or upper side thereof, of a spring plate secured therein, and provided with a pin or plug which projects through said opening, said spring plate being carried outwardly, and being provided in front of said pin or plug with a tubular portion which acts in connection with the tubular holder to hold the pen, and the outer end of said spring plate being pointed and the sides thereof curved in the direction of the pen, substantially as shown and described. 2nd. The combination with a tubular pen-holder, provided with an opening in its upper side or back, of a spring plate secured therein, and provided with a pin or plug which projects through said opening, said spring plate being adapted to act in connection with said tubular holder, to hold the pen, and being provided with a point which bears on the under side of the pen when the latter is in position, substantially as shown and described. 3rd. The combination with a tubular pen-holder, provided with an opening in its upper side or back, of a spring plate secured therein, and provided with a pin or plug which projects through said opening, said spring plate being adapted to act in connection with said tubular holder, to hold the pen, and being provided with a point which bears on the under side of the pen when the latter is in position, and the sides thereof, being curved upwardly or in the direction of the pen, substantially as shown and described.

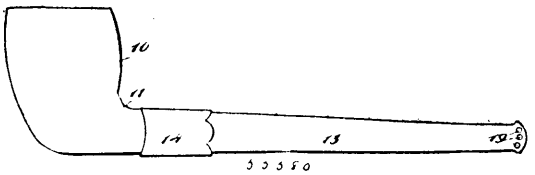
**No. 55,579. Burial Casket Box.** (*Boîte pour cercueil.*)



Joseph J. Stephen, Clinton, Missouri, U.S.A., 9th April, 1897; 6 years. (Filed 5th February, 1897.)

*Claim.*—1st. The combination with a water-tight box or vault adapted to exclude moisture when arranged below high-water mark, of a ventillating tube communicating with the interior of the box or vault extended upwardly and provided with a goose neck or loop above high-water mark and terminating in the soil adjacent to the box or vault, substantially as specified. 2nd. The combination with a casket box or vault adapted to exclude moisture when arranged below high-water mark, of a ventilating tube communicating at one end with the interior of the box or vault and adapted to be extended above high-water mark and doubled upon itself to form a goose-neck or loop, said tube terminating at its free or open end contiguous to the box or vault, and a cage or reticulated shield secured to the box or vault and receiving the free end of the tube, whereby the latter is held in place and earth is excluded, substantially as specified.

**No. 55,580. Tobacco Pipe.** (*Pipe à tabac.*)



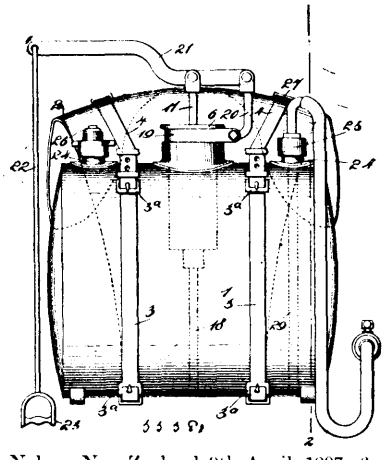
Henry Hunt and Henry Hunt, jr., both of Wilkesbarre, Pennsylvania, U.S.A., 9th April, 1897; 6 years. (Filed 13th February, 1897.)

*Claim.*—1st. A tobacco pipe, comprising the bowl having an integral lateral stem perforated longitudinally to intersect the cavity

of said bowl, a tongue-piece extending from said stem and having two opposite longitudinal grooves, one of said grooves aligning with the aforesaid perforation, and a mouthpiece incasing said tongue-piece and provided with a ferrule by which it is attached to said stem, the grooves being thereby converted into a smoke-passage and a moisture chamber, substantially as described. 2nd. A tobacco pipe, comprising a bowl, a short integral stem laterally projecting from the bowl and longitudinally perforated to intersect the cavity therein, a tapered tongue-piece extended from the stem and having less diameter than said stem at the point of junction therewith, the tongue-piece having two opposite grooved passages longitudinal therein, one groove aligning with the perforation of the stem, a cylindric tapered mouthpiece incasing the tongue-piece, and converting the grooved formations respectively into a smoke passage and a moisture chamber, and a tapered ferrule fast on the end of the mouthpiece and fitted upon the tapered body of the short stem, substantially as described. 3rd. The herein described mouthpiece for pipes and other smoking articles provided with a series of peripheral openings, substantially as set forth. 4th. The herein described pipe, provided with two longitudinal passages, one of which leads to the bowl, and a transverse passage connecting said longitudinal passages, substantially as set forth. 5th. The herein described pipe, provided with a stem having a projecting collar, and a mouthpiece having a groove adapted to receive the end of said collar, and a ferrule arranged to fit over the collar, substantially as set forth.

**No. 55,581. Pneumatic Spraying Machine.**

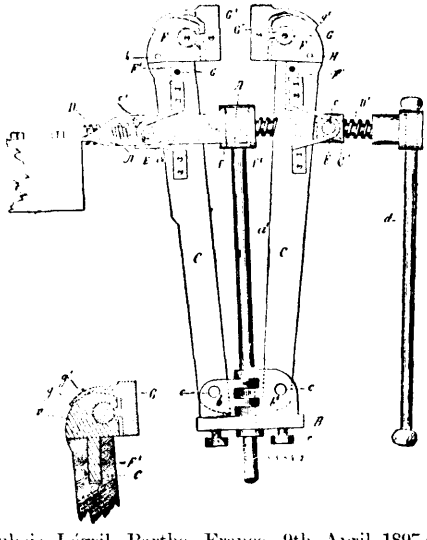
(*Machine pneumatique à jet.*)



John Black, Nelson, New Zealand, 9th April, 1897; 6 years. (Filed 12th February, 1897.)

*Claim.*—1st. A spraying device, comprising a tank for spraying liquid, a pump cylinder extended into said tank, a pipe extended from the lower end of said cylinder and having a valve controlled communication with the interior of the cylinder, a piston operating in the cylinder, an operating lever connected to the piston rod, a liquid tube extended through the tank and nearly to the bottom thereof, an air tube inclosing the liquid tube, a nozzle provided with liquid and air ducts, and flexible hose connection between said nozzle and liquid and air tubes, substantially as specified. 2nd. A spraying device, comprising a tank for spraying liquid, a yoke attachable to said tank and adapted for engagement over the shoulders of a person, a pump cylinder extended into the tank, a pipe extended from the lower end of said cylinder nearly to the bottom of the tank and having a valve controlled communication with the interior of the cylinder, a piston operating in said cylinder, a piston rod connected with, but longitudinally movable with relation to the piston, a valve on said rod for controlling a port, providing communication between the upper and lower sides of said piston, an actuating lever being connected with the outer end of said piston rod, a rod depending from said lever and having a hand-piece at its lower end, and an air and liquid ejector nozzle having pipe connections with the interior of the tank, substantially as specified. 3rd. A spraying device, comprising a tank, a yoke for carrying said tank, a pump cylinder extended into the tank and having an air inlet at its outer end, a pipe having a valve controlled communication with the interior of said cylinder and extended nearly to the bottom of the tank, a piston operating in said cylinder, a piston rod extended from said piston, a ring mounted to rotate on the outer end of said cylinder, an arm having pivotal connection with said ring, an actuating lever having pivotal connection with said arm, and also having pivotal connection with the piston rod, and an air and liquid ejecting nozzle having pipe communication with the interior of the tank, substantially as specified. 4th. A spraying device, comprising a tank, a pump for forcing liquid therefrom, a liquid tube extended through said tank and nearly to the bottom thereof, an air tube enclosing said liquid tube and having a clamping ring for securing said tube to a nipple on the tank, a flexible hose connected at one end to the end of the liquid tube, a flexible hose connected at one end to the air tube, and a nozzle having liquid and air ducts communicating respectively with the flexible liquid hose and flexible air hose, substantially as specified. 5th. A spraying nozzle, comprising a body portion having a valve controlled longitudinal liquid duct and a valve controlled longitudinal air duct, a tube extended from and having communication with the liquid duct, a tube extended from and having communication with the air duct, a liquid discharge nozzle having a contracted outlet and screwing onto the forward end of the body portion, an air discharge nozzle having a contracted outlet, and provided at its inner end with an annular flange having a port or ports adapted for communication with the liquid duct in the body portion, and an annular shoulder formed in the inner side of the liquid discharge nozzle for engaging against the flange to hold the air discharge nozzle against the end of the body portion, substantially as specified.

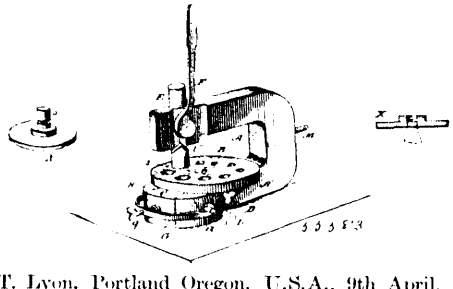
**No. 55,582. Vise.** (*Etau.*)



Charles Dubois, Légril, Parthe, France, 9th April, 1897; 6 years. (Filed 8th February, 1897.)

*Claim.*—1st. In a vise, the combination with pivoted levers carrying vise jaws, of right and left hand screws operatively connected with said levers, and a universal joint coupling the adjacent end portions of the said screws, substantially as set forth. 2nd. In a vise, the combination, with pivoted levers carrying vise jaws, or nuts provided with laterally projecting pivots supported from the said levers, right and left hand screws engaging with the said nuts, and a universal joint coupling the adjacent end portions of the said screws, substantially as set forth. 3rd. In a vise, the combination, with a vertical rod, of hinges pivoted on said rod, and levers pivoted to the said hinges and provided with vise jaws, substantially as set forth. 4th. In a vise the combination, with pivoted levers, of heads provided with vertical stems journalled in the upper end portions of said levers, and vise jaws carried by the said heads, substantially as set forth. 5th. In a vise, the combination, with pivoted levers provided with heads, of oscillatory vise jaws provided with cylindrical pivots journalled in horizontal sockets in the said heads and having curved flanges covering the tops of the heads, substantially as set forth.

**No. 55,583. Dental Appliance.** (*Appareil dentaire.*)

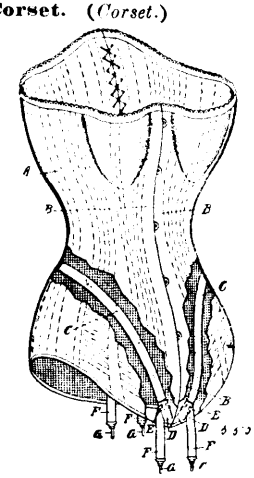


William T. Lyon, Portland Oregon, U.S.A., 9th April, 1897; 6 years. (Filed 6th February, 1897.)

*Claim.*—1st. A method of forming artificial tooth crowns which consists in the following steps:—Taking impression of natural tooth, second making a metal tooth form, third forming a mattrix on such tooth form, fourth in forming a crown from within the matrix, substantially in the manner hereinbefore described. 2nd. A dental appliance comprising a main frame having a chambered portion to receive the molten metal, and wall having a pouring opening, a de-

tachable cover plate for one end of the chamber having means for holding the tooth from projecting into the said chamber for the purposes described. 3rd. A dental appliance having at one end an opening I, a detachable disc having means for holding a tooth form projected into the opening, a pouring aperature communicating with the opening I and an adjustible slide plate for covering all or part of the end of opening I opposite the disc cover member as specified. 4th. A dental appliance formed of a □ shaped frame having an opening in one of its parallel members, a plunger shaft connected to its opposite member, a slide plate movable over the under side of the aforesaid opening, a detachably centrally apertured disc adapted to be held over the top of such opening and a shank member adapted to connect such disc to the plunger shaft, substantially as shown and for the purposes described. 5th. A dental appliance comprising a main frame having a casting chamber open at each end, an adjustible slide operating over the under side thereof, and a disc having a stem adapted to fit over the top side of such member, a plunger shaft and a lever for operating such shaft, all arranged substantially as shown and described. 6th. A dental appliance comprising a □ shaped frame having means for holding it either on one of its long arms or base, the lower one of such arms having an aperture I, a detachable section C having a pouring aperture, the slide plate L, the disc X having stem 5, the plunger shaft E having a lock device to engage the stem 5 and projections T and U and the lever F, all arranged substantially as shown and for the purposes described. 7th. In a dental appliance of the character described, the combination with the main frame having aperture I, and plunger shaft operated thereover, of a disc adapted to be rotated on the frame, and having a concentric series of apertures of different diameters and a series of dies or plunger shafts of different diameters adapted to be connected with the plunger shaft substantially as described. 8th. In a dental appliance as described, the combination of the main frame, the plunger shaft and the dies, the plunger shaft having a spring held device for holding the dies to the shaft, and trip means on the main frame adapted to engage such spring holder as the shaft is elevated to release the die, as specified. 9th. In a dental appliance, as described, the combination of the main frame having a circular shaped opening I, and a detachable section C having a pouring opening, the clamp G, the detachable rotary disc B having a series of concentric openings of a gradually decreasing diameter, the shaft E and the lever F, all being arranged substantially as shown and for the purposes described. 10th. A dental appliance comprising the main frame, the tooth form holding the disc X and stem 5, said frame having an opening I, and detachable section C having a pouring opening, the clamp G, the slide plate L, the detachable aperture disc B, the sliding plunger E and the lever mechanism F, all being arranged and combined for the purposes and substantially in the manner described.

**No. 55,584. Corset.** (*Corset.*)



Thomas H. Robinson, London, Ont., Canada, 9th April, 1897; 6 years. (Filed 26th February, 1897.)

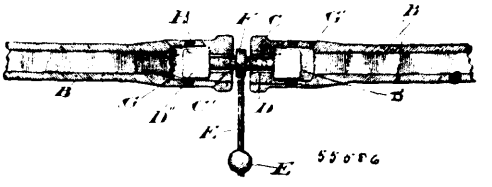
*Claim.*—1st. As a new article of manufacture, a corset, the lower portion, particularly the lower ends of the front stays, of which is drawn inwards on placing it against the body of the wearer, substantially as and for the purpose set forth. 2nd. The application to the inside of a corset, of a strap or straps C, substantially as and for the purpose set forth. 3rd. The application to the inside of a corset, of a strap or straps C secured at two points in such a manner that the portion of the corset between the two points at which the straps are secured will be greater than the loose portion of said strap or straps between said two points, substantially as and for the purpose set forth. 4th. The application to a corset of the depending straps F, substantially as and for the purpose set forth. 5th. A corset having the inside strap or straps C, the loops or straps D, and the buckles E, substantially as and for the purpose set forth. 6th. A corset having the inside strap or straps C, the loops or straps D, and the buckles E, in combination with the depending straps F, substantially as and for the purpose set forth.

**No. 55,585. Tong.** (*Tenailles.*)

Oscar L. Owen, Whitensville, Massachusetts, U.S.A., 9th April, 1897; 6 years. (Filed 11th February, 1897.)

*Claim.*—1st. In a pair of tongs, the combination in a body portion formed of a piece of wire bent to form an eye or loop substantially in the middle of said piece, finger sockets at each side of said loop, and integral, normally open spring-arms, and a wire-operating rod extending through said eye and having a clamping-section at one end for engaging the spring-arms, and a loop or thumb-socket at the opposite end, said parts being arranged so that the spring-arms can be controlled and operated with one hand, substantially as described. 2nd. In a pair of tongs, the combination of a body portion having spring-arms 14 and 15, which normally stand in a spread or open position, a central guide or eye 11, finger-sockets 12 and 13 at each side of said guide or eye, and an operating-rod 18 extending through said guide, and having a clamping-section 19 at one end, and a loop or thumb-socket 20 at the other end, the parts being arranged so that the spring-arms can be controlled and operated with one hand, substantially as described.

**No. 55,586. Car Coupler.** (*Attelage de chars.*)



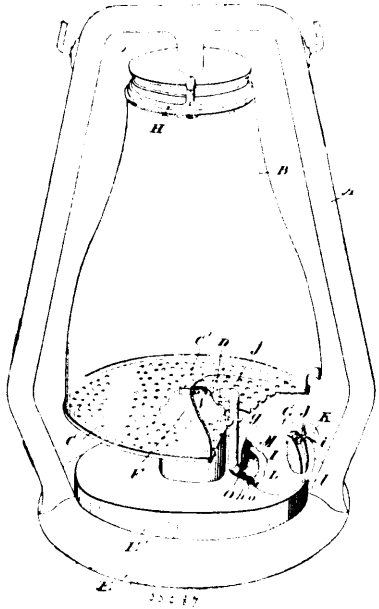
George Sleeman and John McHardy, both of Guelph, Ontario, Canada, 9th April, 1897; 6 years. (Filed 27th February, 1897.)

*Claim.*—1st. In a car coupler, the combination of draw-heads and locking chambers formed therein, and elongated openings leading thereto from the ends of the draw-heads, a double headed pin with elongated heads adapted to pass through the elongated openings for coupling or uncoupling purposes, a weighted rod so attached to the pin between the heads so as to be substantially horizontal when the pin is in its uncoupled position, so that when the cars come together both elongated heads enter their respective locking chambers and move through a quarter circle to lock against the wall of the locking chambers, substantially as specified. 2nd. In a car coupler, the combination of draw-heads and locking chambers formed therein, and elongated openings leading thereto from the ends of the draw-heads, a double headed pin with elongated heads adapted to pass through the elongated openings for coupling or uncoupling purposes, a collar formed on the pin between the heads and a weighted rod so attached to the collar as to be substantially horizontal when the pin is in its uncoupled position, so that when the cars come together both elongated heads enter their respective locking chambers and move through a quarter circle to lock against the wall of the locking chambers, substantially as and for the purpose specified. 3rd. In a car coupler, the combination of draw-heads with locking chambers formed therein, and oblong openings leading thereto from the ends of the draw-heads, a double-headed pin with flattened oblong heads adapted to enter the oblong openings when the longer axes of the heads are horizontal, a weighted rod attached to the pin between the heads and in a plane substantially parallel to the longer axes of the heads, so that when the cars come together both oblong heads enter their respective locking chambers and move through a quarter circle to lock against the wall of the locking chambers, substantially as and for the purpose specified. 4th. In a car coupler, draw-heads provided with locking chambers G, $G^1$, and oblong openings C, $C^1$, respectively, in combination with a pin D, provided with flattened oblong heads $D^1$, $D^{11}$, designed to pass through the oblong openings C, $C^1$, for coupling or uncoupling purposes, the weighted rod E attached to the pin D so as to be on the same plane as the upper face of the head as it enters the oblong opening, substantially as described and for the purpose specified. 5th. In a car coupler,

draw-heads provided with locking chambers C, $C^1$, and oblong openings C', $C^1$, respectively, in combination with a pin D, provided with flattened oblong heads $D^1$, $D^{11}$, designed to pass through the oblong openings C, $C^1$, the collar F, the rod E provided with weight $E^1$ and attached to the collar so as to be in the same plane as the upper face of the head as it enters the oblong opening, and the chain $E^{11}$, substantially as described and for the purpose specified.

**No. 55,587. Lamp or Lantern Extinguisher.**

(*Extincteur de lampes ou lanternes.*)



Daniel Thomas Kennedy McEwen, Baxborough, and Ewen McArthur, Maxville, both in Ontario, Canada, 10th April, 1897; 6 years. (Filed 5th February, 1897.)

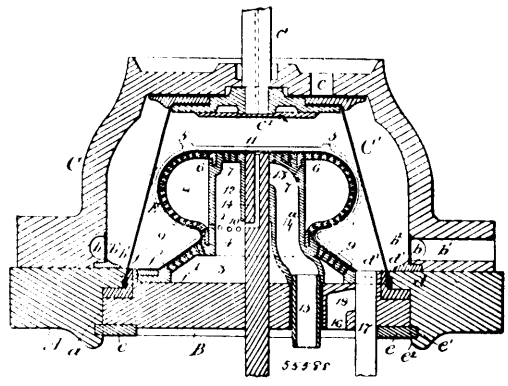
*Claim.*—1st. As an extinguisher for lanterns, a tube having the upper end opposite the end of the wick and in alignment with the same, and the tower end extending over the bottom body of the lantern, and means at the outer end of the tube for expelling the air through such tube against the flame, as and for the purpose specified. 2nd. A device of the class described, comprising a hollow metal ball, an internal rubber bulb having communication with a metal tube leading from the ball up to within suitable distance of the flame, and means for expelling air from the bladder, as and for the purpose specified. 3rd. In a device of the class described, in combination a hollow metal ball, an internal rubber bulb having communication with a metal tube leading from the ball up to within suitable distance of the flame, a flat semi-circular spring suitably secured on the inside of the sphere and designed to normally rest close to the bulb, and means for depressing the spring, as and for the purpose specified. 4th. In a device of the class described, in combination a hollow metal ball, an internal rubber bulb having communication with a metal tube leading fram the ball up to within suitable distance of the flame, a flat semi-circular spring suitably secured to the inside of the sphere and designed to normally rest close to the bulb, a pin connected to the spring, extending out through a hole in the hollow ball and provided with a head or button at its outer end, as set forth and for the purpose specified. 5th. In a device of the class described, the combination of the ball, bulb situated within such ball, spring suitably held and normally resting close to such bulb, pin for depressing such spring so as to expel air from the bulb, the tube *g* provided at its upper end with a gradually tapered portion D which terminates in a small hole V, from which the air is expelled from the tube against the flame, as and for the purpose specified. 6th. As an extinguisher for lantern and like articles, a ball fastened in proportionately to the burner, an internal rubber bulb in ball, a tube leading from the bulb to the end of the wick, and arranged with upper portion in alignment with said wick, and means for compressing the bulb, as and for the purpose specified.

**No. 55,588. Machine for Moulding Pulp.**

(*Machine pour mouler la pulpe.*)

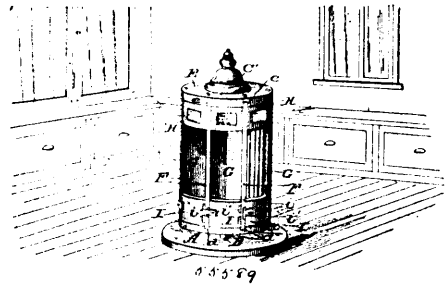
Frank Eugene Keyes, New York, State of New York, and Charles Robinson, Neenah, Wisconsin, both in the U.S.A., 10th April, 1897; 6 years. (Filed 3rd November, 1896.)

*Claim.*—1st. In an apparatus for the manufacture of bulged articles from pulp, the combination with a dome and an elastic bag, or diaphragm, of a sectional former comprising a central body portion and outside sections arranged around the body portion, said outside sections connected with the body portion at their upper and lower ends, substantially as set forth. 2nd. In a former for pulp moulding apparatus, the combination with a base and body portion,



said body portion having a groove or recess at both ends, of a series of removable sections constructed and adapted to enter said grooves, substantially as set forth.

**No. 55,589. Show Stand.** (*Caisse d'étalage,*)

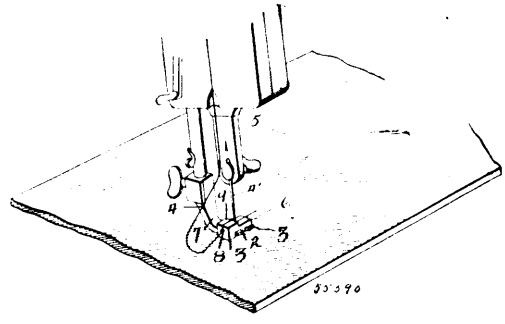


Henry Klein, New Lexington, Ohio, U.S.A., 10th April, 1897; 6 years. (Filed 5th February, 1897.)

*Claim.*—The show stand for curtain shades, herein described, consisting of the approximately circular base and top, the radiating partitions extending between said base and top and forming a series of triangular compartments provided at their upper ends with front plates closing their outer sides, and the door hinged at one edge and adapted to close the outer sides of the compartments at their lower ends, all substantially as described, whereby the shades will be prevented from tipping or falling out of the compartments when they are entirely or partially filled, substantially as described and shown.

**No. 55,590. Needle Threader.**

(*Appareil pour enfiler les aiguilles.*)



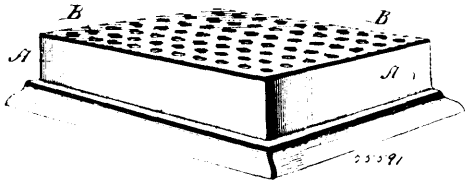
Henry M. Childers and Emma J. Smith, both of Ontario, Oregon, U.S.A., 10th April, 1897; 6 years. (Filed 5th February, 1897.)

*Claim.*—1st. A needle threader, consisting of a block having a tapering opening therein through which the thread is adapted to be passed, substantially as described. 2nd. A needle threader, consisting of a block having a tapering opening therein through which the thread is adapted to be passed, and means for holding the needle so that the eye thereof will lie directly opposite the small end of said tapering opening, substantially as described. 3rd. A needle threader, consisting of a block having a tapering opening therein through which the thread is adapted to be passed, a laterally extending slit leading into said opening, and means for holding the needle so that the eye thereof will lie directly opposite the small end of said tapering opening, substantially as and for the purpose described. 4th. A threading device for the needles of sewing machines, consisting of a block having a lug upon the upper side thereof forming a shoulder between it and the main portion of said

block, a tapering opening extending through said lug and terminating at a point adjacent to said shoulder, a slit extending through said lug into said opening, and a recess for receiving the point of the needle located in the upper side of said block adjacent to the contracted end of said opening, substantially as and for the purpose described.

**No. 55,591. Match Receptacle.**

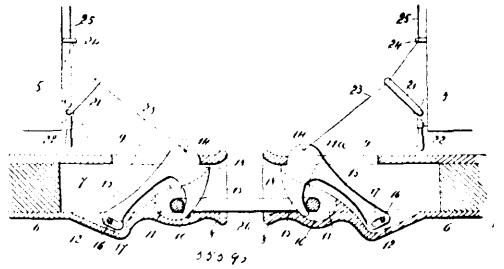
(*Réceptacle pour allumettes.*)




John Alexander Montgomery, assignee of William Cecil Bower, both of Birmingham, Alabama, U.S.A., 10th April, 1897; 6 years. (Filed 4th March, 1897.)

*Claim.*—1st. A match receptacle and igniter, having a series of elongated perforations, the walls of which are corrugated, and means for holding matches against the said corrugated walls of the perforations, substantially as shown and described. 2nd. A match holder and igniter, comprising a cast metallic receptacle having a series of elongated apertures or perforations therein, the walls of each perforation having a roughened surface a portion of its length, combined with the plates C having arms which are designed to hold the matches in the said perforations and against the roughened surface therein, substantially as shown and described. 3rd. A match holder and igniter, comprising a solid metallic block having a series of vertical elongated perforations therein, the walls of each perforation roughened, combined with the plates C having a series of integral spring arms $C^1$, one of each being designed to rest in each perforation, with the upper portion resting against the said roughened surface, between which and the spring the match is designed to be held, substantially as shown and described. 4th. As an improved article of manufacture, a match receptacle having in combination with a base a hollow match receptacle hinged thereto and a locking pin on the side opposite the hinged side, and a series of corrugated strips disposed across the top of the receptacle, whereby a match held between the said strips may be ignited as it is withdrawn from the receptacle, substantially as shown and described.

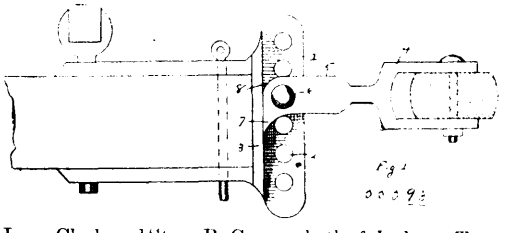
**No. 55,592. Car Coupler.** (*Attelage de chars.*)



Milton Reiter and Sherman William Conn, both of Rushville, Illinois, U.S.A., 10th April, 1897; 6 years. (Filed 5th March, 1897.)

*Claim.*—1st. The herein described car coupling device, which is adapted to be secured to the opposite ends of the cars to be coupled, said device consisting of an oblong coupling head which is provided with a longitudinal opening in the outer end, and with a longitudinal slot in the top thereof, the bottom of the coupling head being also provided adjacent to the open end thereof with a depression behind which is a forwardly and upwardly directed jaw or projection, said coupling head being also provided rearwardly of said jaw or projection with a cavity or depression, a locking lever pivoted in said cavity or depression by means of a pin which passes through a slot formed therein, said lever being also provided at its free end with a head which passes through the slot in the top of the coupling head, and with a downwardly and forwardly directed projection or jaw, substantially as shown and described. 2nd. The herein described car coupling device, which is adapted to be secured to the opposite ends of the cars to be coupled, said device consisting of an oblong coupling head which is provided with a longitudinal opening in its outer end and with a longitudinal slot in the top thereof, the bottom of the coupling head being also provided adjacent to the end thereof with a depression behind which is forwardly and upwardly directed jaw or projection, said coupling head being also provided rearwardly of said jaw or projection with a cavity or depression, a locking lever pivoted in said cavity or depression by means of a pin which passes through a slot formed therein, said lever being also provided at its free end with a head which passes through the slot in the top of the coupling head and with a downwardly and forwardly directed projection or jaw, and a coupling link which is adapted to operate in connection with said lever, substantially as shown and described. 3rd. The herein described car coupling device, which is adapted to be secured to the opposite ends of the cars to be coupled, said device consisting of an oblong coupling head which is provided with a longitudinal opening in its outer end and with a longitudinal slot in the top thereof, the bottom of the coupling head being also provided adjacent to the open end thereof with a depression behind which is a forwardly and upwardly directed jaw or projection, said coupling head being also provided rearwardly of said jaw or projection with a cavity or depression, a locking lever pivoted in said cavity or depression by means of a pin which passes through a slot formed therein, said lever being also provided at its free end with a head which passes through the slot in the top of the coupling head and with a downwardly and forwardly directed jaw or projection, and a coupling link which is adapted to operate in connection with said lever, substantially as shown and described. 4th. The herein described car coupling device, which is adapted to be secured to the opposite ends of the cars to be coupled, said device consisting of an oblong coupling head which is provided with a longitudinal opening in its outer end and with a longitudinal slot in the top thereof, the bottom of the coupling head also provided adjacent to the open end thereof with a depression behind which is a forwardly and upwardly directed jaw or projection, said coupling head being also provided rearwardly of said jaw or protection with a cavity or depression, a locking lever pivoted in said cavity or depression by means of a pin which passes through a slot formed therein, said lever being also provided at its free end with a head which passes through the slot in the top of the coupling head and with a downwardly and forwardly directed projection or jaw, and a coupling link which is adapted to operate in connection with said lever, and means for operating said lever consisting of a rod secured transversely of the ends of the car, and provided centrally with a crank, and a cord or chain connected with the head of said locking lever and passed upwardly through said crank, substantially as shown and described.

**No. 55,593. Clevis.** (*Fer d'attelage.*)

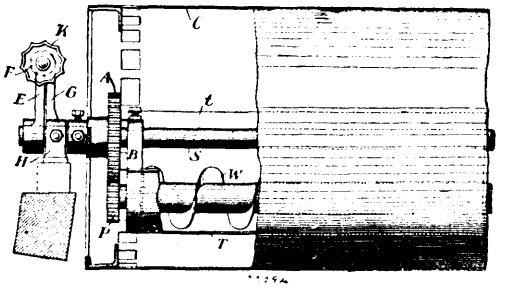


Allen Long Clark and Steve R. Conger, both of Jackson, Tennessee, U.S.A., 10th April, 1897; 6 years. (Filed 18th March, 1897.)

*Claim.*—A clevis having a perpendicular plate provided with a series of perforations, an abutting surface located at each side of the back of said plate, a tree support having a bifurcated shank, said bifurcations having opposite perforations located at an intermediate point, a bolt adapted to pass through the perforations in the bifurcations and a perforation in the plate, said bolt thereby forming a pivotal point, the rear ends of the bifurcations adapted to rest against said abutting surfaces, the rear ends of the bifurcations having downward projections, and the upper rear corners of the bifurcations being rounded.

**No. 55,594. Cylinder for Cleaning Grain.**

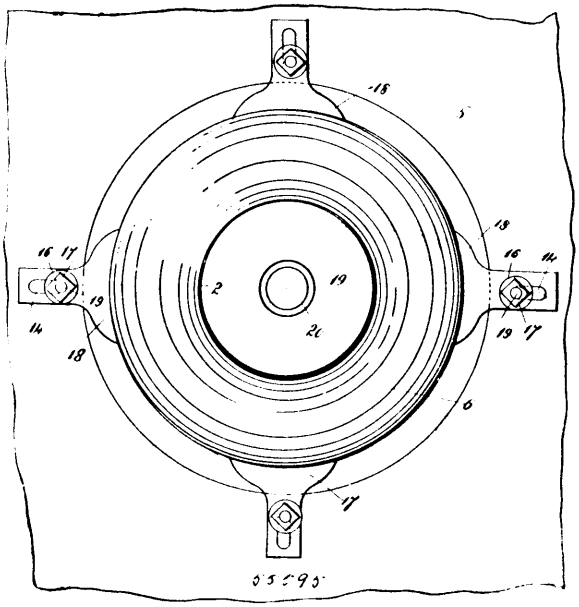
(*Cylindre pour nettoyer le grain.*)




Charles Edward Mumford, Lavenham Hill, Suffolk, England, 10th April, 1897; 6 years. (Filed 4th March, 1897.)

*Claim.*—1st. In a cellular grain-cleaning cylinder, the formation and arrangements of conoidal cells in quincunx order, the axis of each cell being so inclined to the plane of its rotation that when the cylinder is in its inclined working position, the axes of the cells at each side are vertical, substantially as and for the purpose set forth. 2nd. In combination with the shaft and tray of a cellular grain cleaning cylinder, a toothed segment and a worm adapted to gear with the segment and having a hand-wheel, substantially as and for the purpose set forth.

**No. 55,595. Basin Clamp.** (*Emboîture pour bassin.*)



Elizabeth Agnes Willment, New York, State of New York, U.S.A., 10th April, 1897; 6 years. (Filed 15th March, 1897.)

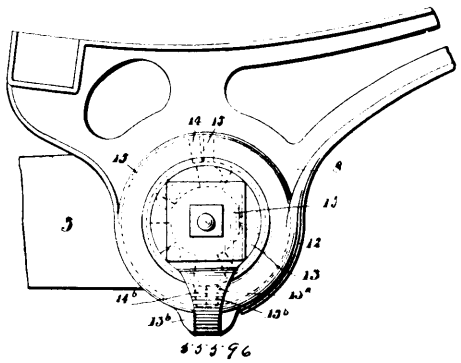
*Claim.*—1st. The herein described means for connecting a bowl or basin with a marble or other slab, or table, which consists of a bolt which is fixed in the bottom portion of said slab or table, an attachment mounted on said bolt, and provided with a cross-head having transverse ratchet-teeth formed therein, and a plate having a longitudinal slot through which said bolt passes, said plate being provided on its under side with ratchet-teeth which engage with these formed in the attachment and said plate being held in place by a nut or burr, and being provided with a head, which presses on an annular flange or rim formed on the bowl or basin, substantially as shown and described. 2nd. The herein described means for securing a bowl or basin, to a marble or other slab, or table, which consists of a number of bolts, secured in said slab, around the central opening formed therein, an attachment mounted on each of said bolts provided with a cross-head having ratchet-teeth formed in the outer surface thereof, and a plate mounted on each of said bolts, and provided with transverse ratchet-teeth which are adapted to engage with those formed in the attachment, said plate being also provided with curved or segmental bands, which are adapted to bear upon an annular flange or rim formed on the bowl or basin, and said bolts being each provided with a washer, and a nut or burr, substantially as shown and described. 3rd. The herein described means for securing a bowl or basin to a marble or other slab, or table, which consists of a number of bolts in the bottom of said slab around the central opening formed therein, an attachment mounted on each of said bolts, a plate provided with a longitudinal slot also mounted on each of said bolts, said plate being provided with a curved or segmental head adapted to bear upon an annular flange or rim formed by the bowl or basin, and means for clamping said plate and said attachment together on said bolt, substantially as shown and described.

**No. 55,596. Ball-bearing Seat Hinge.**

(*Siège de charnière de coussinet à boule.*)

The Grand Rapids School Furniture Co., assignee of Allan Dawson Linn, both of Grand Rapids, Michigan, U.S.A., 10th April, 1897; 6 years. (Filed 17th March, 1897.)

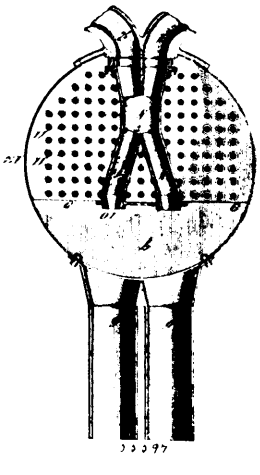
*Claim.*—1st. In combination with the standard, the seat bracket and plate yieldingly connected, the two sets of arc-shaped channels arranged with reversely located inclines, and the balls located in said channels, one of said balls serving as a gradual stop to limit the movement of the seat in one direction, and the other serving to limit gradually the movement of the seat in the other direction, substantially as described. 2nd. In combination with the standard and plate, the interposed seat-bracket, a bolt connecting said three parts and forming a hinge upon which the bracket pivots, a fixed stop located between the standard and bracket and travelling in a groove in the adjacent part, arc-shaped channels in the adjacent faces of the seat-bracket and plate, said channels having inclined ends, balls located in said channels, and a spring-washer surrounding the bolt and exerting a yielding pressure upon the plate, substantially as described. 3rd. In combination, the standard and seat-bracket having annular channels in their adjoining faces, a stop projecting from each part into the channel of the adjoining part, a plate located upon the opposite side of the seat-bracket with means for holding it against turning, channels in the adjoining faces of the bracket and plate, said channels having inclined ends, a bolt and spring-washer for holding said parts yieldingly together,



and a plurality of balls located in the channels between said plate and bracket, one of said balls serving as a rolling stop to limit the upward movement of the seat, another as a rolling stop to gradually limit the downward movement, and another acting as an idler, substantially as described. 4th. In combination with the standard and plate, the interposed seat-bracket, a bolt connecting said three parts and forming a hinge upon which the bracket pivots, oppositely placed fixed stops located between the standard and bracket and travelling in grooves in the adjacent parts, arc-shaped channels in the adjacent faces of the seat-bracket and plate, said channels having inclined ends, balls located in said channels, and a spring-washer surrounding the bolt and exerting a yielding pressure upon the plate, substantially as described.

**No. 55,597. Locomotive Boiler.**

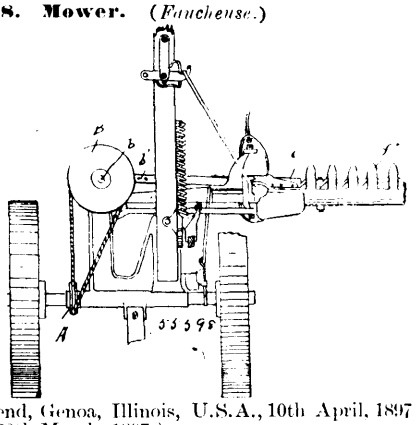
(*Chaudière de locomotive.*)



William Beriah Warren, Peoria, Illinois, U.S.A., 10th April, 1897; 6 years. (Filed 19th March, 1897.)

*Claim.*—1st. The combination of a plurality of smoke-stacks located in a line across the top of the smoke-arch and on different arcs thereof, exhaust-pipes leading from the steam cylinders to a point directly under the smoke-stacks, a chamber with which said exhaust-pipes communicate, and diverging exhaust-passages leading from said chamber to the smoke stacks, whereby the exhaust-steam from each cylinder will be directed through both of the passages and stacks, substantially as shown and described. 2nd. The combination of a plurality of smoke-stacks located in a line across the top of the boiler, and on different arcs thereof, a smoke-arch located under the smoke-stacks and above the top line of boiler flues, exhaust-pipes leading from the cylinders to a chamber and exhaust-passages leading from said chamber to the smoke-arch, and so arranged that each exhaust from the cylinders will pass out into the smoke-arch and through both smoke stacks, and thereby cause a draft through all of the boiler flues, substantially as and for the purpose set forth. 3rd. The combination of a boiler, the plurality of smoke-stacks located in a line across the boiler top and on different arcs thereof, exhaust pipes leading from the steam cylinders to the boiler, and a chamber having diverging exhaust-passages leading therefrom, communicating with the exhaust pipes, and a wedged shaped portion formed at the point of convergence of the exhaust-passages whereby the exhaust steam from each cylinder will be directed through both of the exhaust passages and smoke stacks, substantially as shown and described.

**No. 55,598. Mower.** (*Faucheuse.*)



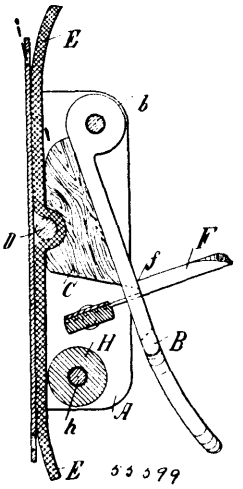

Adolph Pfend, Genoa, Illinois, U.S.A., 10th April, 1897; 6 years. (Filed 20th March, 1897.)

*Claim.*—1st. In a cutter-bar for mowers, the combination of a guard-plate of angular cross-section, and composed of two angle-plates provided with teeth on the horizontal portion of such angles, each tooth of the upper angle-plate arranged vertically above a corresponding tooth of the lower angle-plate, and the teeth of one angle-plate capable of adjustment so as to project beyond the teeth of the other angle-plate or to be flush with it as is desired, a cutter-blade of angular cross-section and composed of two angle-plates constructed in the same manner as those of the guard-plate, and adapted to have a reciprocating motion with reference to the teeth of said guard-plate, substantially as described. 2nd. In a cutter-bar for mowers, the combination of a guard-plate of angular cross-section, and composed of two angle-plates provided with teeth on the horizontal portion of such angles, each tooth of the upper angle-plate arranged vertically above a corresponding tooth on the lower angle-plate, and the teeth of one angle-plate capable of horizontal adjustment so as to project beyond the teeth of the other angle-plate as is desired, a cutter-blade of angular cross-section and composed of two angle-plates constructed in the same manner as those of the guard-plate, and adapted to have a reciprocating motion with reference to the teeth of said guard-plate, a plate in front of and adapted to protect said cutter-blade, rollers adapted to carry said cutter-blades, and brackets arranged to carry said rollers, substantially as described. 3rd. In a cutter-bar for mowers, the combination of a guard-plate of angular cross-section, and composed of two angle-plates provided with teeth on the horizontal portion of such angles, each tooth of the upper angle-plate arranged vertically above a tooth corresponding of the lower angle-plate, and the teeth of one angle-plate capable of horizontal adjustment so as to project beyond the teeth of the other angle-plate or to be flush with it as desired, a cutter-blade of angular cross-section and composed of two angle-plates constructed in the same manner as those of the guard-plate and adapted to have a reciprocating motion with reference to the teeth of said guard-plate, a plate in front of and adapted to protect said cutter-blade, rollers adapted to carry said cutter-blades, and brackets arranged to carry said rollers, and capable of vertical adjustment, and finger-guards adapted to protect the points of said teeth, substantially as described. 4th. In a cutter-bar for mowers, the combination of a guard-plate of angular cross-section, and composed of two angle-plates provided with teeth on the horizontal portion of such angles, each tooth of the upper angle-plate arranged vertically above a corresponding tooth of the lower angle-plate, and the teeth of one angle-plate capable of horizontal adjustment so as to project beyond the teeth of the other angle-plate or be flush with it as is desired, a cutter-blade of angular cross-section and composed of two angle-plates constructed in the same manner as those of the guard-plate, and adapted to have a reciprocating motion with reference to the teeth of the said guard-plate, a plate in front of and adapted to protect said cutter-blade, rollers adapted to carry said cutter-blades, and brackets arranged to carry said rollers and capable of vertical adjustment by means of inclined slots in the front and rear guard-plates and finger-bars adapted to protect the points of each set of teeth and joined to the front and rear guard-plate, substantially as described. 5th. In a cutter-bar for mowers, the combination of a guard-plate composed of two angle-plates provided with teeth on the horizontal portion of such angles, each tooth of the upper angle plate arranged vertically above a corresponding tooth of the lower angle-plate, and the teeth of one angle-plate capable of horizontal adjustment so as to project beyond the teeth of the other angle-plate or be flush with it as is desired, a cutter-blade of angular cross-section and composed of two angle-plates constructed in the same manner as those of the guard-plate, and adapted to have a reciprocating motion with reference to the teeth of said guard-plate, a plate in front of and adapted to protect said cutter-blade, rollers adapted to carry said cutter-blades, and brackets arranged to carry said rollers, a driving sheave on the main axle of the mower provided with connections to a sheave adapted to operate a vertical shaft, such vertical shaft provided with a crank-arm and a connecting-rod adapted to be fastened to the cutter-blade, substantially as described.

4—6

**No. 55,599. Cord Holding Mechanism.**

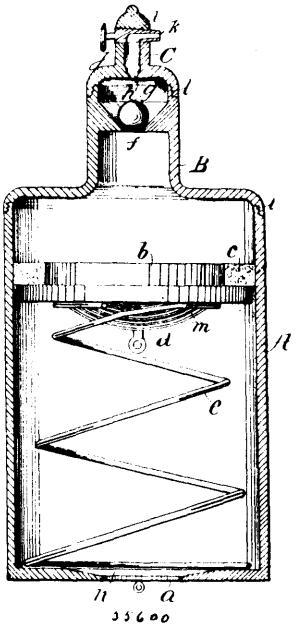
(*Mécanisme d'arrêt pour cordes de faux mantelets.*)




George Walter, Berlin, Prussia, Germany, 10th April, 1897; 6 years. (Filed 22nd March, 1897.)

*Claim.*—A retaining device for blind cords and the like characterized by the combination of a lever secured to a housing through which the cord passes and having its axis of revolution parallel to the surface of the cord and being suspended in front of the same, which lever possesses a projection with cavity in front of the cord whilst the housing has a projection behind the cord, with a spring catch attached to the housing which engages in a slot of the lever for the purpose of holding the lever fast when pressed against the cord, substantially as described.

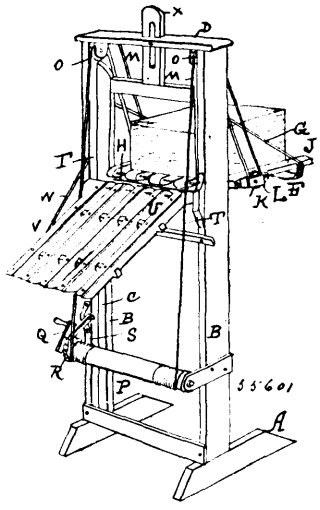
**No. 55,600. Bottle.** (*Bouteille.*)




Edward H. Downing and Arthur A. MacNeil, both of Vancouver, British Columbia, Canada, 12th April, 1897; 6 years. (Filed 23rd March, 1897.)

*Claim.*—1st. A bottle in sections, the lower or body section being of cylindrical form with an aperture in the bottom, substantially as specified. 2nd. In a non-fillable bottle, being composed of three sections, the lower section being of cylindrical form, the neck having a contracted portion and a ball placed therein and the top portion having a stop-cock, the combination of a movable bottom arranged in the cylindrical portion A, a spiral spring $e$ interposed between the said movable bottom and the bottom of the cylinder A, of a depression $n$ in the bottom of the cylinder, and of a swell $m$ on the lower side of the movable bottom having an eye or loop which projects through an opening $a$ to without the bottom of the said cylinder, substantially as and for the purposes hereinbefore set forth.

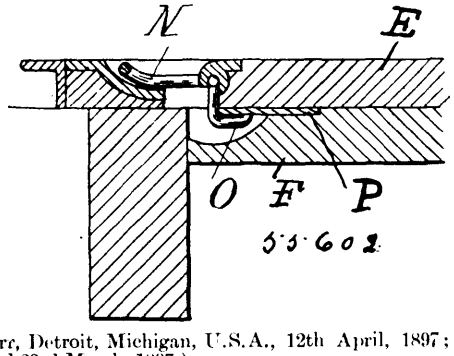
**No. 55,601. Ice Elevator.** (*Elévateur pour la glace.*)




John E. Dell, Paulding, Ohio, U.S.A., 12th April, 1897; 6 years. (Filed 22nd March, 1897.)

*Claim.*—1st. In an elevator, the combination of the frame, the pivoted delivery-platform on one side of the frame, the rod for sustaining the platform when in use, the travelling frame mounted in the main frame, the rigid support carried by the travelling frame, the tilting platform mounted in the travelling frame, mechanism for tilting the platform and moving the frame, and an adjustable stop to limit the movement of the frame and determine when the platfrom shall tilt.

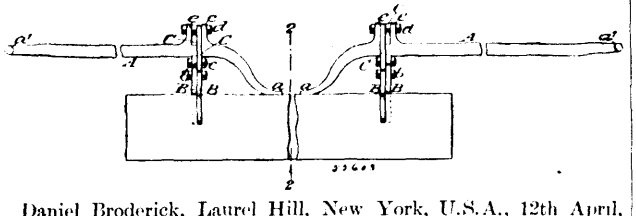
**No. 55,602. Freight-Car.** (*Char de marchandises.*)




John Carr, Detroit, Michigan, U.S.A., 12th April, 1897; 6 years. (Filed 23rd March, 1897.)

*Claim.*—1st. In a freight-car, the combination with the floor, having an opening therein, of a sliding door for said opening, movable longitudinally of the car, a toothed rack secured on the under face thereof, a pinion for operating said door, supported under the car body, and an operating handle for said pinion, movable transversely of the car, substantially as described. 2nd. The combination with a door-opening formed in one side of the car, of a swinging car door hinged adjacent to the door-opening and forming a movable section of the car floor, a false floor below said movable section, the handle N recessed in said movable section, and provided with hooks O, and a keeper in the false floor adapted to interlock with said hooks, substantially as described.

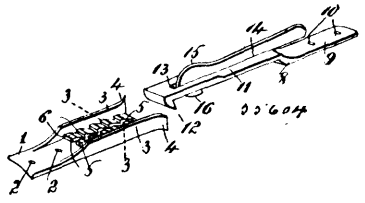
**No. 55,603. Device for Lifting, Moving and Carrying Heavy Bodies.** (*Appareil pour soulever, mouvoir et porter de lourds fardeaux.*)



Daniel Broderick, Laurel Hill, New York, U.S.A., 12th April, 1897; 6 years. (Filed 27th March, 1897.)

*Claim.*—1st. A lifting and carrying device comprising a hand lever, a pair of grappling hooks or tongs, and a pair of toggle links, each link connected by a separate pivot with one of the stocks of said hooks or tongs, and both links being connected with the lever by a single pivot, all in combination substantially as herein set forth. 2nd. A lifting and carrying device comprising a hand lever having a downwardly projecting foot, a pair of grappling hooks or tongs, and a pair of toggle links, each link connected by a separate pivot with one of the stocks of the said hooks or tongs, and both links being connected by a single pivot with an upward projection on the said lever, all in combination substantially as herein set forth.

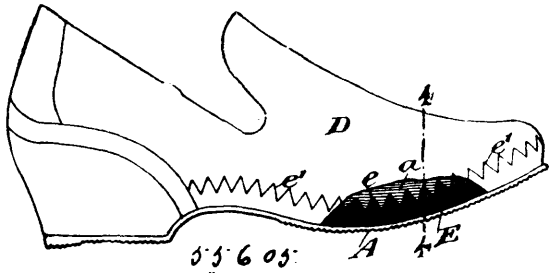
**No. 55,604. Stovepipe-Coupling.**
(*Joint de tuyau de poêle.*)




George Denning Bateman, Pinckneyville, Illinois, U.S.A., 12th April, 1897; 6 years. (Filed 26th March, 1897.)

*Claim.*—1st. In a stovepipe-coupling, a ratchet-plate fixed upon the receiving end of a length of stovepipe, a spring-plate having a hooked end fixed upon the inserting end of the length of stovepipe, and a lever arranged in the spring-plate to disengage the hook on the end thereof from between the teeth of the ratchet-plate. 2nd. In a stovepipe-coupling, a spring-plate having a central slot 13, a hook at one end of said plate and the opposite end of said plate constructed to be fixed upon the inserting end of a 5-length of stovepipe, a ratchet-plate constructed to be fixed upon the receiving end of a length of stovepipe, and a lever secured to the said spring-plate and adapted to pass through the said slot for the purpose of disengaging the hooked end of said spring-plate from said ratchet-plate, substantially as herein specified.

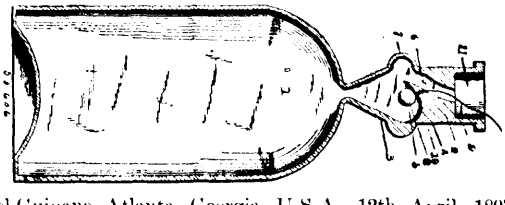
**No. 55,605. Rubber Footwear.**
(*Chaussure en caoutchouc.*)




Joseph M. King, Brooklyn, New York, U.S.A., 12th April, 1897; 6 years. (Filed 26th March, 1897.)

*Claim.*—In a rubber overshoe or boot, the combination with the outsole, the insole, the upper and the upper lining, of a reenforcing strip which runs continuously along the sides of the shoe or boot, and around the toe thereof from one side of the counter to the other, between the outsole and the insole, and between the upper and its lining, the said strip having a sinuous or irregular upper edge, and being united from edge to edge by cementing and vulcanizing with the said parts between which it is interposed, substantially as herein described.

**No. 55,606. Non-refillable Bottle.**
(*Appareil pour empêcher le remplissage des bouteilles.*)

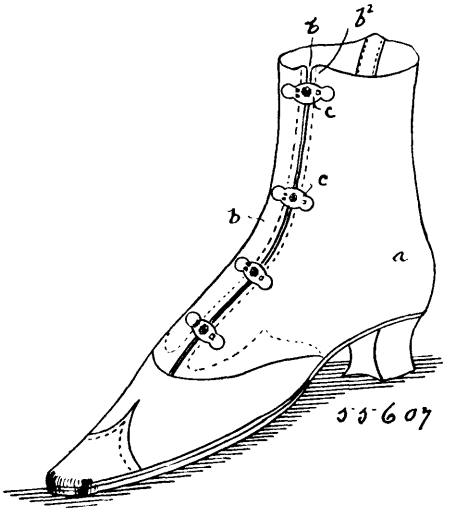


Michael Guinane, Atlanta, Georgia, U.S.A., 12th April, 1897; 6 years. (Filed 19th March, 1897.)

*Claim.*—1st. In a non-refillable bottle, the combination with a bottle neck having a solid inner portion provided with a fluid passage, and said neck being provided with a valve seat below said solid portion, of a ball valve movable in the neck between the seat and solid portion. 2nd. In a non-refillable bottle, the combination with a bottle neck having a lower inner tapering chamber, and provided with an inner solid portion hollowed on its under side, said solid portion being provided with a fluid passage extending from the bottom to the top thereof, of a ball valve in one chamber and adapted

for movement between the seat and the hollow portion of the solid part of the neck. 3rd. In a non-refillable bottle, the combination with a bottle neck having an inner solid portion provided with a passage extending from the top to the bottom thereof, said neck being provided with a valve seat, of a ball valve adapted for movement between the seat and the solid portion, and a wire initially connected to said valve and extending up through the solid portion of the neck but adapted to be detached from the valve after the bottle has been filled.

**No. 55,607. Shoe Fastener.** (*Attache de chaussures.*)

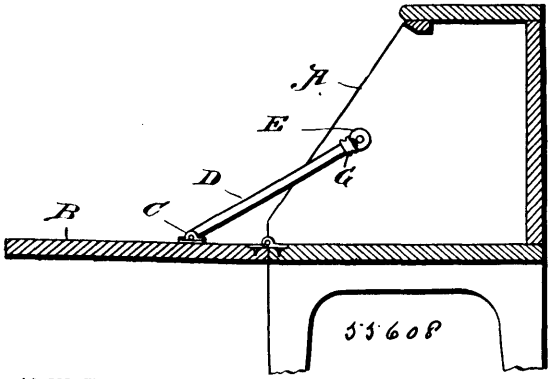



Elizabeth Compton, Campgaw, New Jersey, U.S.A., 12th April, 1897; 6 years. (Filed 22nd March, 1897.)

*Claim.*—1st. A shoe fastener or clasp, consisting of a shield provided at or near each end with a series of parallel slots forming a bridge, a spring-plate on the under side of said shield, a series of prongs on one end of said spring-plate and passing through the parallel slots and over the bridge on one end of the shield, a hook or loop at the other end of the spring-plate and passing through the parallel slots and over the bridge on the other end of the shield, and a hook or eye, adapted to engage the hook or loop of the spring-plate, and a series of prongs on said hook or eye, all said parts, substantially as and for the purposes described. 2nd. A shoe fastener or clasp consisting of a shield provided at or near each end with a series of parallel slots forming a bridge, a spring-plate on the under side of said shield, a series of prongs on one end of said spring-plate and passing through the parallel slots and over the bridge on one end of the shield, a series of notches or corrugations on each of said prongs, a hook or loop at the other end of the spring-plate and passing through the parallel slots and over the bridge on the other end of the shield, and a hook or eye adapted to engage the hook or loop of the spring-plate and provided with a series of notched or corrugated prongs, all said parts, substantially as and for the purposes described.

**No. 55,608. Desk Lid Support.**

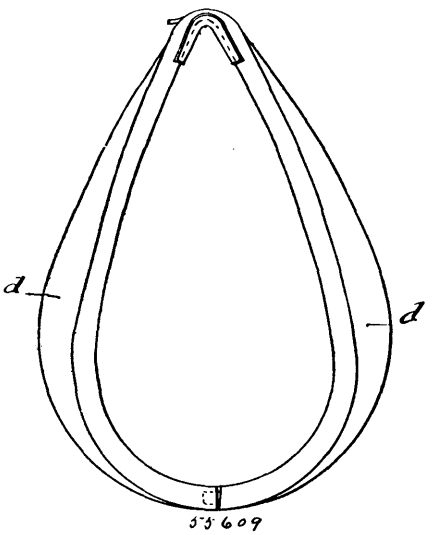
(*Support pour couvercles de pupitres.*)




David W. Tower, Grand Rapids, Michigan, U.S.A., 12th April, 1897; 6 years. (Filed 22nd March, 1897.)

*Claim.*—1st. The combination with the hinged lid of a desk, of a guide-plate connected with the desk-case and having a slotted offset projection provided with opposite bent flanges G, and a lid-sustaining arm slidable under said bent flanges and through said offset projection, said arm being pivoted at one end portion to the desk-lid and having an offset-stop at its other end portion which strikes the slotted offset projection of the guide-plate and firmly supports the desk-lid when the latter is thrown open for use, substantially as described. 2nd. The combination with a desk and desk-lid of a lid-supporting arm pivoted at one end to the lid, a supporting-plate pivoted upon the desk and having a projecting bracket provided with a way or guide for the lid-supporting arm, a stop on one end of the said desk-lid support to engage a projection on the pivoted-plate and serve as a stop, substantially as described.

**No. 55,609. Horse Collar.** (*Collier de cheval.*)

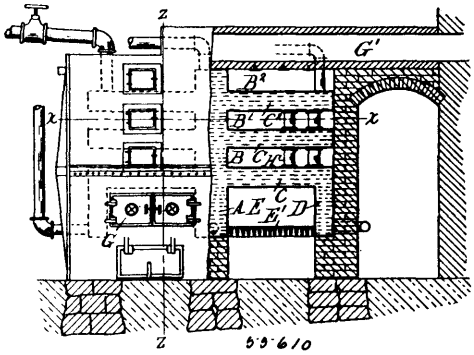



Henry Lawrence Gulline, Granby, Quebec, Canada, 12th April, 1897; 6 years. (Filed 23rd March, 1897.)

*Claim.*—1st. A horse collar having a body portion of leather or like material and a metal rim and hame combined, for the purpose set forth. 2nd. A horse collar having a body portion of leather or like material and a hollow metal rim, for the purpose set forth. 3rd. A horse collar having a body portion of leather or like material and a hollow metal rim and hame combined, for the purpose set forth. 4th. A horse collar having a body portion of leather or like material and a hollow metal rim provided with longitudinal flanges to allow of connection with said body portion, for the purpose set forth. 5th. A horse collar having a body portion of leather or like material, and a hollow metal rim provided with longitudinal flanges to allow of connection with said body portion, and a bearing flange substantially at right angles to such longitudinal flanges, for the purpose set forth. 6th. A horse collar having a body portion of leather or like material, and a hollow metal rim provided with longitudinal flanges to allow of connection with said body portion, and also provided with the usual hame parts or connections, for the purpose set forth. 7th. A horse collar having a body portion of leather or like material, and a hollow metal rim in two parts connected at the throat portion, for the purpose set forth. 8th. A horse collar having a body portion of leather or like material, and a hollow metal rim in two parts, the end of one fitting loosely within that of the other at the throat portion, for the purpose set forth.

**No. 55,610. Hot-Water Circulating Heater.**

(*Calorifère.*)

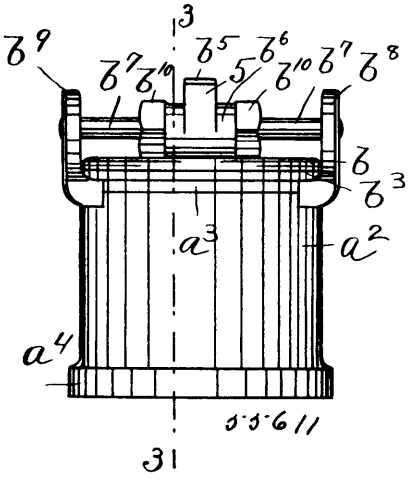



Stephen Taplin, Detroit, Michigan, U.S.A., 12th April, 1897; 6 years. (Filed 23rd March, 1897.)

*Claim.*—1st. The combination with an inclosing casing or setting, of a water heater therein formed with a central chamber extending across and dividing the casing into distinct heating chambers, and a

plurality of laterally extending chambers in each heating chamber communicating each with the central water chamber and situated one above the other, whereby is formed in each heating chamber a plurality of smoke flues communicating with each other alternately at opposite ends of the heating chamber and a smoke exit flue, substantially as described. 2nd. The combination with an inclosing casing or setting, of a water heater therein formed with a narrow central chamber extending across the casing and dividing the latter into distinct heating chambers, and a plurality of horizontal shallow chambers in each heating chamber, each communicating with the central water chamber, and situated one above the other, whereby is formed in each heating chamber a plurality of horizontal smoke flues communicating with each other by means of passages formed in the casing around the ends of the horizontal water chambers, and an exit smoke flue, substantially as described. 3rd. The combination with an inclosing setting or casing, of a water heater therein comprising a vertical narrow central chamber extending across the casing and dividing the latter into distinct heating chambers, and a plurality of shallow horizontal water chambers communicating with the central chamber and extending into each heating chamber one above the other, whereby is formed in each heating chamber a plurality of horizontal smoke flues communicating at their ends, water legs depending from the lowermost horizontal water chambers forming in connection with the horizontal and vertical chambers the sides and top of two furnace chambers.

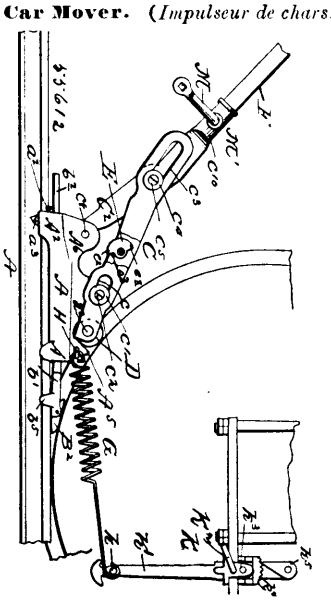
**No. 55,611 Clean-out for Soil Pipes.**
(*Nettoyeur d' égouts.*)




Forest Hooper, Wobury, Mass., U.S.A., 12th April, 1897; 6 years. (Filed 24th March, 1897.)

*Claim.*—1st. In a clean-out apparatus, the combination with a body portion open at its opposite ends and provided with ears substantially diametrically opposite and attached to the sides of the said body portion, of a cover for one of said ends fitted between said ears and provided with a substantially central cam engaging projection, a rod supported by said ears and detachable therefrom, a hub loose on said rod and provided with a cam to engage said projection, and with a nut by which the hub may be turned, substantially as described. 2nd. In a clean-out apparatus, the combination with a body portion open at both its ends and provided with ears substantially diametrically opposite and having holes or openings in them, a cover to close one end of the said body portion and provided with a cam engaging projection, a shaft extended into the holes in said ears above or beyond said cover and removable therefrom, and a hub loose on said shaft and provided with a cam co-operating with said cover, and with a nut, substantially as described. 3rd. In a clean-out apparatus, the combination with a body portion open at its ends and provided with ears substantially diametrically opposite and having holes or openings in them, a cover to close one end of said body portion and provided with a cam engaging projection, a shaft extended into the holes in said ears above or beyond said cover and removable therefrom, and a hub loose on said shaft, a cam attached to said hub and co-operating with the projection on said cover, the said hub being provided with means for the engagement of a tool by which it may be turned on its shaft, substantially as described. 4th. In a clean-out apparatus, the combination with a body portion open at its ends and provided with ears attached to the sides of the body portion substantially diametrically opposite, a cover fitted between said ears to close one end of the said body portion and provided with a cam engaging projection substantially at its centre, a shaft supported in said ears above or beyond said cover and detachable therefrom, a hub loose on said shaft and provided with a cam co-operating with the projection on said cover and a nut attached to the cam hub at one side of the said cam, substantially as described.

**No. 55,612. Car Mover.** (*Impulseur de chars.*)



Henry M. Crippen, Athens, Ohio, U.S.A., 12th April, 1897; 6 years. (Filed 26th March, 1897.)

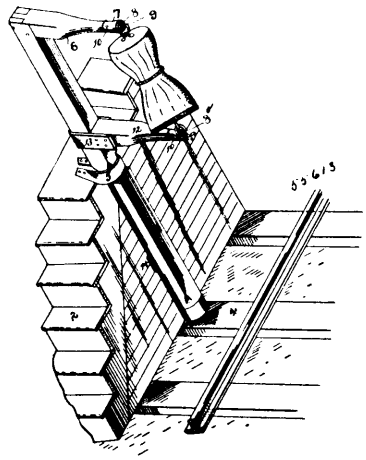
*Claim.*—1st. The combination with the base to seat on and grip the rail, of a lever having a sliding pivotal connection with the upper side of the base and provided at its front end with a roller to engage a car-wheel, the said base having an incline or cam to engage said roller and force the lever rearwardly while its rear end is being raised, substantially as and for the purpose set forth. 2nd. The combination with the rail-grasping base having a cam or inclined lug $A^5$, of the compound lever $C^1$, $C^2$, having an eccentric wheel-engaging roller D, adapted to strike the cam $A^5$, and force the lever section $C^1$ rearwardly when the section $C^2$ is raised, substantially as and for the purpose set forth. 3rd. The combination with the rail-grasping base having the angular bits $a^3$ $a^3$, and separate openings A⁵ leading down thereto from the outer sides of the base, and the compound lever C pivoted to the base and formed of the sections $C^1$, $C^2$, substantially as and for the purpose set forth. 4th. The combination with the base and its rail engaging blades $a^3$ $a^3$, having set-screws $a^2$ $a^2$, of the compound lever C formed of the sections $C^1$, $C^2$, the latter of which has a handle-bar socket $e^{10}$ provided with a combined set-screw M and wrench $M^1$ for the screws $a^3$, substantially as and for the purpose set forth. 5th. The combination in a car mover, with the rail-grasping base having a longitudinal bore and formed with a tongue $a^9$, of the wheel-chock having a spring pressed shank working in said bore and provided with a stop-lug $b^3$, into the outward path of which the tongue $a^9$ is bent. 6th. The combination with the rail-grasping base and the compound operating lever, of a shank sliding in the base and provided at its front end with a loosely pivoted chock $B^2$ in the form of a wedge forked at its rear end to limit its swinging movement, substantially as and for the purpose set forth. 7th. The combination with the rail grasping base and the operating lever, of a clamp for engaging the car truck and a spring connecting the clamp with said base, substantially as described. 8th. The clamping mechanism formed of the clamp proper provided with a rack, and the pivoted spring engaging arm having a pawl to engage said rack and hold the arm at any desired angle to regulate the tension of the spring, substantially as and for the purpose set forth. 9th. The combination with a car mover of a spring connected thereto, a reversible clamp for engagement with the car truck and having a rack provided with oppositely inclined teeth, an arm pivoted to the inner end of the clamp, connected at its lower end to the spring and provided at its upper end with a pawl to engage said teeth and hold the arm at any desired angle. 10th. The combination with the rail-grasping base and the car moving lever mounted thereon, of a spring provided with a pin to connect it to said base, a reversible clamp adapted to engage the car truck and provided with a rack, and an arm pivoted to the clamp, provided with a pawl at its upper end to engage the rack-teeth and having a lateral pin at its lower end to engage the front end of the spring, substantially as described. 11th. A car starter comprising a base having rail-engaging bits and set-screws $a^2$, a compound wheel-engaging lever pivoted to the base and provided with a round socket $e^{10}$ on its member $C^2$, the combined set-screw and wrench M, $M^1$, and the reversible handle-bar having a straight and an angular end to fit into said socket, substantially as and for the purpose set forth.

**No. 55,613. Mail-crane.** (*Appareil à saisir les sacs postaux.*)

Ephraim A. Foster, Port Clinton, Ohio, U.S.A., 12th April, 1897; 6 years. (Filed 29th March, 1897.)

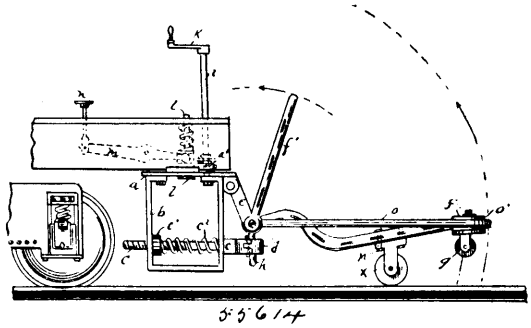
*Claim.*—1st. In a mail-crane, the combination with the platform and the rotatable post or standard, provided with the rubber strip

or block of the upper pouch-holding arm rigidly secured thereto, and the lower vertically-movable arm, substantially as described. 2nd.



In a mail-crane, the combination with the pouch-holding arms, having recesses at the outer ends, of the sleeves, the holders consisting of the spring-metal plates bent over upon themselves at the centre, and the transverse retaining-pins, substantially as described.

**No. 55,614. Car Fender.** (*Défense de chars.*)



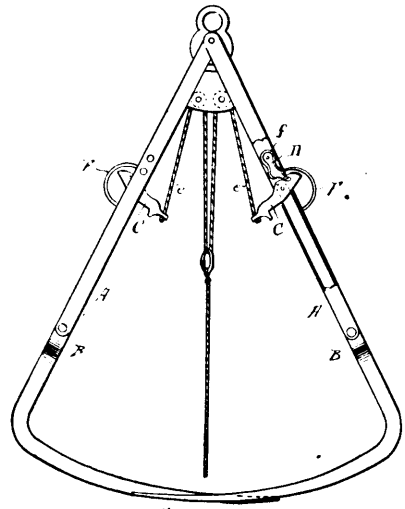
John Gibson and John Watson, both of Toledo, Ohio, U.S.A., 12th April, 1897; 6 years. (Filed 29th March, 1897.)

*Claim.*—1st. A street-car fender comprising a plate extending under and across the forward end of the front platform, a two-part fender pivotally supported from said plate and adapted to fold upwardly against the forward end of the car, a housing projecting downwardly from each end of said plate, a spring-controlled, adjustable horizontal rod in each of said housings, means for connecting said rod with said fender, whereby through the adjustment of said rod, the fender may be supported at any desired height, means for swinging said plate with its attachments horizontally, and means for securing said plate at any position to which it may be swung, substantially as and for the purposes specified. 2nd. In a street-car fender, a tubular frame provided with a suitable netting, corner-blocks secured to the forward angles of said frame having rounded corners and grooved rims, in combination with an elastic-guard (as an india-rubber hose) extending from the rear of said fender around its outer edge and in the grooves of said corner-blocks, substantially as and for the purpose specified. 3rd. In a street-car fender, a tubular frame provided with a suitable netting, corner-blocks secured to the forward angles of said frame having rounded corners and grooved rims, an elastic guard extending from the rear of said fender around its outer edge and in the grooves of said corner-blocks, in combination with suitable trucks or wheels attached to said tubular frame as a means of operating the fender on curves, substantially as and for the purpose described.

**No. 55,615. Hay-fork.** (*Fourche à foin.*)

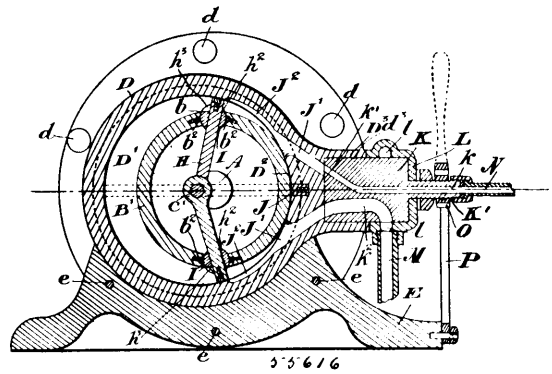
Overton H. Lewis, Richards, Missouri, U.S.A., 12th April, 1897; 6 years. (Filed 29th March, 1897.)

*Claim.* 1st. The combination with a horse hay-fork having arms between which are rigidly secured stops, said arms carrying pivoted tines with catches which engage the stops, of spring-metal shields F which are bent at one of their ends to embrace the stops, the other part of the shields being shaped to extend outwardly beyond the arms and below the stops, the free ends engaging the outer edges of the arms, substantially as shown and for the purpose set forth. 2nd. In combination with a horse hay-fork comprising a frame made up of parallel bars, tines pivoted between said parallel bars or plates, the upper end of each tine carrying a catch, of stops rigidly secured between the parallel bars or plates and shaped to present inwardly curved side edges, and a shield F made up of a single strip of flat spring-metal bent or looped at one end to conform to the configuration of the stop, as shown, the other part of said strip being



curved in the segment of a circle and the outer end spread to engage the outer edges of the parallel bars below the upper end of the tine, substantially as set forth, whereby the shield will give when the tines impinge against the same.

**No. 55,616. Rotary Engine.** (*Machine rotatoire.*)

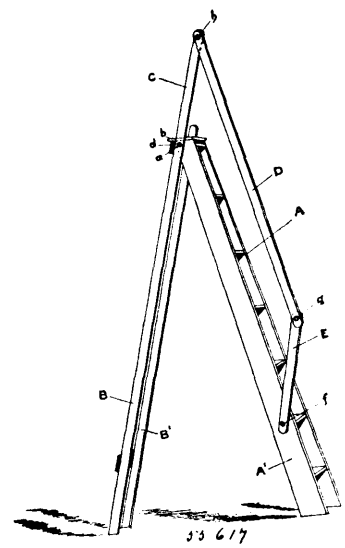


Eber Blake Tree, Woodstock, and Robert Henry Eldon, Toronto, both in Ontario, Canada, 12th April, 1897; 6 years. (Filed 25th March, 1897.)

*Claim.*—1st. In a rotary engine, the main driving shaft, the end disc and ring piston secured to same concentric to the shaft, a suitable casing, the disc plates secured to each side thereof, a pin located eccentrically to the shaft and secured on the opposite side to that on which the shaft is connected, a chamber in the casing concentric to the pin and against which the ring piston abuts at one side, wings journalled on the pin and extending through slots in the ring piston into the concentric chamber, and inlet and exhaust ports located on each side of the portion of the ring piston which abuts the inner periphery of the chamber, as and for the purpose specified. 2nd. In a rotary engine, the main driving shaft, the end disc and ring piston secured to same concentric to the shaft, a suitable casing, the disc plates secured to each side thereof, a pin located eccentrically to the shaft and secured to the opposite side to that on which the shaft is connected, a chamber in the casing concentric to the pin, a recess between the ports concentric to the ring piston and in which it fits, wings journalled on the pin and extending through slots in the ring piston into the concentric chamber, and inlet and exhaust ports located on each side of the portion of the ring piston which abuts the inner periphery of the chamber, as and for the purpose specified. 3rd. In a rotary engine, the main driving shaft, the end disc and ring piston secured to same concentric to the shaft, a suitable casing, the disc plates secured to each side thereof, a pin located eccentrically to the shaft and secured on the opposite side to that on which the shaft is connected, a chamber in the casing concentric to the pin and against which the ring piston abuts at one side, and spring-held packing situated between the ports and abutting against the ring piston, wings journalled on the pin and extending through slots in the ring piston into the concentric chamber, and inlet and exhaust ports located on each side of the portion of the ring piston which abuts the inner periphery of the chamber, as and for the purpose specified. 4th. In a rotary engine, the main driving shaft, the end disc and ring piston secured to same concentric to the shaft, a suitable casing, the disc plates secured to each side thereof, a pin locat-

ed eccentrically to the shaft and secured on the opposite side to that on which the shaft is connected, a chamber in the casing concentric to the pin and against which the ring piston abuts at one side, a plate abutting the ring piston provided with a central aperture, wings journalled on the pin and extending through slots in the ring piston into the concentric chamber, and inlet and exhaust ports located at each side of the portion of the ring piston which abuts the inner periphery of the chamber, as and for the purpose specified. 5th. In a rotary engine, the main driving shaft, the end disc and ring piston secured to same concentric to the shaft, a suitable casing, the disc plates secured to each side thereof, a pin located eccentrically to the shaft and secured on the opposite side to that on which the shaft is connected, a chamber in the casing concentric to the pin and against which the ring piston abuts at one side, a plate abutting the ring piston provided with a central aperture, ring packing located in the edges of the central portion of the casing and abutting the inner plates, wings journalled on the pin and extending through slots in the ring piston into the concentric chamber, and inlet and exhaust ports located at each side of the portion of the ring piston which abuts the inner periphery of the chamber, as and for the purpose specified. 6th. In a rotary engine, the main driving shaft, the end disc and ring piston secured to same concentric to the shaft, a suitable casing, the disc plates secured to each side thereof, a pin located eccentrically to the shaft and secured on the opposite side to that on which the shaft is connected, a chamber in the casing concentric to the pin and against which the ring piston abuts at one side, wings journalled on the pin and extending through slots in the ring piston into the concentric chamber, side packing for the wings and inlet and exhaust ports located on each side of the portions of the ring piston which abuts the inner periphery of the chamber as and for the purpose specified. 7th. In a rotary engine, the main driving shaft, the end disc and ring piston secured to same concentric to the shaft, a suitable casing, the disc plates secured to each side thereof, a pin located eccentrically to the shaft and secured on the opposite side to that on which the shaft is connected, a chamber in the casing concentric to the pin and against which the ring piston abuts, at one side, wings journalled on the pin, slots in the ring piston, rollers located in the slots and journalled at the ends in the rotating plates of the casing, through which the wings extend into the concentric chamber and inlet and exhaust ports located on each side of the portion of the ring piston which abuts the centre of the chamber as and for the purpose specified. 8th. In a rotary engine, the main driving shaft, the end disc and ring piston secured to same concentric to the shaft, a suitable casing, the disc plates secured to each side thereof, a pin located eccentrically to the shaft and secured on the opposite side to that on which the shaft is connected, a chamber in the casing concentric to the pin and against which the ring piston abuts at one side, wings journalled on the pin, slots in the ring piston, rollers located in the slots and journalled at the ends in the rotating plates of the casing through which the wings extend into the concentric chamber, side packing for the wings, and inlet and exhaust ports located on each side of the portion of the ring piston, which abuts the inner periphery of the chamber as and for the purpose specified. 9th. In a rotary engine, the main driving shaft, the end disc and ring piston secured to same concentric to the shaft, a suitable casing, the disc plates secured to each side thereof, a pin located eccentrically to the shaft and secured on the opposite side to that on which the shaft is connected, a chamber in the casing concentric to the pin and against which the ring piston abuts at one side, wings journalled on the pin and extending through slots in the ring piston into the concentric chamber, inlet and exhaust ports located on each side of the portion of the ring piston, which abuts the inner periphery of the chamber, an extension in portion of the casing, a valve journalled in same and provided with inlet ports and outlet ports designed to register with the ports in the casing and means for reversing the position of these ports as and for the purpose specified. 10th In a rotary engine, the main driving shaft, the end disc and ring piston secured to the same concentric to the shaft, a suitable casing, the disc plates secured to each side thereof, a pin located eccentrically to the shaft and secured on the opposite side to that on which the shaft is connected, a chamber in the casing concentric to the pin and against which the ring piston abuts at one side, wings journalled on the pin and extending through slots in the ring piston into the concentric chamber, inlet and exhaust ports located on each side of the portion of the ring piston, which abuts the inner periphery of the chamber, an extension to the central portion of the casing, the valve journalled in same and provided with inlet port and outlet ports designed to register with the ports in the casing, a cap for the valve, an annular passage way communicating with the outlet port and means for reversing the position of the ports as and for the purpose specified. 11th. In a rotary engine, the main driving shaft, the end disc and ring piston secured to same concentric to the shaft, a suitable casing, the disc plates secured to each side thereof, a pin located eccentrically to the shaft and secured on the opposite side to that on which the shaft is connected, a chamber in the casing concentric to the pin and against which the ring piston abuts at one side, wings journalled on the pin and extending through slots in the ring piston into the concentric chamber, inlet and exhaust ports located on each side of the portion of the ring piston, which abuts the inner periphery of the chamber and concentric passage ways forming the persphery of the chamber and extending on each side of the ports as and for the purpose specified.

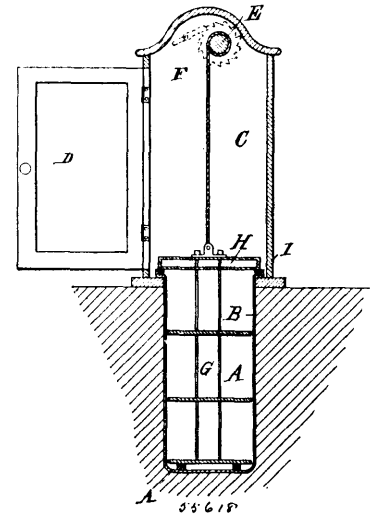
**No. 55,617. Step Ladder.** (*Echelle à marches.*)




William M. Pearse and Thomas Lawrence Morecroft, assignees of George Henry Cliff, all of Johannesburg, South African Republic, South Africa, 13th April, 1897; 6 years. (Filed 30th March, 1897.)

*Claim.*—1st. In a step ladder, the combination of the steps or front portion A, the struts B, B¹, the extension piece or continuation C of one of the said struts, the pivoted rail D and pivoted arm or support E, substantially as described. 2nd. In a step ladder, the combination of the steps or front portion of the step ladder cap A, the projecting ledge *b* formed on the top step, the back struts B, B¹, the cross-bar or brace *d* of the struts B, B¹, the clamping bolt and pin or pivot *a*, the extension piece or continuation C of one of the struts, the pin or pivot *h*, the rail D, the pin or pivot *g* the arm or support E and the clamping bolt and pin or pivot *f*, substantially as set forth.

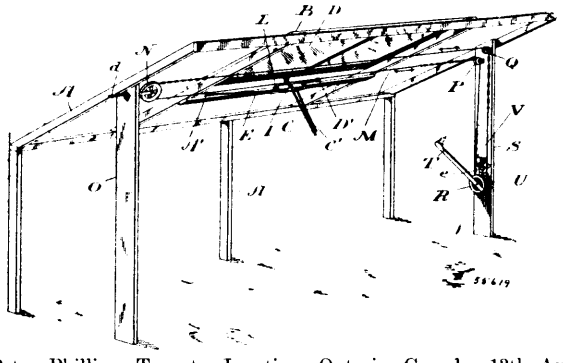
**No. 55,618. Refrigerator.** (*Refrigérateur.*)




Jonas Hillman, Leamington, and John E. Agla, Essex, both in Ontario, Canada, assignees of James N. Dugaw, Detroit, Michigan, U.S.A., 12th April, 1897; 6 years. (Filed 23rd March, 1897.)

*Claim.*—1st. In a cache, the combination of the air and watertight well, the well house containing the hoisting device, and the food supporting rack suspended therefrom, substantially as described. 2nd. In a cache, the combination of the tight well, the well house above the same, the windlass supported on top of the well house, the food supporting rack suspended from the windlass and the air chamber H on top of the food rack forming the cover of the well, substantially as described. 3rd. In a cache, the combination of the metallic vessel B set in the ground, the well house C supported thereupon above the ground, the windlass E and the food supporting rack G, supported from said windlass and adapted to be drawn up into the house, and the air chamber H formed on top of the food supporting rack and adapted to form a cover for the vessel B and supporting the rack in position, substantially as described.

**No. 55,619. Ventilator.** (*Ventilateur.*)



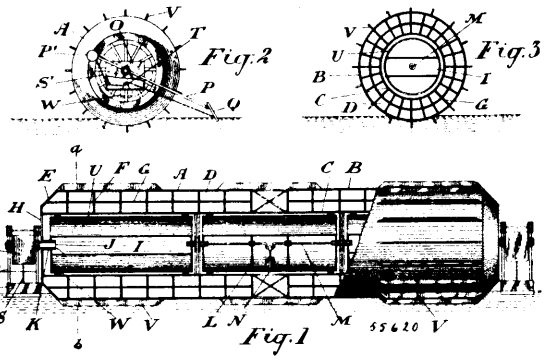
Peter Phillips, Toronto Junction, Ontario, Canada, 13th April, 1897; 6 years. (Filed 29th March, 1897.)

*Claim.*—1st. In apparatus of the class described, an endless cable supported in proximity to a ventilator, in combination with a rod connected to the said ventilator, guide pulleys supported on the framing of the roof, and cords connected respectively to the upper and lower ends of the said rod, passing round the said guide pulleys and attached to the endless cable so that one cord is adapted to raise the ventilator and the other to close is, substantially as and for the purpose specified. 2nd. In apparatus of the class described, an endless cable supported in proximity to a ventilator, in combination with a rod connected to the said ventilator, guide pulleys supported on the framing of the roof, cords connected respectively to the upper and lower ends of the said rod, passing round the said guide pulleys and attached to the endless cable so that one cord is adapted to raise the ventilator and the other to close it, and a suitably-supported operating drum for the said cable provided with a handle and a holding dog or catch, substantially as and for the purpose specified. 3rd. In apparatus of the class described, an endless cable supported in proximity to a ventilator, in combination with a rod connected to the said ventilator, guide pulleys supported on the framing of the roof, cords connected respectively to the upper and lower ends of the said rod, passing round the said guide pulleys and attached to the endless cable so that one cord is adapted to raise the ventilator and the other to close it, a suitably-supported operating drum for the said cable provided with a handle and a holding dog or catch, and an adjustable tightening pulley, suitably supported, round which the cable passes, substantially as and for the purpose specified. 4th. In apparatus of the class described, a ventilator and a rod pivoted to the ventilator, in combination with a guide frame journalled on a suitable bearing connected to the framing of the roof and provided with a guide-way for the aforesaid rod, two guide pulleys journalled in said frame, an operating cable supported in proximity to said frame, and cords connected respectively to the upper and lower ends of the said rod, passing round the said guide pulleys and attached to the cable so that one cord is adapted to raise the ventilator and the other to close it, substantially as and for the purpose specified. 5th. In apparatus of the class described, a ventilator and a rod pivoted to the ventilator, in combination with a guide frame journalled on a suitable bearing connected to the framing of the roof and provided with a guide-way for the aforesaid rod, two guide pulleys journalled in said frame, an operating cable supported in proximity to said frame, cords connected respectively to the upper and lower ends of the said rod, passing round the said guide pulleys and attached to the endless cable so that one cord is adapted to raise the ventilator and the other to close it, and a suitably-supported operating drum for the said cable, provided with a handle and a holding dog or catch, substantially as and for the purpose specified. 6th. In apparatus of the class described, a ventilator and a rod pivoted to the ventilator, in combination with a guide frame journalled on a suitable bearing connected to the framing of the roof and provided with a guide-way for the aforesaid rod, two guide pulleys journalled in said frame, an operating cable supported in proximity to said frame, cords connected respectively to the upper and lower ends of the said rod, passing round the said guide pulleys and attached to the endless cable so that one cord is adapted to raise the ventilator and the other to close it, a suitably-supported operating drum for the said cable, provided with a handle and a holding dog or catch, and an adjustable tightening pulley, suitably supported, round which the cable passes, substantially as and for the purpose specified.

**No. 55,620. Marine Vessel.** (*Vaisseau marin.*)

Frederick Augustus Knapp, Prescott, and George Goodwin, Ottawa, both in Ontario, Canada, 13th April, 1897; 6 years. (Filed 16th March, 1897.)

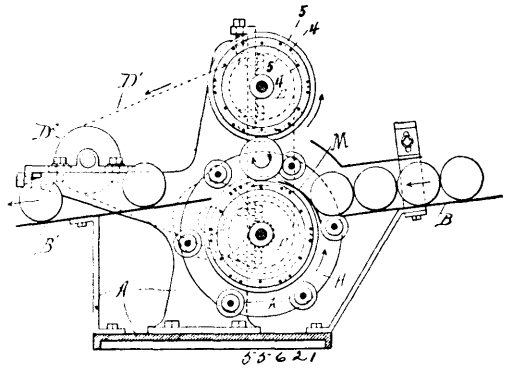
*Claim.*—1st. In a vessel of the class described, a rotatable outer hull comprising two cylinders substantially concentric to each other and having an annular air space between them. bulkheads subdividing said air space into water-tight compartments, the inner cylinder being of such a size that its lower side is above the water-line, stationary compartments inside of said rotatable hull, and mechanism for rotating the rotatable hull around said stationary compartments, substantially as described. 2nd. In a vessel of the class described,



a rotatable outer hull comprising two substantially concentric cylinders confining an air space between them, the air space inclosed by the outer cylinder entirely surrounding and protecting the inner cylinder, bulkheads subdividing said air space into water-tight compartments, in combination with stationary compartments suitably supported inside of said rotatable hull, and mechanism constructed and arranged to rotate said rotatable hull around the stationary compartments, substantially as described. 3rd. In a vessel of the class described, a series of stationary compartments, one of which has a driving shaft therein and suitable mechanism for driving said shaft, a rotatable outer hull surrounding said stationary compartments, means as the spiders connecting said outer hull with said driving shaft, a hollow shaft at the outer end of each of the outer stationary compartments, and means as the spiders forming connections between said rotatable hull and said hollow shafts, whereby the outer hull is rotated around the stationary compartments when the driving shaft is rotated, substantially as described. 4th. In a vessel of the class described, a rotatable outer hull comprising two substantially concentric cylinders inclosing an air space between them, the air space inclosed by the outer cylinder entirely surrounding and protecting the inner cylinder, stationary compartments inside of said outer hull and spiders connecting said compartments and the outer hull, the outer bearing of each of said compartment being formed by a hollow shaft journalled in said spiders, a central stationary compartment also located inside of said rotatable hull, a central driving shaft connected to the outer hull by one or more of said spiders and located in one of said stationary compartments, and means for operating said shaft and thereby rotating the outer hull around the stationary compartments, substantially as described. 5th. In a vessel of the class described, a rotatable flanged outer hull made in two sections connected by open truss work, in combination with two stationary compartments located inside of said outer hull, swinging from spiders connected to the rotatable hull, the outer bearing of each compartment being formed by a hollow shaft rigidly connected to the said hull and journalled in the end spider, a central stationary compartment also swinging from spiders connected to the rotatable hull, a central shaft on one of said compartments rigidly connected to one or more of the said spiders, and means located in the said central compartment for rotating the said shaft, thereby rotating the outer hull around the stationary compartments, substantially as and for the purpose specified. 6th. In a vessel of the class described, a rotatable outer hull made in two sections connected together by open truss work, each section comprising two cylinders inclosing an annular air space, the inner cylinder being of such a diameter that its lower side is above the water-line, bulkheads dividing the air space into water-tight compartments, a series of longitudinal flanges connected to the outside of the hull, interior stationary compartments and mechanism in one of said compartments for driving said rotatable outer hull around said stationary compartments, substantially as and for the purpose specified. 7th. In a vessel of the class described, the combination of a hull comprising cylinders B and C, inclosing an air space between them, flanges V connected to the outer of said cylinders, bulkheads E, F and G dividing the air space between said cylinders into water-tight compartments, stationary compartments I and L, shafts J and M, spiders connecting said shafts and the hull, and means for driving one of said shafts, with pilot houses O, drags Q, and means as the windlasses and chains for operating said drags, substantially as described. 8th. In a vessel of the class described, the hull A made in two sections connected together by open truss work, each section comprising two cylinders inclosing an air space D, the cylinder C being of such a diameter that its lower side is above the water-line, bulkheads E closing the ends of the air space, bulkheads F and G subdividing the air space, and a series of longitudinal flanges connected to the outside of the hull, substantially as and for the purpose specified. 9th. In a vessel of the class described, a rotatable outer hull comprising two cylinders having an air space inclosed between them, bulkheads dividing said air space into water-tight compartments, a series of stationary compartments inside of said rotatable hull, a driving shaft in one of said stationary compartments and mechanism for operating the same, spiders connecting said shaft with the outer hull, a pilot house suitably supported at

the outer end of each of the outer stationary compartments, drag-rudders supported by said pilot houses, and mechanism for operating said drag-rudders, substantially as described.

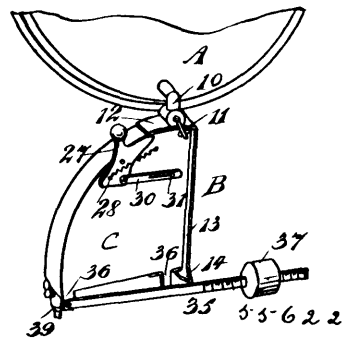
**No. 55,621. Crimping Machine.** (*Machine à gaufrer.*)




Edward P. Holden, Chicago, Illinois, U.S.A., 14th April, 1897; 6 years. (Filed 25th January, 1897.)

*Claim.*—1st. In a crimping machine, the combination of two parts having proximite surfaces positively moving in opposite directions between which the can is rolled, at least one of said surfaces provided with a crimping flange, and at least one surface positively acting to revolve the can, substantially as described. 2nd. In a crimping machine the combination of two rotary discs between the which the can to be crimped is rolled, both said discs bearing upon the flange to be crimped, and at least one of them positively acting to revolve the can, substantially as described. 3rd. In a crimping machine, the combination with two rotary discs between which the can is rolled, both discs bearing on the flange to be crimped and at least one of them positively acting to revolve the can, of mechanism for carrying the can to a point between the two discs, substantially as described. 4th. In a crimping machine, the combination of two discs arranged to revolve in a vertical plane and between which the can to be crimped is rolled, both discs bearing on the flange to be crimped, and at least one of them positively acting to revolve the can, substantially as described. 5th. In a crimping machine, the combination of two sets of rotary discs between which the can is rolled, both sets bearing on the flanges to be crimped, and at least one of the sets positively acting to revolve the can, substantially as described. 6th In a crimping machine, the combination of two sets of discs in vertical planes between which the can is rolled, at least one set acting to revolve the can, said sets of discs respectively bearing simultaneously on the flanges of the opposite ends to be crimped, substantially as described. 7th. In a crimping machine, the combination of two sets of discs in vertical planes between which the can is rolled, at least one set acting to revolve the can, said sets of discs respectively bearing simultaneously on the flanges of the opposite ends to be crimped, and mechanism for carrying the can to a point between the two sets of discs, substantially as described. 8th. In a crimping machine, the combination of two sets of rotary discs, both sets of discs bearing on the flanges to be crimped, and at least one set positively acting to revolve the can, and mechanism for having an intermittent motion for carrying the can to a point between the discs, substantially as described. 9th. In a crimping machine, the combination of two sets of rotary discs revolving in vertical planes both sets bearing on the flanges to be crimped, and at least one set positively acting to revolve the can, and another disc revolving also in a vertical plane, the latter carrying means for elevating the cans to a point between the two sets of discs, substantially as described. 10th. In a crimping machine, the combination of two sets of rotary discs between which the can is rolled, revolving in a vertical plane, and another disc also revolving in a vertical plane, the latter carrying arms provided with rollers adapted to engage the can and elevate it to a point between the two sets of discs, substantially as described. 11th. In a crimping machine, the combination of the rotary discs between which the can is rolled, at least one of the discs provided with a separate crimping lining or flange adapted to bear upon and crimp the can, substantially as described. 12th. In a crimping machine, the combination of two rotary discs between which the can is rolled, at least one of the discs provided with a steadying flange to hold the can in place, and at least one disc positively acting to revolve the can substantially as described. 13th. In a crimping machine, the combination of two discs between which the can is rolled, at least one of the discs provided with a crimping flange and a steading flange to hold the end of the can in place, and at least one disc positively acting to revolve the can, substantially as described. 14th. In a crimping machine, the combination of two discs between which the can is rolled, at least one of the discs provided with a steadying gauge made laterally adjustable thereon, substantially as described. 15th. In a crimping machine, the combination of two sets of rotary discs between which the can is rolled, at least one disc for each end of the can provided with a crimping flange or lining and at least one set positively acting to revolve the can, substantially as described. 16th. In a crimping machine, the combination of two sets of rotary discs between which the can is rolled, and at least one disc for each end of the can provided with a steadying flange laterally adjustible thereon, substantially as described. 17th. In a crimping machine the combination of two rotary discs revolving in vertical planes, a chute for feeding the cans to the machine, a guard plate against which the lower can strikes, and another disc revolving in a vertical plane carrying arms adapted to engage the cans sucessively and elevate them to a point between the discs, substantially as described. 18th. In a crimping machine, the combination of two rotary discs between which the can is rolled, at least one of said discs adjustible toward or from the other, and at least one disc positively acting to revolve the can, substantially as described. 19th. In a crimping machine, the combination of two sets of rotary discs, one of said sets adjustible toward or from the other set, and at least one set positively acting to revolve the can substantially as described.

**No. 55,622. Weighing or Measuring Machine.**
(*Machine à peser et mesurer.*)

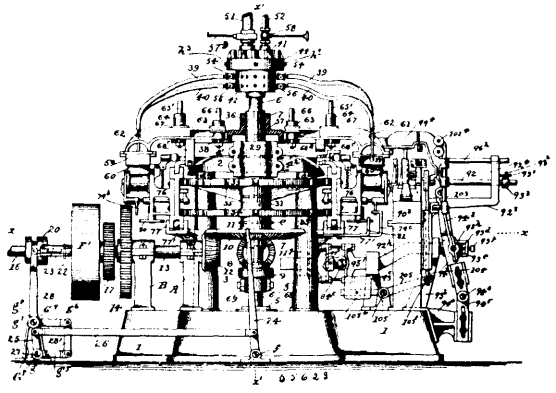



Samuel Paxter Mackey, Ridgefield, Washington, U.S.A., 14th April, 1897; 6 years (Filed 23rd January, 1897.)

*Claim.*—1st. The combination with a storage vessel having a valve-controlled outlet, of a rocking measuring receptacle below the said outlet and engaging the valve thereof to operate it, and a locking-latch carried by the receptacle and engaging a fixed portion of the supporting frame to lock the receptacle in a receiving position, substantially as described. 2nd. The combination with a storage vessel, and a valve controlling its outlet, of a weighing or measuring receptacle supported at one edge to rock beneath the storage vessel, the said measuring vessel being provided with an inlet adapted for registry with the outlet of the storage vessel and having connection with the valve of the latter for operating it, a locking-latch controlling one position of the measuring receptacle, said latch being carried by the receptacle and engaging a fixed support, and a scale-beam secured to the lower part of the receptacle and having a movable balance thereon, said beam being tripped by the weight of the contents of the receptacle, substantially as described. 3rd. The combination with a storage vessel provided with an outlet and a valve controlling the same, of a measuring receptacle having a rocking support beneath the storage vessel, having a connection with the valve of the storage vessel and being also provided with an inlet adapted for registry with the outlet of the said storage vessel, a spring-controlled latch on the receptacle, a keeper on a fixed support and adapted for engagement with the latch at one position of the measuring receptacle, a scale-beam carried by the receptacle and tripped by the movement of the said receptacle, and an outlet through which the contents of the receptacle may escape, as and for the purpose set forth. 4th. The combination with a storage vessel divided into compartments, each compartment being provided with a valve-controlled opening, and a frame extending along the bottom of the vessel, of a measuring and weighing device, comprising a receptacle having a sliding and rocking movement on the frame, a guide carried by the said receptacle adapted for engagement with keepers located beneath each compartment, a connection between the receptacle and the cut-off of the said vessel, a locking device, and a scale-beam operated by the weight of the contents of the receptacle, substantially as set forth. 5th. The combination with a storage vessel having an outlet in its bottom, of a rocking measuring receptacle below the storage vessel and provided with an inlet-opening, a valve secured to the receptacle adjacent to its inlet-opening and working in guideways in the bottom of the storage vessel, and a latch carried by the receptacle for holding the receptacle in a receiving position, substantially as described. 6th. The combination with a storage vessel having a valve-controlled outlet, of a frame below the vessel, a measuring receptacle mounted on the frame to rock and connected with the valve thereof, a pivoted and spring-pressed latch on the receptacle and engaging a keeper on the frame, and a link pivoted to the latch and having a sliding connection with the receptacle, substantially as described.

## No. 55,623. Can Body Soldering Machine.

(*Machine à souder les boîtes en fer-blanc.*)



Henry Schaake, San Francisco, California, U.S.A., 14th April, 1897; 6 years. (Filed 19th January, 1897.)

*Claim.*—1st. In a can-body soldering-machine, the combination with the moving horns or mandrels, of the feed device for can-body blanks, a primary forming device which receives the blanks from the feed device and rolls the same so as to provide partially-formed can-bodies and mechanism for delivering the rolled can-body blanks to the horns or mandrels. 2nd. In a can-body blank soldering machine, the combination with the moving horns or mandrels, of a primrry forming device which receives the can-body blanks and rolls the same so as to remove the spring therefrom and provide partially-formed bodies, and mechanism for delivering the partially-formed bodies from the forming device to the horns or mandrels. 3rd. In a can-body soldering machine, the combination with the longitudinally-traveling horns or mandrels, of the feed device for the can-body blanks, a movable forming device which receives the can-body blanks from the feed device and rolls the same, so as to provide partially-formed can-bodies, mechanism for conveying the blanks from the feed device to the forming device, and mechanism for delivering the partially-formed can-bodies from the forming device to the horns or mandrels. 4th. In a soldering-machine, the combination with the continuously traveling horns or mandrels, of a device for receiving the can-body blank and rolling the same so as to remove the spring from the metal and provide an unfastened or partially-formed can-body, and mechanism for delivering the partially-formed can-body from the forming device to a horn or mandrel. 5th. In a can-soldering machine, the combination with the continuously moving mandrels or horns, of mechanism for supplying can-bodies to the traveling mandrels or horns during their continuous movement, and the continuously and horizontally moving soldering-irons which bear upon the can-body during a portion of the travel of the horns or mandrels. 6th. In a soldering-machine, the combination with the longitudinally and continuously moving horns or mandrels, of the soldering irons moving continuously in a horizontal circle which bear upon the can-bodies during a portion of the longitudinal travel of the horns or mandrels and mechanism for imparting a reciprocal movement to the soldering-irons during the horizontal travel thereof. 7th. In a soldering machine, the combination with the longitudinally and continuously moving horns or mandrels of the soldering irons moving continuously in a horizontal circle and the movable solder-supplying mechanism. 8th. In a soldering-machine, the combination with the longitudinally and continuously moving mandrels or horns of mechanism for supplying can-bodies to the said horns or mandrels during the continuous movement thereof, the horizontally and continuously moving soldering irons which bear upon the can-body during a portion of the longitudinal travel of the horns or mandrels, and mechanism for imparting a reciprocating movement to the soldering-irons while they bear upon the can-bodies. 9th. In a soldering-machine, the combination with the horns or mandrels of mechanism for imparting continuous longitudinal travel thereto, primary forming mechanism which receives the can-body blanks and rolls the same so as to remove the spring therefrom and provide unfastened can-bodies, mechanism for delivering the bodies thus formed to the horns or mandrels, and the horizontally and continuously moving soldering-irons which bear upon the can-bodies during a portion of the longitudinal travel of the horns or mandrels. 10th. In a soldering-machine, the combination with the longitudinally and continuously moving horns or mandrels, of mechanism for receiving the can-body blanks and rolling or forming the same so as to form partially-formed or unfastened can-bodies, devices for imparting longitudinal movement to the forming mechanism so as to cause the same to move in unison with the mandrels, and a horizontal movement thereto so as to deliver the partially-formed bodies to the travelling mandrels, and the horizontally and continuously-moving soldering-irons which bear upon the can-bodies during a portion of the longitudinal travel of the mandrels or horns. 11th. In a soldering-machine, the combination with the longitudinally and continuously moving horns or mandrels, of a longitudinally and horizontally reciprocating can-body feed device, and continuously horizontally moving soldering-irons which bear upon the can-bodies during a portion of the longitudinal travel of the horns or mandrels. 12th. In a soldering-machine, the combination with the longitudinally and continuously moving horns or mandrels, of a longitudinally and horizontally reciprocating device for forming the can-body blanks and delivering the same to the mandrels or horns while in motion, horizontally and continuously moving soldering-irons which bear upon the can-bodies during a portion of the longitudinal movement of the horns or mandrels, and mechanism for imparting a reciprocating motion to the soldering-irons while in contact with the can-bodies. 13th. In a soldering-machine, the combination with the horns or mandrels, of mechanism for imparting longitudinal travel thereto, the soldering-irons, mechanism for imparting a horizontal movement thereto, devices for reciprocating the soldering-irons while bearing upon the can-bodies during a portion of the longitudinal travel of the horns or mandrels, and the longitudinally and horizontally reciprocating device for forming the can-body blanks and delivering the formed or unfastened can-bodies to the travelling horns or mandrels. 14th. In a soldering-machine, the combination with the moving mandrels or horns, of an independent device which receives the can-body blanks and rolls the same so as to remove the spring from the metal and automatically deliver the rolled can-body blanks to the mandrels of the machine. 15th. The combination in a soldering-machine, of a device for receiving the can-body blanks, rolling the same so as to take the spring from the metal and provide unsoldered or unfastened bodies, and of mechanism for automatically delivering the partially-formed can-bodies to the soldering mechanism. 16th. In a can-body soldering-machine, the combination with the movable horns or mandrels, of a movable device for receiving the can-body blanks and rolling the same so as to remove the spring from the metal and provide partially-formed can-bodies, and of mechanism for delivering the partially-formed can-bodies to the movable horns or mandrels. 17th. In a soldering-machine, the combination with the travelling horns or mandrels, of the feed device for the can-body blanks, a device for receiving the can-body blanks from the can-body blank feed, rolling the blanks so as to relieve the metal from the spring thereof and provide unsoldered can-bodies, and mechanism for delivering the rolled can-bodies to the horns or mandrels. 18th. The combination with a soldering-machine, of a movable device for receiving the can-body blank and rolling the same so as to relieve the metal of its spring and provide an unfastened or partially-formed can-body, and of mechanism for delivering the partially-formed can body to the seamer-horn. 19th. In a soldering-machine, the combination with the longitudinally and continuously moving horns or mandrels, of mechanism for delivering the can-body blanks to the horns or mandrels, the solder-feed, longitudinally and horizontally-reciprocating flux-applying device, and the horizontally and continuously moving soldering-irons. 20th. In a soldering-machine, the combination with the longitudinally and continuously moving horns or mandrels, of the longitudinally-reciprocating solder-feed mechanism, the horizontally and longitudinally reciprocating flux-applying device, and the horizontally and continuously moving soldering-irons. 21st. In a soldering-machine, the combination with the longitudinally and continuously moving horns or mandrels, of the longitudinally-reciprocating solder-feed mechanism, the horizontally and longitudinally reciprocating flux-applying device, horizontally and continuously moving soldering-irons adapted to bear upon the can-bodies during a portion of the longitudinal movement of the horns or mandrels, and devices for imparting a reciprocating movement to the soldering-irons while resting upon the can-bodies. 22nd. In a soldering-machine, the combination with the longitudinally-travelling horns or mandrels, of a device for receiving the can-body blanks, forming or rolling the same so as to remove the spring from the metal and delivering the rolled bodies to the said horns or mandrels, the longitudinally-reciprocating solder-feed mechanism, the flux-applying device, and the horizontally-moving soldering-irons. 23rd. In a soldering-machine, the combination with the longitudinally and continuously moving horns or mandrels, of the primary can-body-forming device which receives the can-body-blanks, forms or rolls the same and delivers the formed bodies to the travelling horns or mandrels, mechanism for imparting a longitudinally-reciprocating motion to the primary forming device, the longitudinally-reciprocating solder-feed mechanism, and the horizontally and continuously moving soldering-irons. 24th. In a soldering-machine, the combination with the longitudinally and continuously moving horns or mandrels, of the flux-applying device, mechanism for imparting a longitudinally and horizontally reciprocating movement to the flux-applying device, the soldering-irons, and mechanism for horizontally moving the soldering-irons. 25th. In a soldering-machine, the combination with the continuously-moving mandrels or horns, of the feed mechanism for the can-body blanks, and the continuously longitudinally and horizontally moving extracting device for the soldered can-bodies. 26th. In a soldering-machine for can-bodies, the combination with the longitudinally and continuously moving mandrels or horns, of the feed mechanism for supplying can-body blanks to the mandrels or horns, the horizontally and continuously moving soldering-irons, and the longitudinally and horizontally continuously-moving extracting device for the can-bodies. 27th. In a soldering-machine, the combination, with the continuously-moving mandrels, of an independent and continuously, longitudinally and horizontally moving and extracting device located at one side of the machine and of mechanism for imparting continous movement to the extracting device. 28th. In a soldering-machine, the combination with the continuously moving

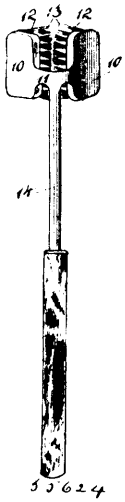
horns or mandrels, of the feed mechanism for the can-body blanks, movable solder-feed mechanism, flux-applying device, continuously-moving soldering-irons, and the movable extracting device for removing the soldered can-bodies from the horns or mandrels. 29th. In a soldering-machine, the combination with the continuously-moving horns or mandrels, of a device for receiving the can-body blanks, rolling or forming the same so as to remove the spring from the metal and provide partially-formed can-bodies and delivering the rolled or formed can-body blanks upon the travelling mandrels or horns. 30th. In a soldering-machine, the combination with the longitudinally and continuously moving horns or mandrels, of mechanism for receiving the can-body blanks, rolling the same so as to remove the spring therefrom and form unfastened can-bodies, and delivering the rolled can-body blanks to the travelling horns or mandrels, and the horizontally and continuously moving soldering-irons. 31st. In a soldering-machine, the combination with the horns or mandrels, of devices which receive the can-body blanks, roll the same so as to remove the spring therefrom and form rolled but unfastened can-bodies, and deliver the rolled bodies to the horns or mandrels, the solder-feed mechanism, and the moving soldering-irons. 32nd. In a soldering-machine, the combination with the continuously-moving horns or mandrels, of mechanism which receives the can-body blanks, rolls the same so as to remove the spring from the metal and provide rolled but unfastened can-bodies and delivers the rolled can-bodies to the travelling horns or mandrels, the movable solder-feed mechanism, and the continuously-moving soldering irons. 33rd. In a soldering-machine, the combination with the feed mechanism for the can-body blanks, of a device which receives the can-body blanks from the said feed mechanism and rolls the same so as to remove the spring therefrom and provide unfastened can-bodies, and a movable device for conveying the body-blanks from the feed mechanism to the rolling device. 34th. In a soldering-machine, the combination with the moving horns or mandrels, of feed mechanism for the can-body blanks, a forming device for receiving the can-body blanks, rolling the same so as to remove the spring from the metal, and provide rolled unfastened can-bodies and delivering the rolled can-bodies to the moving horns or mandrels, a movable device for conveying the can-body blanks from the feed mechanism to the forming device, the solder-applying mechanism, and the moving soldering-irons. 35th. In a soldering-machine, the combination with the continuously-moving mandrels or horns, of the movable solder-supplying mechanism, devices for imparting longitudinal and horizontal movement to the solder-supplying mechanism, and the continuously-moving soldering devices. 36th. In a soldering-machine, the combination with the longitudinally and continuously-moving mandrels or horns, of the movable solder-supplying mechanism, devices for imparting a reciprocating movement to the solder-supplying mechanism, and the moving soldering devices. 37th. In a soldering-machine, the combination with the moving mandrels or horns, of the horizontally and longitudinally moving solder-supplying mechanism, and the continuously-moving soldering irons. 38th. In a soldering-machine, the combination with the longitudinally and continuously-moving mandrels, of the movable solder-supplying mechanism, devices for imparting a longitudinal and horizontal movement to the solder-supplying mechanism, and the horizontally and continuously-moving soldering-irons. 39th. In a soldering-machine, the combination with the longitudinally and continuously-moving mandrels or horns, of the longitudinally and continuously-reciprocating solder-supplying mechanism, and the horizontally and continuously-moving soldering mechanism. 40th. In a soldering-machine, the combination with the longitudinally and continuously moving horns or mandrels, of the horizontally and longitudinally movable solder-supplying mechanism, the horizontally and continuously-moving soldering mechanism, and a device for reciprocating the soldering-irons during a portion of the horizontal movement of the soldering mechanism. 41st. In a soldering-machine, the combination with the mandrels or horns moving continuously in a longitudinal circle, of the movable solder-supplying mechanism, and the reciprocating and horizontally-moving soldering devices. 42nd. In a soldering-machine, the combination with a series of mandrels or horns having a continuous, longitudinal movement, of the movable solder-supplying mechanism, and a series of soldering devices having a continuous, horizontal movement. 43rd. In a soldering-machine, the combination with the longitudinally and continuously-moving mandrels or horns, of the horizontally and continuously moving soldering devices, the movable flux and movable solder-supplying mechanism, and devices for regulating the feed of the solder, and imparting a reciprocating movement to the flux-supplying mechanism. 44th. In a soldering-machine, the combination with the longitudinally and continuously-moving mandrels or horns, of mechanism for receiving the can-body blanks, rolling the same so as to remove the spring from the metal and delivering the rolled can-body blanks to the mandrels, the movable solder-supplying mechanism, and the horizontally and continuously-moving soldering mechanism. 45th. In a soldering-machine, the combination with the movable mandrels or horns, of mechanism for receiving the body-blanks and rolling the same so as to remove the spring therefrom and delivering the rolled bodies to the mandrels or horns, movable-supplying mechanism, and the movable soldering mechanism. 46th. In a soldering-machine, the combination with the longitudinally-moving mandrels or horns, of mechanism for receiving the can-body blanks and rolling the same so as to remove the spring therefrom and delivering the rolled body blanks to the moving mandrels or horns, movable soldering-supplying mechanism and the horizontally-moving soldering mechanism. 47th. In a soldering machine, the combination with the movable mandrels or horns, of mechanism for receiving the blank sheets of metal, rolling the same to remove the spring therefrom and delivering the rolled bodies to the mandrels, movable solder-supplying mechanism, movable flux-applying device, and the movable solder mechanism. 48th. In a soldering-machine, the combination with the movable mandrel or horn, of mechanism for receiving a blank sheet of metal, rolling the same so as to remove the spring from the metal and delivering the rolled body to the mandrel, solder-supplying device, movable soldering mechanism, and a device for automatically removing the soldered body from the mandrel. 49th. In a soldering-machine, the combination with the movable mandrel or horn, of mechanism for receiving a body blank, rolling the same so as to remove the spring therefrom and delivering the rolled body to the mandrel, the solder-feed mechanism, reciprocating flux-applying device, the soldering mechanism, and the extracting mechanism for removing the soldered body from the mandrel. 50th. The combination with the longitudinally and continuously moving mandrels or horns, of the feed mechanism for the can-body blanks, the horizontally and continuously moving soldering mechanism, and the continuously moving extracting device for removing the bodies from the mandrels or horns. 51st. In a soldering-machine, the combination with the longitudinally and continuously moving mandrels or horns, of mechanism for removing the blank sheets of metal, rolling the same and delivering the rolled blanks to the continuously moving mandrels or horns, the horizontally and continuously moving soldering mechanism, and devices for automatically removing the soldered bodies from the continuously moving mandrels or horns. 52nd. The combination with the longitudinally and continuously moving mandrels or horns, of the feed mechanism for the body blanks, the solder-applying mechanism, the horizontally and continuously moving soldering mechanism, the extracting device for removing the soldered bodies from the moving mandrels or horns, and mechanism for imparting a longitudinally and a horizontally reciprocating movement to the extracting device. 53rd. The combination with the longitudinally and continuously moving mandrels or horns, of the movable soldering-supplying mechanism, the horizontally and continuously moving soldering mechanism, and the continuously moving body-extracting device. 54th. In a soldering-machine, the combination with the continuously moving mandrels of a continuously moving extracting device located to one side of the mandrels and of mechanism for imparting a longitudinally and horizontally reciprocating movement to the extracting device. 55th. The combination with a soldering-machine, of the moving horns or mandrels, and an automatically-operated device which receives the body blanks, rolls the same so as to remove the spring from the metal and delivers the rolled body blanks to the moving mandrels or horns. 56th. The combination with a soldering-machine, of the horns or mandrels, mechanism for imparting continuous movement thereto, and an automatically and continuously operated device which receives the body blanks, rolls the same to remove the spring from the metal and delivers the rolled body blanks to the horns or mandrels. 57th. In a soldering-machine, the combination with the endless carrier, mechanism for imparting substantially an elliptical movement thereto, of a series of mandrels or horns secured to the endless carrier and carried thereby, mechanism for receiving the can-body blanks, rolling the same so as to remove the spring therefrom and delivering the rolled body blanks to the mandrels or horns, the solder-feed devices, the soldering mechanism, and the extracting device for removing the soldered bodies from the mandrels or horns. 58th. In a can-soldering machine, the combination with the endless carrier, of the mechanism for imparting continuous movement thereto, a series of horns or mandrels secured to and carried by the endless carrier, the soldering mechanism moving continuously in a horizontal circle which bears upon the horns or mandrels during a portion of its horizontal movement and of devices for imparting a reciprocating movement to the soldering mechanism while bearing upon the horns or mandrels. 59th. In a can-body soldering-machine, the combination with the continuously-moving mandrels, of the mechanism for supplying can-body blanks thereto, the continuously-moving soldering mechanism, the extracting device which engages the end of the soldered can-bodies and automatically removes the same from the moving horns or mandrels and of mechanism for horizontally and longitudinally reciprocating the extracting device. 60th. In a soldering-machine, the combination with the endless carrier, of a series of mandrels or horns secured thereto and carried thereby, the reciprocating solder-feed device, and the continuously-moving soldering mechanism. 61st. In a soldering-machine, the combination with the endless carrier, of the mandrels or horns secured thereto and carried thereby, the reciprocating solder-feed device, the continuously-moving soldering mechanism, and the continuously-moving extractor for removing the soldered bodies from the mandrels. 62nd. In a soldering-machine, the combination with the endless carrier chain or belt having a series of mandrels or horns secured thereto, of the reciprocating solder-applying mechanism, reciprocating device for applying the flux to the bodies carried by the mandrels, the reciprocating and continuously-moving soldering mechanism, and the continuously-moving extractor device for removing the soldered bodies. 63rd. In a can-body soldering-machine, the combination with the continuously-moving endless carrier, of the mandrels or horns secured to and carried thereby, the soldering mechanism mov-

ing continuously in a horizontal circle said mechanism bearing upon the mandrels or horns during a portion of the horizontal movement, devices for reciprocating the soldering mechanism while bearing upon the mandrels or horns, the extracting device which engages the end of the soldered can-bodies and automatically removes the same from the mandrels or horns, and a mechanism for horizontally and longitudinally reciprocating the extracting device. 64th. In a soldering-machine the combination with the continuously-moving endless carrier belt or chain, of the mandrels or horns secured thereto and carried thereby, the reciprocating soldering mechanism, and the reciprocating flux-applying mechanism. 65th. In a soldering-machine, the combination with the continuously-moving endless carrier belt or chain, of the mandrels or horns secured thereto and carried thereby, and the longitudinally and horizontally reciprocating solder and flux-applying mechanism. 66th. In a soldering-machine, the combination with the continuously-moving carrier chain or belt of the mandrels or horns secured thereto and carried thereby, the reciprocating solder and the reciprocating flux-applying mechanism and the reciprocating and horizontally rotary-moving soldering mechanism. 67th. In a soldering-machine, the combination with the continuously-moving endless carrier chain or belt, of mandrels or horns secured thereto and carried thereby, the continuously longitudinally-reciprocating solder-feed, the continuously-moving flux-applying mechanism, the horizontally and continuously-moving soldering mechanism, and the extractor device for removing the soldered can-bodies from the continuously-moving mandrels or horns. 68th. In a soldering-machine, the combination with the continuously-moving endless carrier chain or belt, of the mandrels or horns secured thereto and carried thereby, mechanism for receiving the body blanks, rolling the same and delivering the rolled body-blanks to the moving mandrels or horns, and the vertically-movable knife or blade for holding down the lap edge of the rolled body during the operation of soldering. 69th. In a soldering-machine, the combination with the continuously-moving mandrels or horns which receive and hold the can-bodies while being soldered, of the movable knife or blade carried by each mandrel or horn for holding down the lap edge of the body while being soldered, the continuously-moving soldering mechanism and a fixed cam for raising the knife or blade from the can-body after the soldering thereof. 70th. In a soldering-machine, the combination with a series of longitudinally and continuously-moving mandrels or horns, of a vertically-movable clamp blade or knife for each mandrel, the soldering mechanism moving continuously in a horizontal circle and devices for raising and lowering the clamp blade or knife. 71st. In a soldering-machine, the combination with the continuously-moving mandrels or horns, of mechanism for rolling the can-body blanks and delivering the same to the moving mandrels or horns, a movable gauge-plate connected to each mandrel or horn for sizing the can-body while held upon the mandrels or horns, and the movable clamp blade or knife for holding down the lap edge of the rolled body during the operation of soldering. 72nd. In a soldering-machine, the combination with the endless carrier chain or belt, of a series of mandrels or horns secured thereto and carried thereby, a movable gauge-plate connected to each mandrel or horn, and fixed cams for throwing the movable gauge-plate in and out of engagement with the end of the can-body held upon the mandrel or horn to which it is connected. 73rd. In a soldering-machine, the combination with an endless and continuously-moving carrier chain or belt, of series of mandrels or horns secured thereto and carried thereby, a spring-actuated clamp blade or knife for each mandrel or horn, which normally bears upon the lap edge of the body held upon the mandrel or horn, and fixed cams for elevating the clamp blade or knife during the movement of the mandrels. 74th. In a soldering-machine, the combination with a series of continuously-moving mandrels or horns, of a movable clamp knife or blade carried by each mandrel or horn, the continuously-moving soldering mechanism, the fixed cams for raising the clamp blades or knives after the can-bodies carried by the mandrels or horns have been soldered and the extracting mechanism for removing the soldered can-bodies from the moving mandrels or horns. 75th. In a soldering-machine, the combination with the continuously-moving mandrels or horns, of a movable gauge-plate connected to each mandrel or horn for sizing the can-bodies, and devices for throwing the gauge-plate in and out of engagement with the bodies held upon the mandrels or horns. 76th. In a soldering-machine, the combination with the continuously-moving mandrels or horns, of the movable mechanism for receiving the body-blanks, rolling the same and delivering the rolled body-blanks to the moving mandrels or horns, the movable clamp blade or knife for each mandrel or horn, and the movable gauge-plate for receiving the end of the bodies secured upon the mandrels or horns and sizing the bodies. 77th. The combination with the continuously-moving mandrels or horns, of the movable gauge-plate, and devices for throwing the movable gauge-plate at an angle to the axis of the mandrels or horns during the movement thereof. 78th. The combination with the mandrels or horns, of the movable gauge-plate for sizing the body held upon the mandrel or horn, of devices for throwing the movable gauge-plate at an angle to the axis of the mandrel or horn, and devices for moving the gauge-plate toward and from the mandrel or horn, so as to move the same in and out of engagement with the end of the body. 79th. In a soldering-machine, the combination with the longitudinally and continuously moving mandrels or horns, of mechanism for rolling the body-blanks and delivering the same to the mandrels or horns, gauge-plates for receiving the ends of the rolled bodies and sizing the same, one of said plates being movable, devices for moving the movable gauge-plate toward and from the mandrel or horn and throwing the same at an angle to the axis of the mandrel or horn, a clamp-plate or knife which bears upon the lap edge of the can-body, and the horizontally and continuously moving soldering mechanism. 80th. In a soldering-machine for can bodies, the combination with the continuously moving endless carrier chain or belt, of a series of mandrels or horns for the can bodies secured to and carried by said belt or chain, which mandrels or horns form a complete cylinder at one end, being cut away diagonally from one side and end to the opposite side and end, the movable clamp blade or knife, the fixed and movable gauge plates which receive the ends of the can bodies when secured upon the mandrels or horns, and devices for throwing the movable gauge plate at an angle to the axis of the mandrels or horns and toward and from the mandrels or horns. 81st. In a soldering-machine, the combination with a series of continuously moving mandrels or horns, of continuously moving mechanism which receives body blanks, rolls the same and delivers the rolled bodies to the mandrels or horns during the continuous movement thereof, the movable and fixed gauge plates carried by each mandrel or horn, and devices for throwing the movable gauge plate at an angle to the axis of the mandrel or horn and toward and from the same during the same continuous travel thereof. 82nd. In a soldering-machine, the combination with the soldering mechanism, moving continuously in a horizontal circle of automatically-operated devices for raising and lowering the soldering mechanism with the stopping and starting of the soldering machine. 83rd. In a soldering-machine, the combination with the continuously moving mandrels or horns, of mechanism for driving the same, continuously moving soldering mechanism operated by the mechanism which imparts motion to the mandrels or horns, devices for starting and stopping the driving mechanism at will, and devices for automatically lowering and raising the soldering mechanism with the starting and stopping of the machine. 84th. In a soldering-machine, the combination with the continuously moving mandrels or horns, of the movable solderer-supplying mechanism, the soldering mechanism, and devices for raising and lowering the soldering mechanism with the starting and stopping of the machine. 85th. In a soldering-machine, the combination with the can-body blank feed device, of the endless carrier belt or chain for conveying the body blanks toward the soldering mechanism, mechanism for driving the endless belt or chain, mechanism for receiving the can-body blanks from the feed device and removing the spring from the body blanks, and the reciprocating side plates which receive the body blanks from the carrier belt and deliver the same to the said mechanism. 86th. In a soldering-machine, the combination with the continuously moving mandrels or horns, of the solder feed, mechanism for imparting a continuously longitudinal reciprocating movement to the solder feed, and the automatically-operated knife for cutting the solder wire after the proper amount of solder has been placed upon the can body carried by the moving mandrels or horns. 87th. In a soldering-machine, the combination with the longitudinally and continuously moving mandrels or horns, of the soldering mechanism moving continuously in a horizontal circle, the soldering-irons carried thereby, devices for reciprocating the soldering-irons so as to move back and forth over the side seam of the body held upon the mandrels or horns during a portion of the rotary travel thereof, and the inclined cam or track for raising or lowering the soldering irons during the movement of the soldering mechanism. 88th. In a soldering-machine, the combination with the longitudinally and continuously moving mandrels or horns, of the reciprocating solder-feed mechanism, the horizontally and continuously moving soldering mechanism, the soldering-irons carried thereby, device for reciprocating the soldering irons, the inclined cam or track for raising and lowering the soldering-irons during the horizontal movement of the soldering mechanism, and the continuously moving extractor mechanism for automatically removing the soldered bodies from the longitudinally moving mandrels or horns. 89th. In a soldering-machine, the combination with the longitudinally continuously moving mandrels or horns, of mechanism for receiving the can-body blanks, rolling the same and automatically delivering the rolled blanks to the mandrels or horns, movable devices for clamping the bodies upon the mandrels or horns and sizing the same, the movable solder-feed mechanism, movable device for applying flux to the can-bodies, the horizontally and continuously moving soldering mechanism, the soldering-irons carried thereby, device for reciprocating the irons, inclined cam or track for raising and lowering the soldering-irons, and the extractor mechanism for automatically removing the soldered can-body from the moving mandrels or horns. 90th. In a soldering-machine, the combination with the continuously-moving mandrels or horns, of the continuously-moving soldering mechanism, soldering-irons carried thereby, device for reciprocating the soldering-irons, the extractor mechanism for the soldered bodies, and mechanism for automatically raising and lowering the soldering mechanism with the starting and stopping of the machine. 91st. In a soldering-machine, the combination with the mandrels or horns, of the mechanism for rolling the can bodies and delivering same to the mandrels or horns, devices for clamping the can-bodies upon the mandrels or horns and sizing the same, the solder and flux supplying mechanism, soldering mechanism, extracting mechanism for removing the soldered can-bodies from the mandrels or horns, and mechanism for automatically raising and lowering the soldering

mechanism with the starting and stopping of the machine. 92nd. In a can-soldering machine, the combination with the moving mandrels or horns which receive the can-body blanks and convey the same to the soldering mechanism, of a device which receives the can-body blanks and rolls the same so as to remove the spring from the metal and provides partially formed can-bodies prior to the blanks being delivered to the mandrels or horns, of mechanism which receives the can-body blanks after being rolled and automatically delivers the same to the moving horns or mandrels, and of devices for clamping the rolled body-blanks upon the mandrels or horns and sizing or gaging the same. 93rd. In a soldering-machine, the combination with the continuously-moving mandrels or horns, of continuously longitudinally reciprocating mechanism which receives the can-body blanks and rolls the same prior to the feed thereof to the moving mandrels or horns, a cup-shaped mandrel around which the body is rolled, mechanism for forcing said mandrel in and out so as to place the rolled can-bodies upon the continuously-moving mandrels or horns, and devices which automatically clasp the can-bodies upon the mandrels or horns and size the same. 94th. In a can-soldering machine, the combination with the moving horns or mandrels, of the feed mechanism for the can-body blanks, a device which receives the can-body blanks from the feed mechanism and rolls the same so as to remove the spring from the metal and provide partially-formed can-bodies, and of mechanism for receiving the rolled can-body blanks and automatically placing the same upon the moving horns or mandrels. 95th. In a soldering-machine, the combination with the continuously moving mandrels or horns, of a set of feed devices for the can-body blanks, mechanism for operating the same so as to give an alternate feed, a set of devices for rolling the can-body blanks and delivering the same to the moving mandrels or horns, mechanism for alternately delivering the rolled bodies to the moving mandrels or horns, mechanism for imparting an opposite reciprocating movement to each forming device, the reciprocating slide-plates for conveying the body-blanks from the feed devices to the forming devices, and mechanism for imparting opposite reciprocating movement to the slide-plates. 96th. In a soldering-machine, the combination with the moving mandrels or horns, of the set of devices for receiving the body-blanks and rolling the same so as to remove the spring from the metal, devices for receiving the body blanks as rolled, and mechanism for alternately moving the said devices toward and from the moving mandrels or horns. 97th. In a forming device for can-soldering machines, of the combination with the rolls between which the can-body blanks are fed, mechanism for imparting motion to said rolls, the forming mandrel which receives the blanks as delivered from the rolls, and mechanism for moving the forming mandrel so as to place the rolled body-blank held thereby upon the mandrels or horns of the soldering-machine. 98th. In combination with the mechanism of a soldering-machine for receiving and rolling the can-body blanks, of the forming-mandrel composed of the clamp-plates and the cup shaped mandrel, between which and the clamp plates the rolled can-body is received, and mechanism for moving the forming-mandrel toward and from the soldering-machine. 99th. The combination with a can-body-soldering-machine, of the can-body-blank-forming mechanism which receives the body-blanks and rolls the same prior to delivering the rolled body-blanks to the mandrels or horns of the soldering-machine the mandrel secured within the forming mechanism the plunger-rod for moving the mandrel toward and away from the mandrels or horns of the soldering machine, and mechanism for imparting a horizontal reciprocating movement thereto. 100th. In a device for receiving can-body blanks and rolling the same so as to remove the spring therefrom prior to delivering the can-body blanks to a can-body-soldering machine, the combination with the forming-mandrel within which the can-body blanks are rolled, the movable lock or clamp plate which holds the rolled body against the face of the mandrel as the body is moved toward the machine, the plunger-rod, mechanism for moving the same in and out, and devices forming connection between the plunger-rod and movable clamp-plate, whereby the clamp-plate is raised and lowered as the forming mandrel is moved in and out. 101st. In a device which receives can-body blanks and rolls the same prior to the delivery thereof to the mandrels or horns of the machine, the combination with the carriage, of mechanism for imparting a longitudinally-reciprocating motion thereto, the rolls between which the body-blanks are feed, the forming mandrel for receiving the body-blanks from between the rolls, the plunger-rod for moving the forming-mandrel in and out, and of mechanism for imparting movement to the plunger-rod. 102nd. In a device for receiving can-body blanks and rolling the same so as to remove the spring therefrom, the combination with the forming-mandrel, of the plunger-rod, the rocker-arm for imparting reciprocating movement to the plunger-rod, and the crank cam for operating the rocker arm. 103rd. The combination with a soldering-machine for can-bodies, the sliding carriage, of forming mechanism carried thereby which receives the can-body blanks and rolls the same, devices for delivering the rolled can-body blanks to the mandrels or horns of the soldering-machine, the cam for imparting reciprocating movement to the carriage, and mechanism for operating the driving-cam. 104th. In a soldering-machine, in combination with the forming-mandrel for the can-body blanks, of the plunger rod for moving the forming-mandrel in and out, and devices for slightly rotating the plunger rod as moved in and out so as to impart a twist to the forming mandrel or horn after the can-body has been placed upon the mandrel of the soldering-machine, so as to bring the lap edge of the can-body beneath the clamp plate or knife of the mandrel or horn of the soldering-machine. 105th. In a soldering-machine, the combination with the vertical drive-shaft for the soldering mechanism, of mechanism for imparting rotary motion thereto, the movable keys working within grooves or channels cut in the vertical drive-shaft, the spider-frame connected to said keys, soldering-arms carried by said frame which arms carry the soldering-irons, and mechanism for raising and lowering the keys, so as to raise and lower the soldering-irons, with the stopping and starting of the drive mechanism. 106th. In a soldering-machine, the combination with the spider-frame, of soldering-arms connected thereto, which arms carry the soldering irons, the rotatable shaft to which the spider-frame is connected, mechanism for driving the rotatable shaft, and devices for imparting a vertical and reciprocating movement to the soldering arms. 107th. In a soldering-machine, the combination with the vertical shaft, of mechanism for driving the same, a spider-frame carrying the soldering mechanism, secured to said shaft by slidable keys, collar for supporting the slidable keys, the weighted fulcrumed rods connected to said collar, a cam for raising and lowering the fulcrumed rods, and mechanism for automatically operating said cam with the stopping and starting of the driving mechanism. 108th. In a solder-feed mechanism of a soldering-machine for can-bodies, the combination with the reciprocating bed-plate, of the solder-feed tubes secured thereto, the grooved solder-feed rolls, operating-shaft for imparting rotary motion to the feed-rolls, rack-pinion rotating upon said shaft, rack-bar with which the rack-pinion engages, mechanism for raising and lowering the bed-plate, a pawl which engages with a gear rigid upon the operating-shaft as the bed-plate moves downward, the knife for cutting the solder, and a fixed cam for operating the solder-cutting knife. 109th. In a soldering-machine, the combination with the flux-holding receptacles secured to the frame of the machine above the mandrels or horns, of the mandrels or horns, the flux-applying devices, and mechanism for imparting longitudinal and horizontal movement to the flux-applying devices, and for raising and lowering the said devices. 110. In a soldering-machine, the combination with the continuously-moving mandrels or horns, of continuously-moving mechanism for placing can-bodies upon more than one of the moving mandrels or horns, and continuously-moving devices for supplying solder and flux to more than one of the can-bodies simultaneously. 111th. In a soldering-machine, the combination with the solder-feed mechanism, of the movable bed, mechanism for imparting longitudinal and horizontal movement to said plate, flux-applying devices connected to the plate, the lift-rod for raising and lowering the said plate, the fulcrumed lever connected to lower end of said rod, and the eccentric cam for actuating the fulcrumed lever so as to raise and lower the lift rod. 112th. In a soldering-machine for can-bodies, the combination with the endless carrier-chain or belt, of mechanism for imparting continuous motion thereto, a series of mandrel-frames secured to the endless carrier-chain or belt, a mandrel or horn secured to and projecting horizontally from each mandrel-frame, a movable gage-plate for each mandrel or horn, said plate having an annular groove cut within its inner face for reception of the end of the can-body. 113th. In a soldering-machine, the combination with the mandrels or horns, of a movable gauge-plate for each mandrel or horn, the arm to which said plate is connected, the sleeve projecting from the lower end of said arm, rotatable shaft to which said sleeve is keyed, fixed cams or devices for oscillating said shaft so as to raise and lower the gauge-plate, and devices for moving the rotatable shaft in and out so as to move the gauge-plate in and out of engagement with the end of the can-body secured upon the mandrel or horn. 114th. In a soldering-machine, the combination with the endless carrier-chain or belt, of the mandrels or horns projecting therefrom, the movable gauge-plate, devices for lowering the gauge-plate as the mandrel or horn is carried toward the extracting mechanism, the curved or inclined trackway or cam for gradually lowering the movable gauge-plate, and the extractor for removing the can-bodies from the mandrels or horns. 115th. In a soldering-machine, the combination with the feed mechanism, of the endless carrier for the body-blanks, the frame within which the same works, the rolls which receive the blanks from the endless carrier and remove the burs therefrom as the body-blanks pass there between, mechanism for imparting motion to the endless carrier and rolls, and devices which receive the can-body blanks and roll the same so as to remove the spring therefrom. 116th. In a can-soldering machine, the combination with the horns or mandrels thereof, of a device located at one side of the soldering machine which receives the can-body blanks and rolls the same so as to remove the spring from the metal prior to the blanks being placed upon the horns or mandrels of the soldering machine, said device consisting of the rolls which receive the can-body blanks, the forming-mandrel which receives the body-blanks as delivered from between the rolls and the deflecting-plate located between the rolls and the forming-mandrel, and of mechanism for delivering the rolled and partially-formed can-body blank to the mandrels or horns of the soldering machine. 117th. In a can-body-soldering machine, the combination with the horns or mandrels, of the forming device located at one side of the soldering-machine which receives the can-body blanks and rolls the same so as to remove the spring from the metal prior to the blanks being placed upon the horns or mandrels of the soldering-machine, said forming device consisting of the rolls which receive the can-body blanks, the

forming mandrel which receives the can-body blanks as delivered from the rolls, and the adjustable deflecting plate located between the rolls and the forming-mandrel, and of mechanism for delivering the rolled can-body blanks to the horns or mandrels of the soldering-machine. 118th. In a soldering-machine for can-bodies, the combination with the continuously-moving mandrels or horns, of the continuously-moving extractor devices for removing the can-bodies from the moving mandrels, the movable gauge-plates, devices for throwing the movable gauge-plates out of engagement with the can-bodies held upon the mandrels or horns, as the mandrel is carried toward the extractor, the clamp blades or knives which bear upon the lap edge of the can-bodies, the movable arms to which the clamp blades are secured, and the fixed cams, secured to the frame of the machine, with which the free ends of the arms of the clamp blades engage during the travel of the mandrels or horns. 119th. In a soldering-machine the combination with the continuously-moving mandrels or horns, of mechanism for delivering can-body blanks thereto, devices for holding the can body blanks upon the mandrels or horns, the continuously-moving extractor mechanism which automatically removes the soldered can-bodies from the mandrels or horns during the continuous movement thereof, and devices located within the pathway of the mandrels or horns which automatically release the holding devices for the can-bodies as the mandrels or horns are carried toward the extractor, whereby the can-bodies may be readily withdrawn from the mandrels or horns. 120th. In a soldering-machine, the combination with the continuously-moving mandrels or horns which receive and hold the can-bodies, of the continuously-moving extractor for automatically removing the can-bodies from the mandrels or horns during the continuous movement thereof, and a device for discharging the can-body from the extractor after the same has been drawn off the mandrel or horn. 121st. In a soldering-machine the combination with the continuously-moving mandrels or horns, of the longitudinally and horizontally continuously-reciprocating extractor mechanism, the nipper arms carried thereby, devices for opening and closing the nipper-arms, so as to grasp the can-body and release the same during the horizontally-reciprocating movement of the extractor mechanism, and a device for automatically discharging the can-body from the extractor upon the opening of the nipper arms. 122nd. In a soldering-machine, the combination with the extractor mechanism for the can-bodies, of an upper and a lower slidable plate mechanism for imparting a continuously and longitudinally reciprocating movement to the upper plate and devices which grasp the can-bodies upon the full forward movement of the upper plate and release the same upon its outward movement. 123rd. In a soldering-machine, the combination with the driving mechanism, of the extractor mechanism for the soldered can-bodies, and connection between the driving mechanism of the machine and extractor mechanism, whereby a continuously longitudinally and horizontally reciprocating movement is imparted to the extractor mechanism. 124th. In an extractor device for can-body-soldering machines, the combination with the upper slidable plate, of mechanism for imparting a horizontally-reciprocating movement thereto, the nipper-arms, the slide-rods for moving the slidable plate the slide-rod located between the nipper arms, fixed cams upwardly projecting from the slidable plate which forces the last-mentioned slide-rod in and out, lazy-tongs connection between the nipper-arms and the slide rods, and the fixed plate secured to the slidable plate between the free end of the nipper arms which plate fits within the can-body when slidable plate is moved forward its full distance. 125th. In an extractor for the can-bodies of a soldering-machine, the combination with the nipper-arms for engaging the can-bodies and removing the same from the horns or mandrels of the soldering-machines, devices for opening and closing the nipper-arms, the push-rod for releasing the can-body after having been extracted from the horns or mandrels of the soldering-machine and the slide plate which engages the push-rod as the extractor mechanism is moved away from the soldering-machine. 126th. In a soldering-machine, the combination with the extractor, of the upper slidable plate, mechanism for imparting a continuously horizontally-reciprocating movement thereto, mechanism for driving the machine, the central shaft connected thereto which operates the driving mechanism for the upper slidable plate, the lower slidable plate which carries the upper slidable plate, the cam for giving a continuously longitudinally-reciprocating movement thereto, and mechanism driven by the central shaft for imparting motion to the driving-cam. 127th. The combination with the extractor mechanism for removing the soldered can-bodies from the mandrels or horns, of a soldering-machine, of the cross-head for moving the same forward and backward, the crank-arms connected thereto at their upper end by straps, cross-shaft to which the said arms are secured, the pitman connection between the lower end of the crank-arms and coank-arms of the drive-shaft, and of mechanism for transmitting the motion of the soldering-machine to the drive-shaft. 128th. In a soldering-machine for can-bodies, the combination with a series of soldering-irons, of mechanism for giving continuous movement thereto, the fire-boxes, the air and gas reservoir composed of a rotatable and non-rotatable section, the rotatable section being secured to a vertical shaft which drives the soldering mechanism, each section of the reservoir being sub-divided into an air and gas chamber, an air-inlet and a gas-inlet pipe communicating with said chambers, outlet-pipes extending from the air and gas chambers of the rotatable section, and flexible connections between the outlet-pipes and the fire-boxes for the soldering-irons. 129th. In a soldering-machine, the combination with the soldering-irons, of mechanism for continuously rotating the same, devices for reciprocating the irons during the rotary movement thereof, the fire-boxes, the air and gas reservoir, consisting of a rotatable and a non-rotatable section, a packing-ring located between the sections so as to provide a seat, and the flexible connections between the rotatable section and the fire-boxes. 130th. In a soldering-machine for can-bodies, the combination with the longitudinally-movable endless carrier chain or belt, of series of mandrels or horns secured thereto and carried thereby, the feed mechanism for the can-body blanks, a device which receives the can-body blanks from the feed mechanism and rolls the same so as to remove the spring from the metal and delivers the rolled bodies to the mandrels or horns, movable devices for clamping the can-bodies upon the mandrels or horns, and sizing the same, mechanism for applying solder and flux to the can-bodies held upon the mandrels, horizontally-moving soldering mechanism, a series of soldering-irons carried thereby, gas and air supplying mechanism, devices for releasing the clamping devices which hold the can-bodies to the mandrels or horns, after the side seam of the can body has been soldered, a device for automatically removing the released soldered bodies from the mandrels or horns, and mechanisms for imparting continuous movement to the several parts and causing them to operate in the order named. 131st. In a soldering-machine, the combination with the horizontally and continuously moving soldering mechanism, of a series of soldering-irons carried thereby, the air and gas reservoir, consisting of rotatable and a non-rotatable section suitably united and the flexible air and gas connection between the soldering mechanism and the rotatable section of the air and gas reservoir. 132nd. In a can-body soldering-machine, the combination with the horns of mandrels, of a device for receiving the can-body blanks and rolling the same so as to remove the spring from the metal prior to the body-blanks being delivered to the horns or mandrels of the soldering-machine, said device being located to one side of the soldering-machine and consisting of the forming-mandrel, the forming-rolls which receive the can-boby blanks and feed the same to the forming-mandrel and a device which prevents the can-body blanks moving above the forming-mandrel after being fed thereto by the forming rolls, and of the mechanism for delivering the rolled can-body blanks to the horns or mandrels of the soldering-machine. 133rd. The combination with a continuously-moving mandrel or horn, of the continuously-moving solder-supplying mechanism, and reciprocating soldering devices moving continuously in a horizontal circle. 134th. The combination with a series of continuously-moving mandrels or horns, of the continuously-moving solder-supplying mechanism, a movable flux-supplying device and a series of reciprocating soldering devices moving continuously in a horizontal circle. 135th. The combination with a continuously-moving mandrel or horn, of the continuously-moving solder-supplying mechanism, and of the soldering device moving continuously in a horizontal circle. 136th. The combination with the continuously-moving mandrel or horn, of a movable solder-supplying mechanism, and of a soldering-device moving continuously in a horizontal circle and bearing upon the mandrel during a portion of its movement, and a device for imparting a reciprocal movement to the soldering device while bearing upon the mandrel or horn. 137th. The combination with the continuously-moving mandrel or horn, of the continuously-moving feed mechanism for automatically placing the can-body blanks upon the moving mandrel or horn, the continuously-moving solder-feed mechanism for supplying solder to the moving can-bodies carried by the mandrel or horn and the continuously-moving soldering device. 138th. In a soldering-machine for can-bodies, the combination with the longitudinally and continuously-moving endless carrier, a series of horns or mandrels secured thereto and carried thereby, the soldering mechanism moving continuously in a horizontal circle and devices for imparting a reciprocating movement to the soldering-irons carried by the soldering mechanism during a portion of the travel of said mechanism. 139th. In a soldering-machine, the combination with the continuously-moving horns or mandrels, of the soldering mechanism moving continuously in a horizontal circle. 140th. In a soldering-machine, the combination with the continuously-moving horns or mandrels, of the flux-applying device, the solder-feed and the soldering mechanism moving continuously in a horizontal circle. 141st. In a soldering-machine, the combination with the continuously-moving mandrels or horns, of the soldering mechanism carrying a series of soldering-irons which move continuously in a horizontal circle and devices for raising and lowering the soldering-irons during the movement of the soldering-mechanism. 142nd. In a can-body soldering-machine, the combination with the continuously-moving horns or mandrels, of the soldering-irons moving continuously in a horizontal circle and which bear upon the horns or mandrels during a portion of their travel, devices for moving the soldering-irons back and forth over the seam of the can-body held upon the horns or mandrels and of mechanism for automatically raising and lowering the soldering-irons. 143rd. In a can-body soldering-machine, the combination with the continuously-moving horns or mandrels, of the continuously moving mechanism for supplying can-body blanks to the horns or mandrels, a series of soldering-irons moving continuously in a horizontal circle, devices for reciprocating the soldering irons and raising and lowering the same during the movement thereof and of the continuously-moving extracting mechanism for automatically removing the soldered can-bodies from the moving horns or mandrels.

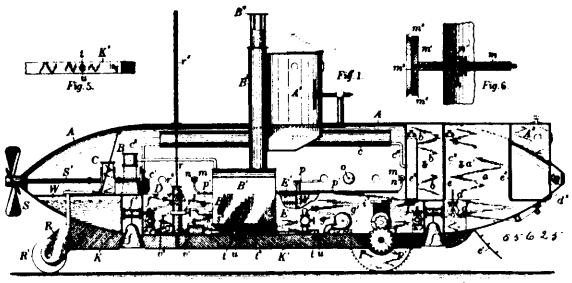
**No. 55,624. Tooth Brush.** (*Brosse à dents.*)




Edward Henry Hamilton, Cantonment of Poona, Bombay, India, 14th April, 1897; 6 years. (Filed 3rd February, 1897.)

*Claim.*—A tooth brush comprising two flat backs placed at angles to each other, a bridge 11 connecting said backs and forming an inverted A-shaped trough, a handle secured to said bridge, and rows of bristles secured in the under faces of said backs and being shortest in the rows adjacent said bridge and longest in the outside rows, said bristles being inclined in a reverse direction to the inclination of said backs, the working surfaces of the rows adjacent said bridge being almost in engagement and the space between said working surfaces being gradually widened as the longer and outer rows are approached, whereby an angular or V-shaped opening is formed by said working surfaces, as and for the purpose set forth.

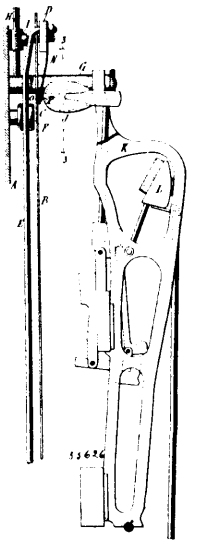
**No. 55,625. Submarine Vessel.** (*Vaisseau sous-marin.*)




Simon Lake, Baltimore, Maryland, U.S.A., 14th April, 1897; 6 years. (Filed 30th January, 1897.)

*Claim.*—1st. A submarine vessel provided with means for submerging and maintaining it in contact with the water bed, depending wheels adapted to support the vessel while upon the water bed, means for driving said wheels to propel the vessel, and means for guiding the vessel over the water bed, as and for the purpose set forth. 2nd. A submarine vessel provided with a detachable keel section, a safety valve having its inlet connected with the exterior of the vessel, and means operated by the said safety valve for automatically disengaging the said keel section, substantially as shown and described. 3rd. A submarine vessel, provided with a detachable keel section, a safety valve having its inlet connected with the exterior of the vessel, a hydraulic cylinder connected at one end with the discharge of the said safety valve, and a piston within the said cylinder connected to release levers for the said keel section and adapted to disengage the latter, substantially as shown and described. 4th. A submarine vessel, provided with a detachable keel section formed with shouldered recesses in its upper side, buttons projected downward through the hull with their heads locked normally within the said recesses in the keel section and provided with latterly projecting release levers within the hull, a safety valve having its inlet connected with the exterior of said vessel, a hydraulic cylinder connected at one end with the discharge of the said safety valve, and a piston within said cylinder connected to the said release levers, substantially as shown and described. 5th. In a submarine vessel, provided with means for supporting and steadying it when resting upon the water bed, and a diving compartment having a bottom door and means for supplying said compartment with compressed air at the pressure of the surrounding water, the combination, with hoisting mechanism fixed within said diving compartment and means for actuating the same, of a crane pivoted upon the exterior of said vessel, and a line leading from said hoisting mechanism through said door of the diving compartment to said crane, as and for the purpose set forth. 6th. A submarine vessel, provided with a hollow bar projected through the wall of the hull without the same and having at its outer end a disc provided around the edges with a yielding packing, a stuffing box in the interior of said wall for excluding the water around said bar, an air pump, and a connection from the said air pump to the inner end of the said hollow bar, as and for the purpose set forth. 7th. A submarine vessel, provided with a hollow bar projected through the wall of the hull without the same and having at its outer end a disc, a continuous rubber band clamped around the edges of the said disc and provided with a flaring thin outer edge, a stuffing box in the interior of said wall for excluding water around the said bar, an air pump, and a connection from the said air pump to the inner end of the said hollow bar, as and for the purpose set forth. 8th. A submarine vessel, provided with a hollow bar projected through the wall of the hull without the same and having at its outer end a disc, a continuous flaring rubber band with thin outer edge clamped around the edge of the said disc, a stuffing box in the interior of said wall for excluding water around the said bar, a transverse setscrew piercing the body of the stuffing box to retain the said bar in position, an air pump, and a connection from the said air pump to the inner end of the said hollow bar, as and for the purpose set forth. 9th. A submarine vessel, provided with means for submerging the same, and having a drill with its shank projected through an aperture in the hull surrounded by a stuffing box for excluding the water, as herein set forth. 10th. A submarine vessel, provided with means for submerging the same, and having a drill with its shank projected through a suitable aperture in the hull surrounded by a box or casing having at its inner end a stuffing box and an adjacent door and provided with a gate valve intermediate to its ends, as and for the purpose set forth. 11th. The combination, with a submarine vessel provided with supporting wheels upon its bottom and with means for submerging, propelling and guiding the same, of an auxiliary car or receptacle similarly provided with supporting wheels, a removable hatch, means for admitting and expelling water to and from its interior, and means for connecting it with the hull of said submarine vessel so as to be towed thereby upon the water bed, as and for the purpose set forth.

**No. 55,626. Musical Instrument.**
(*Instrument de musique.*)

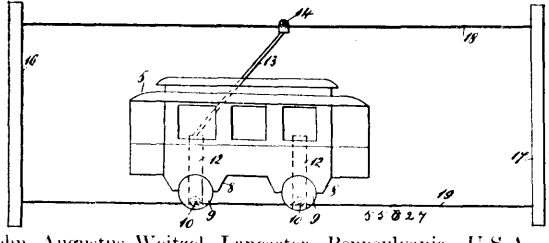



John Albert Weser, New York, State of New York, U.S.A., 14th April, 1897; 6 years. (Filed 4th February, 1897.)

*Claim.*—1st. For string instruments, a harmonic device consisting of a flexible support and a striker having a plurality of resonant striking portions carried thereby for contacting with the strings of an instrument, and an integral connecting part uniting said striking portions. 2nd. A harmonic device for string instruments consisting of a support and a ring like-striker carried on and with its flat side toward said support, having separated resonant striking portions and an intermediate non-resonant portion for contacting with the strings of an instrument. 3rd. A harmonic device for string instruments consisting of a swinging support, and a ring-like striker, having a plurality of striking portions spaced apart, and connected together by an integral part, for contacting with the strings of an instrument, said portions disposed to successively contact with such strings when moved there against. 4th. A harmonic device for string instruments having an annular swinging striker, having its axis coincident with its direction of swing and a flat striking portion for contacting with the strings of an instrument. 5th. A harmonic device for string instruments having an elastic ring-like striker, having its axis at right angles to the strings, and having a

striking portion of resonant material for contacting with the strings of such instrument. 6th. A harmonic device for string instruments comprising the combination with the strings of the instrument, of a convolution of spring wire in proximity to such strings, and means supporting the wire in position to strike the strings of such instrument. 7th. A harmonic device for string instruments consisting of two convolutions of wire and a support therefor passing between said convolutions. 8th. A harmonic device for string instruments consisting of two convolutions of spring wire and a flexible support compressed between said convolutions. 9th. A harmonic device for string instruments consisting of a resonant striking portion and a support therefor, said striking portion having two separated points for contacting with the strings of an instrument, an intervening part connecting and integral with said points, and an intermediate space between said points. 10th. A harmonic device for string instruments consisting of a resonant part having projecting points for contacting with the strings of an instrument, an intervening part connecting and integral with said points, a depression between said points, a non-resonant portion between said points, for contacting with the strings, and means for supporting said parts. 11th. A harmonic device for string instruments consisting of a flexible strip having on one face in the path of the hammer a plurality of hard striking portions separated and spaced apart and permitting said plate to flex between them, adapted to contact with the strings, and having on its other face a soft cushioning portion between said striking portions and adapted to receive the blow from the hammer, and thereby to bend said strip outwardly between said striking portion and against the strings. 12th. A striker for pianofortes consisting of a felt strip, a metal ring thereon with its axis angular to the longitudinal extension of the strip, and a cushioning pad thereon. 13th. A striker for pianofortes consisting of a flexible strip suspended in front of the strings and having on its face adjacent thereto two striking portions, the one annular and surrounding an axis angular to the longitudinal extension of said strip, and the other within said annular portion, one of said portions being resonant and the other non-resonant. 14th. In pianofortes and the like, a harmonic device suspended opposite the strings of the instrument and consisting of a plurality of ring-like objects contacting with the strings to modify the tones produced thereby, said objects differentiated in construction for different strings of the instrument. 15th. In pianofortes and the like, the strings, a striker rail, and means for moving it, in combination with a plurality of strikers C and $C^1$ carried by said rail opposite the strings, the striker C acting against certain of the strings and having resonant portions first striking the latter and non-resonant portions subsequently contacting therewith, and the strikes $C^1$ acting against other of the strings and having each a non-resonant portion first striking the strings and a resonant portion subsequently acting against the latter.

**No. 55,627. Toy.** (*Jouet.*)



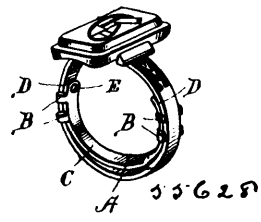

John Augustus Weitzel, Lancaster, Pennsylvania, U.S.A., 14th April, 1897; 6 years. (Filed 4th February, 1897.)

*Claim.*—1st. In a toy car, constructed and operated as herein described, the same consisting of two side pieces, each of which represents the side of a car, and between the lower edges of which are mounted two pulleys or wheels, said car being adapted to be supported on a cord or wire on which said pulleys or wheels rest, and to be moved from one end to the other of said cord or wire by raising and lowering said ends, substantially as shown and described. 2nd. A toy trolley car consisting of two side pieces, each of which represents the side of a car, and between the bottoms of which are mounted a plurality of pulleys, said car being provided at its upper side with a trolley arm, in which is mounted a pulley and two cords connected with suitable end pieces or supports which are adapted to be raised and lowered, one which serves as a support for the pulleys in the bottom of the car, and the other for the pulley in the trolley arm, substantially as shown and described. 3rd. A top car constructed as herein described, provided with pulleys or wheels in the bottom thereof, said car being also provided with a trolley arm, and two cords or wires connected with suitable end pieces or supports, one of said cords or chains serving as a support for the pulleys or wheels in the bottom of the car, and the other of which supports said trolley arm, substantially as shown and described.

**No. 55,628. Ring.** (*Anneau.*)

Chester Hiram Wells, Meshoppen, Pennsylvania, U.S.A., 14th April, 1897; 6 years. (Filed 23rd January, 1897.)

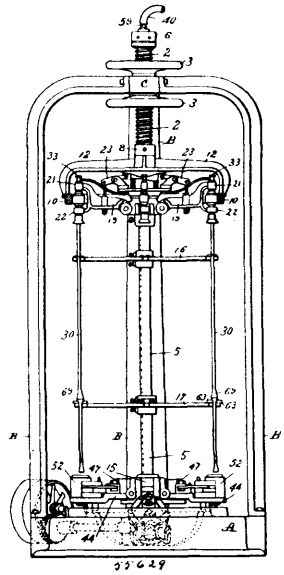
*Claim.*—An improved ring attachment, comprising a curved band of spring metal adapted to fit within a ring, devices for holding it in place, the body portion of the band or that part midway its ends being of less curvature than that of the ring, whereby when a




ring provided with the attachment is placed upon the finger, the body of attachment will be bowed outward upon the curvature of the ring, the extremities of the attachment being bent normally inward out of engagement with the inner surface of the ring, to engage the finger by the expansion of the body portion of the attachment, substantially as and for the purpose described.

**No. 55,629. Glass Blowing Machine.**

(*Machine à souffler le verre.*)




Michael Joseph Owens and Henry Joseph Colburn, both of Toledo, Ohio, U.S.A., 14th April, 1897; 6 years. (Filed 8th February, 1897.)

*Claim.*—1st. In an automatic machine for blowing glass, a main shaft containing an air-conduit, a mould, a blow-iron, means for supporting the blow-iron on said shaft in operative relation to the mould, air-conducting and controlling devices supported on said shaft in operative relation to the blow-iron and to said air-conduit, and means for adjusting said shaft, blow-iron support, blow-iron, and air-conducting and controlling devices, simultaneously, to different vertical positions relative to the mould, substantially as set forth. 2nd. In an automatic machine for blowing glass, a main shaft containing an air-conduit, a mould, a blow-iron, means for supporting the blow iron on said shaft in disconnection from said conduit, and in operative relation to said mould, and mechanism interposed between said conduit and said iron, and means intermittently to connect and disconnect said mechanism with the iron forming an intermittent air-conduit connection between said iron and said conduit, and means for actuating said mechanism and for rotating said blow-iron, substantially as set forth. 3rd. In a machine for blowing glass, an air-conduit, a mould, a blow-iron supported in operative relation to the mould and to said conduit, and means interposed between said conduit and blow-iron whereby the degree of pressure of air against the interior of an article in process of formation in said mould is variable, substantially as set forth. 4th. In an automatic machine for blowing glass, a main shaft, an air-conduit in said shaft, a blow-iron, means for supporting the blow-iron on said shaft, an arm pivoted on said main shaft, a revoluble hollow shaft hung on said arm having an air-passage therethrough in communication with said conduit, and a socket for receiving the end of said blow-iron, a valve interposed between said conduit and said hollow shaft, means for operating said valve whereby the supply of air to the hollow shaft is controlled, means for swinging said arm whereby the hollow shaft is engaged with and separated from the end of the blow-iron, and means for rotating said hollow shaft, substantially as set forth. 5th. In an automatic machine for blowing glass, a main shaft, an air-conduit in said shaft, a blow-iron, means for supporting the blow-iron on said shaft, an

arm pivoted on said main-shaft, a revoluble hollow shaft hung on said arm having an air-passage therethrough in communication with said conduit, and a socket for receiving the end of said blow-iron, a valve interposed between said conduit and said hollow-shaft, means for operating said valve whereby the supply of air to the hollow shaft is controlled, means for swinging said arm whereby the hollow shaft is engaged with and separated from the end of the blow-iron, comprising a cam 26 fixed around said main shaft, a lever 23 engaging said cam and connected to said pivoted arm, means for rotating sam main shaft, and the friction ring 10, with which a pulley on the hollow shaft engages and is thereby revolved, substantially as set forth. 6th. In a glass-blowing machine, the posts B of the machine having a hub between their upper converging ends, a screw-threaded sleeve adjustably supported in said hub, the main shaft passing through said sleeve and secured against endwise movement therein, the friction-ring 10, pivoted arms 19, and operating devices for the arms, revoluble shafts 28 and discs thereon, and one or more blow-iron holding spiders secured to said shaft, and the hand-wheels 3, having screw-engagement with said sleeve, substantially as set forth. 7th. In a glass-blowing machine, means for adjusting the sections of the moulds thereof for coinciding action in closing, comprising the slide 43, provided with the bolt 47, and the bolt $54^a$, combined with the arms 49, pivoted on said bolt 47 in said slide and each having a slot engaging said bolt $54^a$, and connections uniting said arms and the mould-sections, substantially as set forth. 8th. In a glass-blowing machine, the mould-supporting devices comprising the carrier 44 having the grooved borders, the slides 43 engaging said grooves, having bolt 47 and bolt $54^a$ thereon, the roll 46 on said slide, and the cam 45 which said roll engages, combined with the arms 49 pivoted on said bolt 47, and having slot engagement with said bolt $54^a$, the sectional mould and the connections 50 between said arms and the sections of said mould, substantially as set forth. 9th. In an automatic machine for blowing glass, a mould, a mould-carrier, means for imparting a circular movement to said mould and carrier in a horizontal plane, a wheel 9 supporting said carrier and mould, having a gear 60 on one face thereof, combined with a revoluble mould bottom having a gear connection with said gear 60, whereby the said movement of the mould-carrier imparts a rotary motion to said mould bottom beneath the same, substantially as described.

## No. 55,630. Automatic Filling Apparatus.

(*Machine automatique à remplir.*)

Fig 6

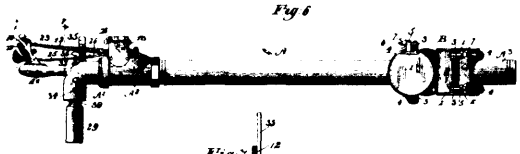
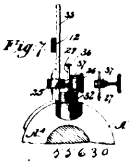


Fig 7



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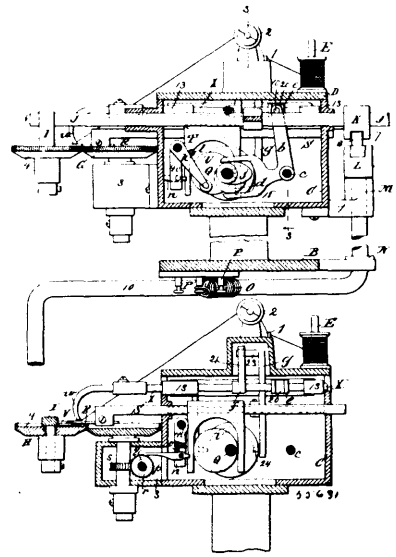
Joseph E. J. Goodlett, Memphis, Tennessee, U.S.A., 14th April, 1897; 6 years. (Filed 5th February, 1897.)

*Claim.*—1st. In a filling apparatus, the combination with tube, gooseneck, valve float, float-rod, pivoted trigger, and valve-lever, of the compound float-lever formed of two parts, which are pivoted together and also separately at fixed points, one part being connected with the float-rod and the other having a shoulder that engages the trigger, as shown and described. 2nd. In a filling apparatus, the combination with the discharge-tube, of a valve arranged in a chamber of the same, a transverse axis for said valve, a coiled spring attached to one end of said axis, a screw-rod and nut for adjusting the tension of the spring, the valve-lever and short slotted sector mounted on the valve alongside the lever, the one being fast and the other loose thereon, a clamp-screw which connects the lever and sector, and trip and float mechanism, arranged substantially as specified. 3rd. In a filling apparatus, the combination with the tube, the valve, valve-lever, trigger, float, rod, and trip-lever, of a fixed graduated gauge-bar, a pointer for the latter, and a clamp for holding it secured in any required adjustment, as shown and described.

## No. 55,631. Overstitching Machine. (*Machine à piquer.*)

Emile J. Perdreaux, New York, State of New York, U.S.A., 14th April, 1897; 6 years. (Filed 8th February, 1897.)

*Claim.*—1st. In a sewing machine, the combination with the main feed disc of the auxiliary feed disc, the sliding arm carrying the auxiliary feed disc toward and from the main feed disc and the operating lever fulcrumed on an approximately vertical axis at the rear of the casing and operatively connected with the sliding arm, the said lever having an approximately horizontal portion extending under the table and an approximately vertical end portion the latter portion being located at the side of the machine, substantially as described. 2nd. In a sewing machine, the combination with the main feed disc, of the auxiliary feed disc, the slide arm carrying the auxiliary feed disc toward and from the main feed disc, a sleeve secured to the rear end of the said arm and having a transverse



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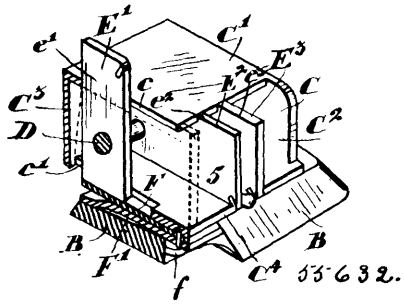
groove in its lower surface and a lever pivoted about an approximately vertical axis and having one end engaging the said groove end and the other end extending under the table at the side of the machine, substantially as described. 3rd. In a sewing machine, the combination with the main feed disc, of the auxiliary feed disc, the slide arm for carrying the auxiliary feed disc toward and from the main feed disc, a sleeve secured to the rear end of the said slide arm, and having a transverse groove in its lower surface, an operating lever pivoted about an approximately vertical axis and engaging the said groove in the slide arm, the said lever extending under the table of the machine and having an approximately horizontal portion and an approximately vertical end portion, and a spring having one end connected with the horizontal portion of the lever, and the other end connected with the frame of the machine, the vertical end portion of the said lever being located at the side of the machine, substantially as described. 4th. In a sewing machine, longitudinally aligned bearings, a looper and a looper bar supported to rock in said bearings and to reciprocate longitudinally therein, means for reciprocating the looper bar, means for removing the aligned bearings so that the longitudinal axis thereof shall constantly remain parallel to its original position, a radially slotted arm rigidly secured to the looper bar and extending upwardly therefrom, and a lever provided with a pin engaging the slot of the arm and operated to impart an oscillating motion to the looper bar, said pin being of sufficient length to permanently engage the slotted arm during the reciprocating movement of the looper bar, substantially as described. 5th. In a sewing machine, and in combination with a reciprocating needle bar a looper bar longitudinally reciprocatory in a path substantially parallel with that of the needle and also bodily movable to and from the needle bar, in parallelism therewith, and means for imparting said movement to the looper bar, substantially as and for the purpose hereinbefore set forth. 6th. In a sewing machine, and in combination with a reciprocating needle, a looper bar longitudinally reciprocatory in a path substantially parallel with that of the needle, and also bodily movable to and from the needle bar, in parallelism therewith, as well as capable of a movement of partial rotation about its longitudinal axis, and means for imparting these several movements to the looper bar at the times, and in the manner, substantially as hereinbefore set forth. 7th. In a sewing machine and in combination with a reciprocating needle bar, a looper bar, longitudinally reciprocatory in a path substantially parallel with that of the needle, supporting bearings in which said looper is mounted and moves, and means for moving said bearings, to and from the needle bar, in parallelism therewith, substantially as and for the purpose hereinbefore set forth.

## No. 55,632. Sight for Fire Arms. (*Mire pour carabines*)

Thomas Archer Watson, Creemore, Ontario, Canada, 14th April, 1897; 6 years. (Filed 9th February, 1897.)

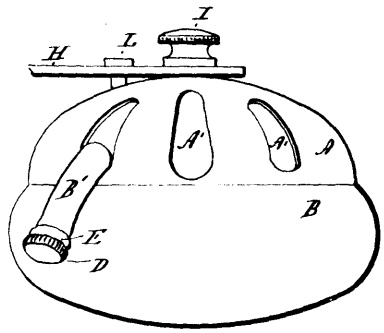
*Claim.*—1st. In a sight for rifles and fire arms and as a new article of manufacture, a plate of dead lustreless black colour having a gold tip at the upper back angle suitably supported and set with the top edge lengthwise on the rifle barrel as and for the purpose specified. 2nd. In a sight for rifles and fire arms and as a new article of manufacture, a suitably supported plate of dead lustreless black colour, a tiny strip of gold inserted angularly into the back angle of the plate, so that the outer end of the gold strip is presented at the top of the back edge of the sight as and for the purpose specified. 3rd. In a sight for rifles and fire arms and as a new article of manufacture, a suitably supported plate of dead lustreless black colour, a tiny strip of gold inserted angularly into the back

angle of the plate, so that the outer end of the gold strip is presented at the top of the back edge of the sight and a bead of dead




lustreless black colour extending above the top edge of the sight as and for the purpose specified. 4th. In a sight for rifles and fire arms and as a new article of manufacture, a suitably supported plate of dead lustreless black colour and a bead of corresponding colour of greater diameter than the thickness of the plate located on the top edge of the sight at the back end thereof as and for the purpose specified. 5th. The combination with the base, of a casing, a bolt extending longitudinally throughout the length thereof, a plurality of sight plates on the bolt, a slit in the top of the casing designed to receive a sight when swung up into position for use as and for the purpose specified. 6th. The combination with the base, of a casing, a bolt extending longitudinally throughout the length thereof, a plurality of sight plates on the bolt, a slit in the top of the casing designed to receive a sight when swung up into position for use and means for retaining such sight when swung up into position as and for the purpose specified. 7th. The combination with the base, of a casing a bolt extending longitudinally throughout the length thereof, a plurality of sight plates on the bolt, a slit in the top of the casing designed to receive a sight when swung up into position for use, a slit in the bottom of the casing through which such plate extends, and a spring plate held to the bottom of the casing and designed to exert a pressure upon the bottom of the sight plate as and for the purpose specified. 8th. The combination with the base, of a casing, a bolt extending throughout the length thereof, a plurality of sight plates on the bolt, a slit in the top of the casing designed to receive a sight when swung up into position for use, a shoulder in the sight designed to rest on the top of the casing at the front of the slit when the sight is not swung up and to permit of the front edge of the sight being flush with the top of the casing when down as and for the purpose specified.

**No. 55,633. Truss.** (*Bandage herniaire.*)




Perjohan Fredin, New Haven, Connecticut, U.S.A., 14th April, 1897; 6 years. (Filed 12th February, 1897.)

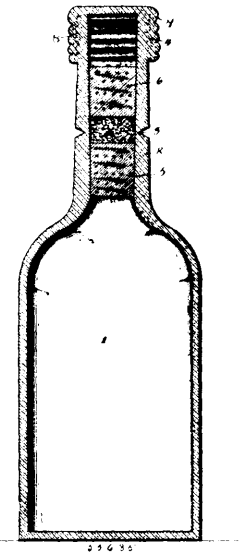
*Claim.*—1st. A truss having an inflatible ball pad furnished with an inflation-tube, a cup shaped frame adapted to receive said pad, a headed screw extending through the centre of said pad into the frame, and so as to clamp the central portions of the pad to the inside of the frame, substantially as described. 2nd. In a truss, the combination with a cup-shaped frame, of an inflatible ball-pad provided with an inflation-tube, and a clamping device extending through the centre of said pad and into the frame, and whereby a central recess is formed in the pad, substantially as described.

**No. 55,634. Soldering Compound.** (*Composé à souder.*)

William John Knox, Pittsburg, Pennsylvania, U.S.A., 14th April, 1897; 6 years. (Filed 13th February, 1897.)

*Claim.*—1st. A soldering compound consisting of a mixture of a finely divided flux and a water-proof or non-absorbent carrier adapted to form an envelope around the particles or atoms of flux, and capable of being rendered fluid by heat, so as to permit of the flux being brought into contact with the surfaces to be soldered, substantially as set forth. 2nd. A soldering compound consisting of a mixture of a finely divided flux, and a water-proof or non-absorbent and non-conducting carrier adapted to form an envelope around the particles or atoms of flux, and capable of being rendered fluid by heat, so as to permit of the flux being brought into contact with the surfaces to be soldered, substantially as set forth. 3rd. A soldering compound consisting of a mixture of a finely divided flux and vaselene, substantially as set forth. 4th. A soldering compound consisting of a finely divided flux, vaselene and paraffin, substantially as set forth. 5th. A soldering compound consisting of a mixture of a finely divided flux, and a hydrocarbon wax or paste, substantially as set forth. 6th. A soldering compound consisting of a mixture of a finely divided chloride of zinc and a hydrocarbon paste or wax, substantially as set forth.

**No. 55,635. Non-refillable Bottle.** (*Appareil pour empêcher le remplissage des bouteilles.*)



Waverly Goode Duggar, Gallion, Alabama, U.S.A., 14th April, 1897; 6 years. (Filed 27th February, 1897.)

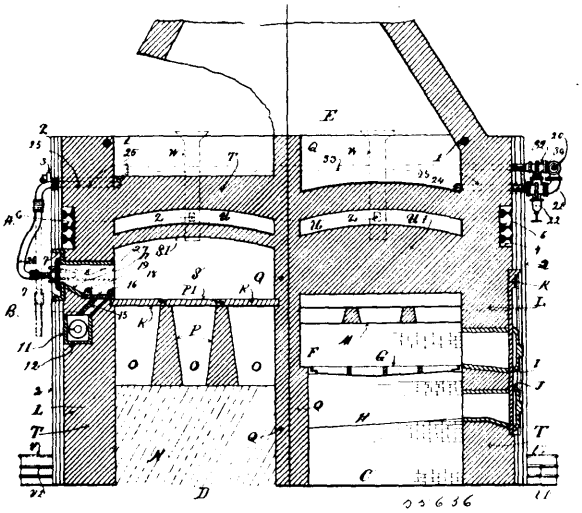
*Claim.*—1st. The herein described non-refillable bottle, the same consisting of a glass sealing stopper to fit the neck of the bottle. 2nd. The herein described non-refillable bottle, the same having a neck with a circumferential groove or weakened portion therein, and a cap fitting upon the upper end of said neck and welded in place thereon. 3rd. A bottle having a neck with a circumferential groove or weakened portion therein and screw threads upon its upper end, a cork fitting within the lower end of said neck below said circumferential groove, and a cap having screw threads upon it adapted to engage the screw threads upon said neck and to be welded in place along its lower edges to said neck. 4th. The herein described non-refillable bottle, the same having a neck provided with an exterior circumferential groove or weakened portion, while the diameter of the interior of the neck is smaller at its base and gradually increases towards its upper end, and a cap fitting upon the upper end of said portion and welded in place thereon. 5th. The herein described non-refillable bottle, the same having a neck provided with a circumferential groove or weakened portion therein, exterior screw threads at the upper end portion of said neck and a cap having a screw-threaded portion to engage the screw-threaded portion of the neck, said screw-threaded portion of cap being longer than the screw-threaded portion of the neck to provide an overlapping end portion to be welded upon said neck.

**No. 55,636. Muffler Furnace.** (*Fourneau à coupelle.*)

Aron M. Beam, Denver, Colorado, U.S.A., 15th April, 1897; 6 years. (Filed 2nd March, 1897.)

*Claim.*—1st. The combination in a muffled furnace of one or more combustion chambers, a chimney co-operating therewith, one or more muffled ovens integral with said combustion chambers and chimney, a flue extending from the combination chamber under around the furthest end of and over the top of said oven or ovens, means for introducing manipulating and discharging ores into and from said oven or ovens, and an air or steam supply pipe embedded in the masonry of the furnace in a position to heat the air passing therethrough by indirect heat radiating from said combustion chamber, a flexible or tubular fed pipe connected with said air or steam supply pipe, an air or steam inlet aperture into said oven or ovens adapted to receive the free end of said flexible air-feed tube, means for closing and opening said air inlet and a gas and vapour outlet from said oven or ovens into said flues or chimney, substantially as described. 2nd. In a muffled furnace the combination of a plurality of sets of two independent muffled ovens arranged back to back with a partition wall between them and having each an arched roof, a combustion chamber at one end, a flue for each line of ovens adapted

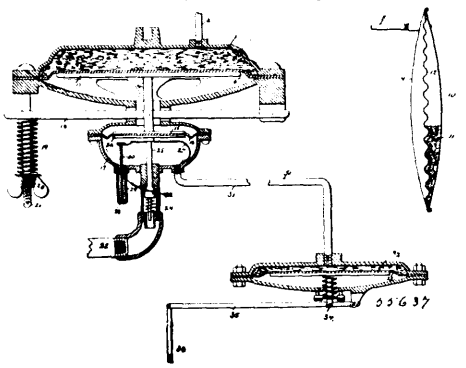
to convey the products of combustion under around the ends of and over the arched top of said ovens a roof floor above said ovens with



a feed pipe extending through said floor into said ovens having a transverse aperture registering with and adapted to form a gas escape passage from said ovens into said flue, a removable cover at the top of said feed chute, doors leading into said ovens and a chimney at the end of said flues, substantially as described. 3rd. The combination of the muffled ovens, the flues, the combustion chamber, the chimney, roof drying floor and feed chutes, with a main air supply pipe embedded in the masonry of the roof floor, a feed pipe extending from the main supply pipe to the front of each oven, a controlling valve in each feed pipe, a flexible pipe connected to the end of each feed pipe, a nipple secured to the end of said flexible feed pipe, an aperture through the front wall of each oven adapted to receive said nipple and a cover removably secured over the external end of said aperture, substantially as described. 4th. In a muffled furnace, the combination of the combustion chamber, the chimney and the flues, with a series of independent muffler ovens arranged back to back, each having a removable floor and an arched roof, an arch shaped flue over said arched roof, a roof floor over each oven, a feed spout extending through said floor into each of said ovens having a removable cover and aperture through said feed spout registering with said flue and chimney, and a series of vertically arranged buckstays at the sides and ends of said ovens and transverse and longitudinal tie rods, substantially as described. 5th. In a muffled furnace the combination with the combustion chamber, the independent, muffled ovens and the flues, with a feed trough constructed in the front wall of said ovens, a screw conveyor operatively secured therein, means for operating said conveyor, an ore chute connecting the floor of each oven with said conveyer and a pivoted door arranged to cover the entrance to said chute, substantially as described. 6th. In a muffled furnace the combination with the combustion chamber and the chimney, of one or more sets of muffled ovens arranged back to back, each having an arched roof and a removable, renewable floor, means for supporting said floor, with a cast door frame secured to the front of said ovens, a projecting rib along the top and bottom edges of said frame, a cast door frame jamb extending through the front wall of said ovens, a door pivoted thereto, a downward inclined floor to said door jamb, a cast discharge chute at the edge of said door jamp, projecting ears on the floor of said door jamb and a swinging door pivoted to said ears and arranged to cover the entrance to said discharge chute, substantially as described. 7th. In a muffled furnace the combination of the combustion chamber, the chimney, the ovens and the flues, having an arched roof to each oven, an ore drying roof above said ovens having side walls extending above its level, feed chutes through said floor and into said ovens, a gas escape passage from each of said ovens through said feed chutes into one of said flues and a cover at the mouth of each feed chute, with longitudinal buckstays arranged in a recess along the opposite fronts of said ovens, vertical buckstays arranged against the fronts opposite the ends of said ovens and against said longitudinal buckstays and adjustable tie rods connecting each opposite pair of vertical buckstays, and arranged to pass through the said roof floor, substantially as described. 8th. In a muffled furnace, the combination with the combustion chamber, the flues, the chimney, the ovens and the ore drying roof, of an air supply pipe extending transversely across said ore-drying roof, an air supply pipe built into said ore drying floor extending along the line of said ovens on each side of said ore drying roof, lateral feed pipes from said air supply pipes extending to the front of each oven, a flexible pipe at the end of each of said lateral air feed pipes, having a tube at their ends and air regulating valves in said pipes, with a cast door frame having an aperture leading into each oven adapted to receive said tube of the flexible pipe, a cover for said aperture, a door jamb frame leading from said door frame into each of said ovens, a screw conveyer built in the front side of the line of ovens, means for operating the same, a discharge chute from each oven to said conveyer and a door hinged to said door jamb to cover the mouth of said discharge chute, substantially as described.

## No. 55,637. Temperature-Controlling Apparatus.

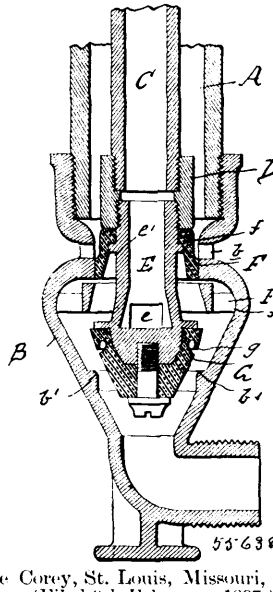
(*Appareil régulateur de température.*)



William P. Powers, Chicago, Illinois, U.S.A., 15th April, 1897; 6 years. (Filed 9th February, 1897.)

*Claim.*—1st. In a temperature-controlling apparatus, the combination with a pressure thermostat, of a movable diaphragm, a pressure chamber having an independent and supplemental pressure-fluid supply, a valve controlling said supply, said valve being adapted to be opened by the thermostatic pressure whereby to admit the supplemental fluid to act on the diaphragm in opposition to the thermostatic pressure, substantially as and for the purpose described. 2nd. In a temperature-controlling apparatus, a fluid-pressure thermostate having a movable diaphragm adapted to be flexed by the thermostatic pressure, a regulating-spring resisting the movement of the diaphragm under said pressure, a supplemental pressure-fluid supply, a valve controlling said supply and adapted to be operated by the movement of the diaphragm, and means for adjusting the regulating-spring and thereby the tension of the diaphragm whereby the thermostat may be made to actuate the valve at any desired pressure, substantially as described. 3rd. In a temperature-controlling apparatus, the combination with a pressure thermostat, of a movable diaphragm adapted to be flexed by the thermostatic pressure, a supplemental pressure-chamber, a pressure-fluid supply communicating with the said chamber and opposing the thermostatic pressure, a valve for controlling the pressure-fluid supply, and intermediate mechanism between the diaphragm and the valve whereby the variations of temperature may be made to control the valve, substantially as described. 4th. In a temperature-controlling apparatus, the combination with a thermostat having a movable diaphragm or wall, a supplemental pressure-chamber having also a movable diaphragm, a pressure-fluid supply communicating with said supplemental pressure-chamber, a valve controlling its inlet and a conduit leading from the supplemental pressure-chamber whereby the motor fluid may be conveyed away for utilization, and an escape-opening whereby the excess of pressure may be relieved, substantially as described. 5th. In a temperature-controlling apparatus, the combination with a thermostat of two pressure-chambers each having a movable diaphragm, one of said chambers being larger than the other, the larger of said chambers being adapted to serve as a pressure-chamber for a thermostat and the smaller chamber as a supplemental fluid-pressure chamber, an independent pressure-fluid supply communicating with the smaller chamber, a valve controlling the pressure-fluid supply inlet, and connections between the diaphragms whereby the thermostatic action may be made to unseat the valve and admit the pressure-fluid supply to the smaller chamber, substantially as described. 6th. In a temperature-controlling apparatus, the combination with a thermostat of two pressure-chambers each having a movable diaphragm, one of said chambers being larger than the other, the larger of said chambers being adapted to serve as a pressure-chamber for a thermostat and the smaller chamber as a supplemental fluid-pressure chamber, an independent pressure-fluid supply communicating with the smaller chamber, a valve controlling the pressure-fluid supply inlet, connections between the diaphragms whereby the thermostatic action may be made to unseat the valve and admit the pressure-fluid supply to the smaller chamber, and a valve controlled by the thermostat to relieve the excess of pressure, substantially as described. 7th. In a temperature-controlling apparatus, the combination with a thermostat of two pressure-chambers each having a movable diaphragm, one of said chambers being larger than the other, the larger of said chambers being adapted to serve as a pressure-chamber for a thermostat and the smaller as a supplemental pressure-fluid chamber, an independent pressure-fluid supply communicating with the smaller chamber, a valve controlling the pressure-fluid supply inlet, connections between the diaphragms whereby the thermostatic action may be made to unseat the valve and admit the pressure-fluid supply to the smaller chamber, and a regulating-spring for adjusting the mechanism to operate under varying pressures, substantially as described.

**No. 55,638. Hydrant.** (*Borne-fontaine.*)




William Wallace Corey, St. Louis, Missouri, U.S.A., 15th April, 1897; 6 years. (Filed 9th February, 1897.)

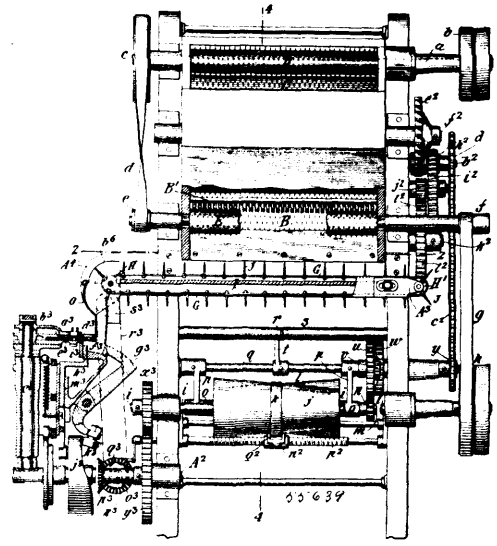
*Claim.*—1st. In a hydrant, the combination with the stand pipe, of a valve casing mounted upon the lower end of the stand pipe, a valve stem, a main valve on the lower end of said stem, and a drip valve, the point of contact of said drip valve being on a plane below its point of support; substantially as described. 2nd. A drip valve for hydrants, having its point of contact on a plane below its point of support; substantially as described. 3rd. An inverted cup-shaped drip valve for hydrants, having its upper portion reduced or cut away, and its point of contact below its point of support, in combination with a valve casing, having drip openings, the contacting face of the flange of the drip valve contacting with the valve casing below the drip openings, substantially as described. 4th. A cup-shaped drip valve for hydrants, having a reduced portion between its point of support and point of contact, whereby, the valve is yielding only below its point of support, substantially as described. 5th. In a hydrant, the combination with the stand pipe, and valve casing, of a conically shaped valve seat formed in the lower end of said casing, said seat forming substantially a bell-mouth for the inlet, a valve stem, and a cone-shaped main valve mounted on the lower end of the valve stem and adapted to co-operate with said valve seat by being forced downwardly thereinto, substantially as described. 6th. In a hydrant, the combination with the stand pipe, and valve casing, of a conically shaped valve seat formed in the lower end of said casing, a vertically disposed portion immediately above said seat and forming a part thereof, a hollow valve stem, a cone-shaped main valve mounted on the lower end of said stem, said main valve having a vertically disposed face at its upper edge to co-operate with the vertically disposed portion in the valve casing, when said valve is in its closed position, and a cup-shaped drip valve mounted on the main valve stem for co-operating with drip openings in the valve casing, substantially as described. 7th. In a hydrant, the combination with the stand pipe, and valve casing, of a conically shaped valve seat formed in the lower end of said casing, a vertically disposed portion immediately above said seat and forming part thereof, a hollow valve stem, a cone-shaped main valve mounted on the lower end of said stem, said main valve having a vertically disposed face at its upper edge to co-operate with the vertically disposed portion in the valve casing, when said valve is in its closed position, said main valve also having an annular recess which opens to the exterior below said vertical face and extends up into the valve behind said face, whereby pressure is admitted into said recess to force said vertically disposed face outwardly, and a cup-shaped drip valve mounted on the main valve stem for co-operating with drip openings in the valve casing, substantially as described.

**No. 55,639. Feed Mechanism for Cigarette Fillers.**

(*Mécanisme alimentateur pour cigarettes.*)

James A. Bonsack and Hugo Bilgram, both of Philadelphia, Pa., U.S.A., 15th April, 1897; 18 years. (Filed 10th February, 1897.)

*Claim.*—1st. In cigarette mechanism, the combination substantially as set forth, of a continuously travelling feeding surface provided with teeth and an intermittently travelling filling surface, the said feeding and filling surfaces being arranged so that their contiguous surfaces will travel in opposite directions, for the purpose set forth. 2nd. In cigarette mechanism, the combination substantially as set forth, of a continuously travelling feeding surface provided with teeth and an intermittently travelling filling surface, the said filling and feeding surfaces being arranged so that their contiguous surfaces will travel in opposite directions and the speed of

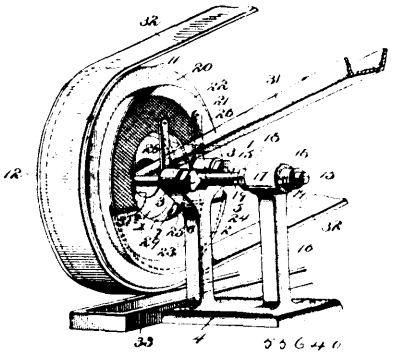



the filling surface, when in movement, will be greater than that of the feeding surface, for the purpose set forth. 3rd. In cigarette mechanism, the combination substantially as set forth, of a continuously rotating feed cylinder provided with teeth and an intermittently rotating filling cylinder, the cylinders being arranged so that their contiguous surfaces will rotate in opposite directions, for the purpose set forth. 4th. In cigarette mechanism, the combination substantially as set forth, of a continuously rotating feed cylinder provided with teeth and an intermittently rotating filling cylinder, the cylinders being arranged so their contiguous surfaces will rotate in opposite directions and the peripheral rotative speed of the filling cylinder will be greater than that of the feeding cylinder, for the purposes set forth. 5th. In cigarette mechanism, the combination substantially as set forth, of a feed cylinder having its surface provided with teeth, and a tobacco receiving hopper, in which the cylinder is arranged to rotate, having its bottom curved concentrically with the surface of the cylinder and in such proximity thereto that the fibres of tobacco deposited upon the bottom will be carried upward by the revolution of the cylinder. 6th. In cigarette mechanism, a series of compartments adapted to contain parcels of tobacco of shape and size for forming the cigarette fillers desired, in combination with means for delivering to the compartments the desired quantity of tobacco and disposing the same therein in the desired shape for the parcels, and means for discharging the parcels from the compartments. 7th. In cigarette mechanism, the combination substantially as set forth, of a series of compartments adapted to contain parcels of tobacco for cigarette fillers, means for delivering thereto and disposing therein quantities of tobacco of shape and size to form parcels adapted upon compression to form conical or tapered fillers. 8th. In cigarette mechanism, the combination substantially as set forth, of a series of compartments adapted to contain parcels of tobacco for cigarette fillers, means for delivering thereto and disposing therein quantities of tobacco to form parcels of the shape and size adapted upon compression to form straight cigarette fillers, that is fillers of uniform diameter throughout their length. 9th. In cigarette mechanism, an endless apron or belt divided by transverse partitions into compartments adapted to contain parcels of tobacco of shape and size for forming cigarette fillers. 10th. In cigarette mechanism, the combination substantially as set forth, of an endless apron divided by transverse partitions into compartments of substantially the length of the cigarette fillers desired, means for delivering tobacco to such compartments in quantity and disposition to form parcels for cigarette fillers, and means for discharging the parcels from the compartments. 11th. In cigarette mechanism, in combination with an endless apron divided by transverse partitions into a series of compartments adapted to contain parcels of tobacco in shape and size for cigarette fillers, means for advancing such compartments and means for discharging the contents therefrom, of side guides to retain the tobacco in the compartments, 12th. In cigarette mechanism, in combination with an endless apron divided by transverse partitions into a series of compartments adapted to contain parcels of tobacco in shape and size for cigarette fillers, means for advancing such compartments and means for discharging the contents therefrom, of side guides to retain the tobacco in the compartments and recesses in the side guides at or near the place of discharge, to give the desired clearance to the parcels, substantially as described. 13th. In cigarette mechanism, the combination of a series of compartments adapted to contain parcels of tobacco for cigarette fillers, means for showering tobacco, a deflecting surface arranged diagonally above the compartments operating

to deliver the showered tobacco in larger quantities to one end of the compartments than to the other and means for advancing the compartments, whereby the parcels formed therein are adapted for conical or tapered cigarette fillers. 14th. In cigarette mechanism, the combination of an endless apron carrying a series of compartments adapted to contain parcels of tobacco for cigarette fillers, means for advancing the apron, means for showering tobacco and a deflecting surface arranged diagonally above the compartments and operating to deliver the showered tobacco in larger quantities to one end of the compartments than to the other, whereby the parcels are adapted for conical or tapered cigarette fillers. 15th. In cigarette mechanism, the combination substantially as set forth, of mechanism for showering tobacco, a series of moving compartments for receiving the showered tobacco, a deflecting surface or plate arranged diagonally between the showering mechanism and the compartments and means for directing the entire shower of tobacco upon the said deflecting surface substantially throughout its entire length, whereby the showered tobacco will be thrown upon the deflecting plate and will be delivered therefrom into the compartments to form parcels adapted for straight cigarette fillers. 16th. The combination of a stripper roll as E, a concave guide as M arranged beneath the stripper roll, a series of compartments adapted to contain parcels of tobacco for cigarette fillers, means for advancing the same and a deflecting surface as L arranged diagonally between the guide M and the series of compartments, whereby the tobacco will be delivered from the diagonal deflecting surface to the compartments to form parcels adapted to form straight cigarettes. 17th. Transverse partitions of a series of compartments adapted to receive showered tobacco for cigarette fillers, the said partitions having broad bases to receive screws or simular securing devices and side walls converging to a thin or narrow edge, substantially as and for the purpose set forth. 18th. Means for securing vertical transverse partitions as J to an endless apron as G, to form a series of compartments which consists in clamping the apron between cleats as $s^2$ and the partitions by means of screws passing through the cleats, the body of the apron and into the partitions, substantially as set forth. 19th. The combination of an endless apron provided with transverse cleats as $s^2$, and a drum for driving the apron as H, provided with longitudinal grooves as K, adapted to receive the cleats, whereby the apron will be advanced without slip. 20th. Mechanism for intermittently discharging parcels of tobacco from a series of moving compartments, which consists in the combination of a door as O, means for bringing the parcels of each compartment successively to rest upon the door when in its closed position, means for opening the door to discharge each parcel as it is brought to rest upon it, and mechanism for closing the door before the next succeeding parcel is brought into discharging position. 21st. In cigarette mechanism, the combination substantially as set forth, of a series of moving compartments adapted to contain and advance parcels of tobacco for cigarette fillers, mechanism for discharging the complete parcels from the compartments and delivering them to mechanism for compressing them to filler shape, and mechanism for discharging the incomplete parcels, whereby they will not be delivered to the compressing mechanism. 22nd. In a mechanism for discharging parcels of tobacco from a series of moving compartments to a compressing mechanism, the combination of a door as O, devices for retaining the door closed to the compressing mechanism for an indefinite period and an opening as X disconnected with the compressing mechanism through which the incomplete parcels can be discharged. 23rd. The combination with a series of compartments containing parcels of tobacco and arranged to pass around a drum, as H, of a door, as O, so curved in its closed position that the ends of the compartment partitions will sweep over the curved door and discharge the parcels through an opening, as X, substantially as and for the purpose set forth. 24th. The combination with mechanism for disposing tobacco in parcels adapted for cigarette fillers and mechanism for compressing the same into filler form, of a chute, as N, narrower at its lower than at its upper end through which the parcels descend, for the purpose of evening up and concentrating their ends. 25th. In combination with a series of compartments for successively conveying and delivering parcels of tobacco for cigarette fillers and mechanism for successively compressing the parcels to filler form as they are delivered thereto, of means for actuating the conveying and delivering compartments in positive and exact unison with the compressing mechanism, for the purpose set forth. 26th. The combination with mechanism for successively compressing parcels of tobacco to filler form and mechanism for successively delivering the parcels of tobacco thereto, of means for positively actuating the compressing mechanism, as shaft $A^2$ and its connections, and means for actuating the delivering mechanism positively connected and operating in unison with the main motor of the compressing mechanism, as by gear-wheels, chain belt and sprocket-wheels, substantially as and for the purpose set forth. 27th. In cigarette mechanism, the combination substantially as set forth, of means for bringing an irregular disarranged or undistributed mass of tobacco to a wed-like condition of substantially uniform thickness and consistency and means for removing the tobacco from the web in substantially uniform quantity and depositing it upon a moving receiving surface in a continuous stream containing the desired quantity and disposition of tobacco for a continuous cigarette filler. 28th. In cigarette machinery, the combination substantially as set forth, of a hopper, feed and filling travelling surfaces, as cylinders B and C, by which tobacco placed in the hopper is formed into a web on the feed surface, a stripper roll, as E, chute, as 9, and a moving receiving surface, as belt 19, by which the tobacco is uniformly taken from the web and showered down the chute and upon the receiving surface to constitute a stream adapted in size and shape to form a continuous cigarette filler. 29th. In cigarette mechanism, the combination substantially as set forth, of a device for scattering tobacco, as roll 1, means for delivering substantially uniform quantities of tobacco to the scattering device, a moving surface, as apron 5, on which the scattered tobacco is deposited in a sheet-like condition and means for bringing the tobacco from the sheet-like condition into a continuous stream upon a receiving surface, as belt 19, the said stream being of the desired quantity and shape for forming a continuous cigarette filler. 30th. In cigarette mechanism, the combination substantially as set forth, of a scattering roll provided with wings, as 4, means for feeding tobacco to such roll, an endless apron arranged beneath and extending forward of such roll at substantially right angles thereto, devices for uniformly showering or dropping the tobacco as it is discharged from the apron and a chute into which the tobacco is dropped and by which it is guided upon a receiving surface to form a continuous stream adapted for a continuous cigarette filler. 31st. In cigarette machinery, the combination substantially as set forth, of devices for bringing tobacco into a web-like condition, means for removing the tobacco from the web, as stripper roll E, a scattering roll, as 1, arranged to rotate at a greater speed than the stripper roll and out of engagement therewith, an endless apron arranged to move beneath and forward of the scattering roll and forming the bottom of a chamber, a downwardly projecting chute, as 9, located near the discharge end of the apron, devices for showering or dropping the tobacco uniformly as it is discharged from the apron into the chute and upon a receiving surface, as belt 19, to constitute a continuous stream of tobacco of size and shape adapted for a continuous cigarette filler. 32nd. In cigarette mechanism, a chute, as 19, provided with adjustable sides, whereby the exit opening at its bottom can be increased or decreased in shape or capacity. 33rd. In cigarette mechanism, a chute, as 19, provided with side pieces extending below the bottom of the chute proper and secured to the walls of the chute and means, as screws 23, for adjusting the lower edges of the sides pieces to increase or decrease the size or shape of the chute exit. 34th. In cigarette mechanism, means for securing a chute, as 9, in position to receive and direct tobacco, which consists in clamping the upper edge of one of the sides of the chute to the frame of the mechanism or some attachment thereto, and supporting the end walls of the chute by means of arms, as 17, which are also secured to the frame.

## No. 55,640. Machine for Pulverizing Quartz.

(*Machine à broyer le quartz*)



Frederick W. Thomson, Fort William, Ontraio, Canada, 15th April, 1897: 6 years. (Filed 17th February, 1897.)

*Claim.*—1st. In a machine for pulverizing quartz, a stationary cylinder, a series of rolls travelling around said stationary cylinder, a suitable frame for regulating the distance between the rolls and controlling their movements, and a drum surrounding said rolls, and means substantially as described for revolving said drum. 2nd. In a machine for pulverizing quartz, a stationary hollow cylindrical support, a series of rolls travelling around the same and held in place by means of a suitable revolving frame, a revolving drum surrounding said rolls, and a centrally arranged shaft for said drum, said shaft passing through said hollow cylindrical support and having the drum keyed thereto, substantially as described. 3rd. In a machine for pulverizing quartz, a stationary hollow cylindrical support, a series of rolls travelling around the same and supported thereby, an annular frame in which said rolls are mounted, a revolving drum surrounding said rolls and stationary support, and a centrally arranged shaft keyed within said drum and mounted in bearings upon one side of the machine, and means substantially as described for preventing endwise movement of said shaft, for the purpose and substantially as described. 4th. In a machine for pulverizing quartz, a stationary hollow cylindrical support, a series of rolls travelling around the same, an annular frame for controlling the relative position of said rolls, and a revolving drum surrounding

and resting upon and supported by said rolls, in combination with a detachable disc or cover secured to said drum for giving access to the interior of the machine, substantially as described. 5th. In a machine for pulverizing quartz, the combination with a revolving drum, and the interiorly arranged stationary hollow cylindrical support and a series of rolls travelling around the latter, of a screen located upon one side of and carried by said revolving drum, and a stationary protecting hood or splasher, all arranged and adapted to operate in the manner set forth. 6th. In a machine for pulverizing quartz, a stationary hollow cylindrical support and a surrounding shoe thereof, both provided with vertically aligned apertures, a series of rolls travelling around said support and shoe, an annular frame for holding said rolls in place, a rotary drum surrounding said rolls, an internally arranged shoe secured to said drum, and means substantially as described for holding said drum in position laterally, as specified. 7th. In a machine for pulverizing quartz, a stationary hollow cylindrical support rigidly connected with and in combination with a supporting pedestal, a series of rolls travelling around said hollow cylindrical support, a rotary drum surrounding said rolls, a centrally perforated end disc secured upon one side of said drum, a centrally arranged shaft passing through said hollow cylindrical support, and a pedestal for supporting said shaft at one end, the opposite end of said shaft being keyed to the end disc of said rotary drum, all arranged substantially as and for the purpose specified. 8th. In a machine for pulverizing quartz, a stationary hollow cylindrical support, and the pedestal upon which said cylindrical support is mounted provided with the upper bifrucated end and central concavity as described, in combination with a series of rolls travelling around said hollow support, a rotary drum surrounding said rolls, and a centrally arranged shaft connected at one end to said drum through the medium of the end disc thereof and mounted at its other end in a pedestal and located intermediate its ends within bifrucation or concavity at the upper end of the main supporting pedestal, substantially as and for the purpose described.

### No. 55,641. Washing Compound.

(*Composé pour nettoyer le linge.*)

Hormisdas Béliveau et Benjamin Béliveau, tous deux de Danville, Québec, Canada, 15 avril 1897; 6 ans. (Déposé le 1er février 1897.)

*Résumé.*—Un composé servant à nettoyer le linge, dont voici les éléments constituants et leurs proportions respectives: quatre gallons d'eau, une livre de potasse, une once d'ammoniaque, une once de carbonate et de potasse et un quart de livre de savon ordinaire, tel que décrit et dans le but mentionné.

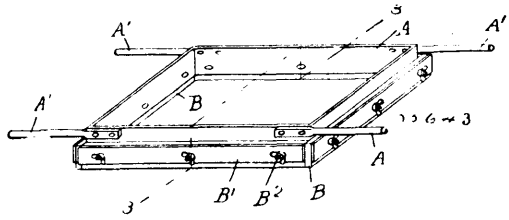
### No. 55,642. Explosive. (*Fabrication d'explosif.*)

Frederick William Jones, Barwick, Hertford, England, 15th April, 1897; 6 years. (Filed 6th March, 1897.)

*Claim.*—1st. The method of varying the density and rate of combustion of a dissolved or condensed smokeless or semi-smokeless powder which consists in submitting the same to the action of a solvent after it has been granulated, substantially as described. 2nd. The method of varying the density and rate of combustion of a dissolved or condensed smokeless or semi-smokeless powder which consists in treating the same with a swelling bath or solvent for the nitro-cellulose therein, substantially as described. 3rd. The method of varying the rate of combustion of a dissolved or condensed smokeless or semi-smokeless powder, which consists in treating the same to a temperature sufficient to liquefy one or more of those ingredients which will exert a solvent action on the remainder, substantially as described. 4th. The method of varying the density and rate of combustion of a dissolved or condensed smokeless or semi-smokeless powder, which consists in treating the same with a swelling bath or solvent for the nitro-cellulose therein, and subsequently heating the same to a temperature sufficient to liquefy one or more of those ingredients thereof which will exert a solvent action on the remainder, substantially as described. 5th. The method of manufacturing an explosive, consisting in acting upon a dissolved or condensed powder by means of a solvent swelling bath, then washing away the solvent, and subsequently boiling the explosive, substantially as described. 6th. The method of manufacturing an explosive, consisting in acting upon a dissolved or condensed powder by means of an aqueous solution of a ketone previously saturated with any of the ingredients which it would otherwise dissolve out of the powder substantially as described. 7th. An explosive consisting of a base of the nitro-cellulose class mixed with di or tri-nitro derivatives of benzine or its analogues, and heated so as to cause such nitro-derivatives to exert a solvent action on the other ingredients, substantially as described. 8th. An explosive consisting of a base of the nitro-cellulose class, mixed with from ten to thirty per cent, of the di, or tri-nitro derivatives of benzine or its analogues, and heated so as to cause such nitro-derivative to exert a solvent action on the other ingredients, substantially as described. 9th. A smokeless or semi-smokeless explosive consisting of a dissolved or condensed powder rendered more rapid by the solvent action of certain of its ingredients on certain of the others such action being caused by boiling the explosive in water, substantially as described.

### No. 55,643. Asphalt-Repairing Process.

(*Procédé pour réparer les pavés d'asphalte.*)




John William Buzzard, Chicago, Illinois, U.S.A., 15th April, 1897; 6 years. (Filed 4th March, 1897.)

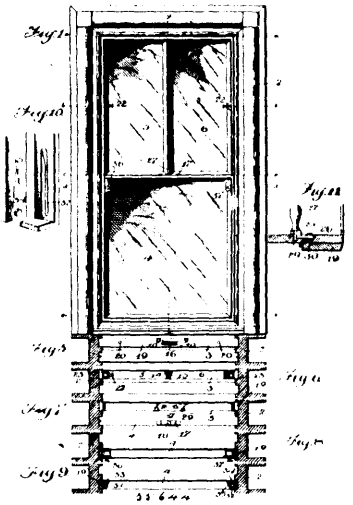
*Claim.*—1st. The process of repairing asphalt pavements or the like, consisting in running molten material into the place to be repaired, allowing such material to remain in place until the asphalt or similar material around the place to be repaired has become soft and plastic, then removing such material and then adding heated asphalt or the like. 2nd. The process of repairing asphalt pavements or the like, consisting in running molten material into the place to be repaired, providing a confining device for said molten material constructed so as to allow the molten material to conform to the irregularities in the opening to be repaired, and provided with a removable device to which said molten material becomes attached when solidified, allowing said molten material to remain in place until the asphalt or similar material around the opening to be repaired has become soft and plastic and the molten material has become solidified, then removing such material and filling such opening with heated asphalt. 3rd. The process of repairing asphalt pavements or the like, consisting in placing a box or casing over the place to be repaired, then placing a smaller box or receptacle within said box or casing, said receptacle being provided with a woven or latticed bottom, then pouring molten material into said receptacle, said material being allowed to remain in place until the asphalt surrounding the place to be repaired becomes soft and plastic and the material becomes solidified, then removing the receptacle and the material, then raking heated asphalt mixture into the place to be repaired, then rolling or compressing such asphalt until the surface of the pavement becomes even. 4th. A pavement-repairing device, comprising a case or box adapted to be placed over the opening to be repaired, said case or box having a projecting strip of asbestos or the like extending around its lower edge and upon which the box or case is supported, a box or receptacle adapted to be placed within said box or case and provided with a woven or latticed bottom, the whole so constructed that when molten lead or the like is poured into said inner box it will pass through the bottom and enter the opening in the pavement and conform to the irregularity thereof so as to heat all the asphalt surrounding said opening. 5th. The method of repairing or re-surfacing pavements, which consists in softening the same by the application thereto of a molten material, then removing the molten material when it is hardened, then smoothing and finishing the softened surface. 6th. The method of re-surfacing pavements, which consists in softening the part to be re surfaced by the application thereto of molten air-excluding material, then removing such material when it is sufficiently hardened, then adding paving material in the proper condition and finishing the surface. 7th. The process of preparing asphalt pavements for re-surfacing, which consists in applying to the part to be repaired a molten material, retaining such material in contact with the part until such part has been softened or heated and the molten material has been partially hardened, then removing such hardened material and finishing the surface. 8th. The method of repairing asphalt pavements, which consists in subjecting the part to be repaired to a molten material until the part to be repaired is heated or softened and the molten material is cooled or hardened, then removing the molten material, adding new paving material and smoothing and burnishing. 9th. The method of repairing asphalt pavements, which consists in subjecting the spot to be repaired to a heated molten material, removing such material when the spot to be repaired has been sufficiently heated, adding new material and smoothing and burnishing.

### No. 55,644. Window. (*Fenêtre.*)

Frank Starace, New York, State of New York, U.S.A., 15th April, 1897; 6 years. (Filed 9th March, 1897.)

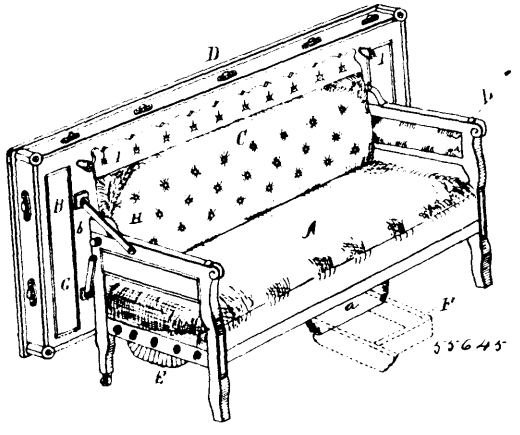
*Claim.*—1st A metallic sash frame provided with one or more interiorally hinged removable panel frames, substantially as and for the purpose set forth. 2nd. A sliding sash frame provided with one or more removably hinged panel frames, substantially as and for the purpose set forth. 3rd. A sliding metallic sash frame provided with non-metallic side battens, substantially as and for the purpose set forth. 4th. The sliding sash frame 3, formed with the elongated holes 8 and 10, in combination with the hinged panel frames 5 and 6, each of which is formed with the pivot stud 7, and provided with the removable pivot screw stud 9, by means of which said panel frames are independently hinged in said sliding sash frame, substantially as and for the purpose set forth. 5th. The sliding sash frame 3, comprising the elongated holes 8 and 10, in combination with the hinged panel frames 5 and 6, each of which is formed with a rigid pivot stud 7 and a removable pivot screw stud 9, the adjacent studs

9– 9 on the panels 5 and 6 being connected by a spring 16, substantially as and for the purpose set forth. 6th. The sliding sash frame



3, in which is hinged the panel frames 5 and 6 as described, one of the adjacent side rails of one panel being formed with a semicircular vertical recess 14, and the the other with a correspondingly convex rib 15, substantially as and for the purpose set forth. 7th. The combination with the frame 3, having elongated holes 8 and 10, of the panel frames 5 and 6 provided with the removable screw studs 9 9 and spring 16, and having their adjacent side rails formed with a recess 14 and a corresponding rib 15, substantially as and for the purpose set forth. 8th. The combination with the sash frame 4 formed with an elongated hole 31 and an inclined slot or recess 32, of the panel frame 35 provided with the stationary pivot studs 33 – 34 and the spring bolts 36 37, substantially as and for the purpose set forth. 9th. The combination with the lower sash frame 4 formed with the recess 29 in its top rail, of the upper sash frame 3 provided with the lever 25, fulcrumed on the screw stud 26 on the bottom rail thereof, and having its outer free end provided with a vertically movable handle 27 formed with an integral pin adapted to engage said recess 29 and lock the meeting rails of the upper and lower sashes, substantially as and for the purpose set forth.

**No. 55,645. Lounge or Sofa.** (*Causeuse ou canapé.*)

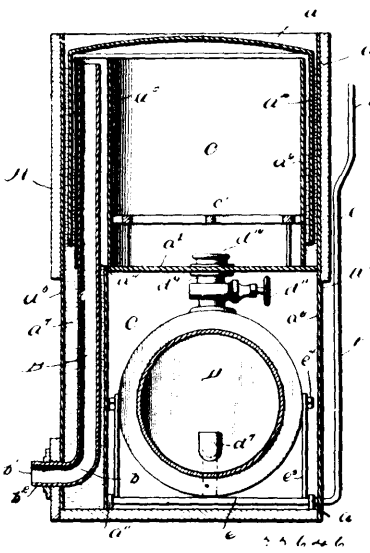


James W. Peddie, Bloomington, Illinois, U.S.A., 15th April, 1897; 6 years. (Filed 26th March, 1897.)

*Claim.* 1st. A lounge or sofa and a swinging convertible frame having one side as a back for the sofa and a game table upon its opposite side substantially as and for the purpose set forth. 2nd. A lounge or sofa and a swinging convertible frame having a back for the sofa and a game table upon its opposite sides, two independently-operating braces at each end of the sofa which are pivoted thereto and to the convertible frame, and adjustable supports for leveling the table located between the same and the arms or ends of the sofa frame, whereby the table is capable of adjustment independent of the sofa, substantially as and for the purpose set forth. 3rd. A lounge or sofa having a swinging convertible frame, two independently operating braces at each end of the sofa which are pivoted thereto and to the convertible frame having on its one side the back of the sofa and on the other a game board, adjustable supports for leveling the table, a cue rack or rest placed under and attached to the sofa, whereby for storing and retaining cues.

**No. 55,646. Smoke Testing Device.**

(*Appareil pour éprouver la fumée.*)

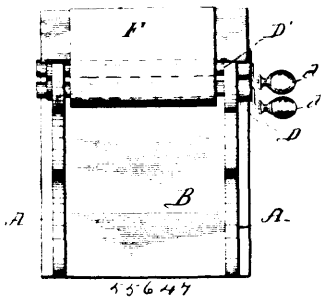


Thomas Thomson, Scranton, Pennsylvania, U.S.A., 15th April, 1897; 6 years. (Filed 12th March, 1897.)

*Claim* – 1st. An apparatus of the character indicated, comprising a casing, a chamber within said casing, an outlet from said chamber, and means for supplying a current of air to said chamber, substantially as described. 2nd. An apparatus of the character indicated, comprising a casing, a chamber in said casing, means in said chamber for supporting combustible material, an outlet from said chamber, and means for supplying a current of air to the chamber on the side of the combustible material opposite the outlet, substantially as described. 3rd. An apparatus of the character indicated, comprising a casing, a chamber in said casing, an outlet from said chamber, means in said chamber for supporting combustible material, a movable covering for said chamber, and means for supplying a current of air to the chamber on the side of the combustible material opposite the outlet, substantially as described. 4th. An apparatus of the character indicated, comprising a casing, a chamber in said casing, said chamber having its outer walls placed a distance from the near faces of the walls of the casing, an outlet from said chamber, means in the chamber for supporting a combustible material, means for supplying a current of air to the chamber on the side of the combustible material opposite the outlet, and a bell fitting over the chamber, said bell having its sides depending in the space between the walls of the chamber and the inner faces of the casing, said space being adapted to receive a sealing fluid, substantially as described. 5th. An apparatus of the character indicated, comprising a casing, a chamber within said casing having its top open, an outlet pipe within the casing also having its top open, a covering for the upper ends of the chamber and the outlet pipe, means within the chamber for supporting a combustible material, and means for supplying a current of air to the chamber on the side of the combustible material opposite the outlet pipe, substantially as described. 6th. An apparatus of the character indicated, comprising a casing, a transverse partition across said casing, walls extending upwardly from said transverse partition to form a chamber, said walls being some distance from the inner faces of the walls of the casing, and one of the walls extending from the transverse partition, extending from said partition vertically in both directions to form a compartment $a^7$, an outlet pipe in said compartment, a bell covering the chamber and the upper end of the outlet pipe, means in said chamber for supporting a combustible material, and means for supplying a current of air to the chamber on the side of the combustible material opposite the outlet pipe, substantially as described. 7th. An apparatus of the character indicated, comprising a casing, a chamber in said casing, an outlet from said chamber, means in the chamber for supporting a combustible material, and a bellows, said bellows comprising end plates secured to the casing, said end plates being provided with ports leading into the above mentioned chamber, a central plate between the walls of the bellows, said central plate having an inlet port leading to each of the chambers of the bellows, valves upon said inlet ports, and means for reciprocating the central plate of the bellows, substantially as described. 8th. An apparatus of the character indicated, comprising a casing, a chamber in said casing, means in said chamber for supporting a combustible material, an outlet from said chamber, means for supplying a current of air to said chamber on the side of the combustible material opposite the outlet, and means for closing the passage into the chamber from the member for supplying the air thereto, substantially as described. 9th. An apparatus of the character indicated, comprising a casing, a chamber in said casing, means in said chamber for supporting a combustible material, an outlet from said chamber, means for sup-

plying a current of air to said chamber on the side of the combustible material opposite the outlet, and a positively operative valve in the passage between the chamber and the member for supplying air thereto, 10th. An apparatus of the character indicated, comprising a casing, a chamber in said casing, means for supporting a combustible material in said chamber, an outlet from said chamber, a bellows communicating with said chamber, said bellows comprising end plates secured to the casing, said end plates being provided with valved ports leading into the chamber, a central plate attached to the walls of said bellows, said central plate having an inlet port leading into each of the chambers of the bellows, valves upon said inlet ports, a shaft journalled upon the casing transversely of the bellows, arms upon said shaft, pivots securing said arms to the central plate of the bellows, and an operating lever upon said shaft, substantially as described.

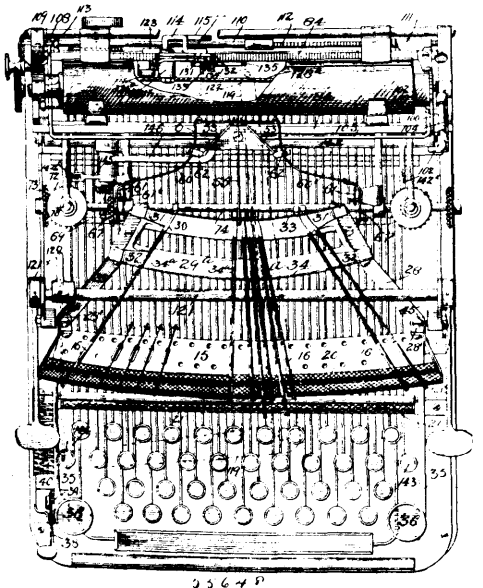
**No. 55,647. Telephone Desk.** (*Pupitre de téléphone.*)




Ernest Mireau, Montréal, Québec, Canada, 15 avril 1897; 6 ans. (Déposé le 6 mars 1897.)

*Résumé.*—1° Un pupitre de téléphone comprenant deux côtés, un couvert incliné, des rouleaux disposés dans les dits côtés et une lisière de papier enroulée sur les dits rouleaux, tel que décrit et pour les fins indiquées. 2° Un pupitre de téléphone comprenant les côtés A, le dos B, le dessus C, les rouleaux D et D' pourvus de manivelles à leurs extrémités, le ressort E ayant pour effet d'empêcher les dits rouleaux de tourner trop librement, et une lisière de papier F enroulée sur les dits rouleaux, le tout tel que décrit pour les fins indiquées.

**No. 55,648. Type-writing Machine.** (*Clavigraphe.*)




Albert Gallatin Corre, Assignee of Bernard Granville, both of Cincinnati, Ohio, U.S.A., 17th April, 1897; 6 years. (Filed 18th December, 1896.)

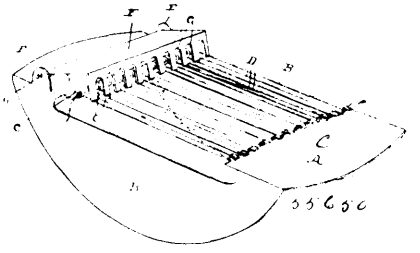
*Claim.*—1st. The converging guide plates for the type bars in conjunction with the shifting tongue movable from side to side between them, substantially as described. 2nd. The links 16 for connecting the type bars and bell crank levers formed of sheet metal of U-shape with spring ends, substantially as described. 3rd. The stops for the cradle frame consisting of the buffers and the eccentric clamping discs, substantially as described. 4th. The two guide plates for the type bars, one having the plain elongated slots to allow the rear ends of the bars lateral movement and the other having the confining notches or perforations with the converging type bar guides 53, substantially as described. 5th. In connection with the rocking cradle frame for the type bars, the lever 39 with or without its spring 40, said lever acting on a part of the cradle frame to tilt the same and for holding it with the row of upper case type bars in line with the printing point, substantially as described. 6th. The line space regulator 117 formed of sheet metal having the shield and the stops as shown in figures 6, 7 and 8 in conjunction with the pawl and the frame arm 104, substantially as described. 7th. The line space frame 105 carrying the pawl for operating the platon, said frame being operated from the key board and also operated automatically when the carriage is returned to normal position by the sliding bar 110, the ball crank 109 and the adjustable stop 111, substantially as described. 8th. The arrangement of the two escapement pawls, 131, 133 with the cam wiper 135 operated from the key board by the ordinary keys and operated also by a special key to give the wiper an additional throw to cause the high part thereof to release both pawls to free the carriage, said pawls being used with or without a yielding support therefore, and with or without the eccentric screw for adjusting them, substantially as described. 9th. The paper shelf 96 held against the end frames of the carriage by the paper clips, substantially as described. 10th. The stop 111 formed as shown in figure 4 from a single piece struck up with a channeled face and with a pawl tooth, and adapted to fit between the rack bar and the frame, substantially as described. 11th. The cradle frame having guides for the type bars and with the links 12 and 13 extending substantially radially of the pivot of the cradle frame, substantially as described.

**No. 55,649. Meat Extract.** (*Extrait de viande.*)

The American Malted Meat Co., assignee of John H. Hetherington, all of Milwaukee, Winconsin, U.S.A., 17th April, 1897; 6 years. (Filed 3rd February, 1897.)

*Claim.*—1st. A dry granulated or powdered food product composed of meat, including proteids which have been converted into soluble peptones, and malt, including nutritive and tonic constituents in addition to the ferments which have acted upon the meat, substantially as and for the purposes set forth. 2nd. The process of preparing extract of meat, which consists in macerating meat and malt together at a moderate temperature, in water, then straining the mixture, evaporating the liquid portion to dryness in vacuo, and granulating it, substantially as and for the purposes set forth.

**No. 55,650. Darning Apparatus.** (*Appareil à repriser.*)




John Henry Wilday, Robert W. Hutton and Zachariah K. Loucks, all of Philadelphia, Pennsylvania, U.S.A., 17th April, 1897; 6 years. (Filed 5th February, 1897.)

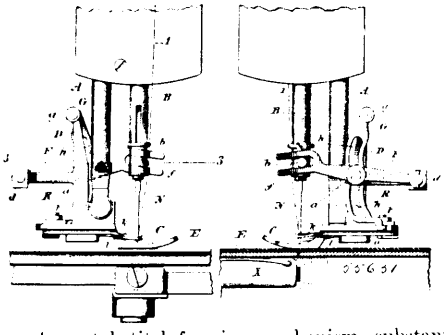
*Claim.*—1st. An apparatus for darning, consisting of a warp-holder formed of sheet metal bent to form clamp sides and having a central opening, hooks formed on the edge of the ends of the central opening, ears formed upon the holder, a warp-opener pivoted to said ears by a pintle, said pintle being of a length to allow the opener to slide sidewise, said opener being of angular form, tongues formed on one section of opener, said tongues being concaved on their lower edges, as and for the purpose described. 2nd. An apparatus for darning, consisting of a warp-holder formed of sheet metal bent to form clamp sides and having a central opening, hooks formed on the ends of the opening, ears formed upon the holder, a pintle slidable in said ears, an angular opener secured on the pintle and adapted to slide between and strike against the ears and thereby limit the movement of the pintle and tongues formed on the opener, as and for the purpose described.

**No. 55,651. Sewing Machine.** (*Machine à coudre.*)

The Self Threading Sewing Machine Co., New York, State of New York, assignee of Albert Legg, Allendale, New Jersey, both in the U.S.A., 17th April, 1897; 6 years. (Filed 9th February, 1897.)

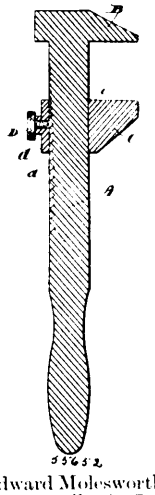
*Claim.*—1st. The improvement in stitch-forming mechanism which consists of a needle having an open eye or recess for engaging and carrying a bight of thread through the material to be sewed, means for operating said needle, means for feeding thread to the same upon each downward stroke thereof, and mechanism complemental thereto for completing the stitch co-operating with the loop formed on the thread supply side of the needle substantially as described. 2nd. In a sewing machine, the combination of a needle having a recess or open eye for engaging the thread, means for operating said needle, means for feeding thread to the same, which consists of a guide and finger movable from in front of the path of the needle, the guide to the side thereof on which the complemental stitch-forming mechanism enters the loop of thread, and the finger to the other side,

whereby the thread is distended and carried into the open eye of the needle as it descends, and means for operating said guide and finger,



with complemental stitch-forming mechanism, substantially as described. 3rd. In a sewing machine having a presser-foot, the device for producing on the presser-foot a horizontal reciprocating movement from the vertical reciprocation of the needle bar, which consists of a lever fulcrumed at one end on the presser-foot, and operatively connected at its other end with the needle bar, so as to be swung by the reciprocation thereof, and the can-lever fulcrumed on said presser-foot, the cam of which is operatively connected with said first named lever at a point on said first named lever between the fulcrum and the other end thereof, substantially as described.

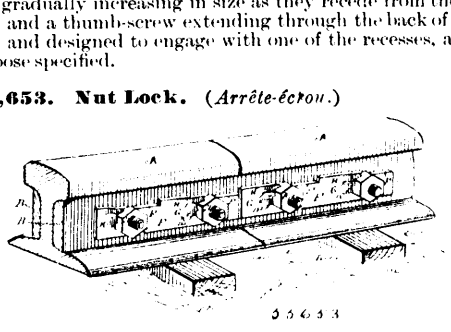
**No. 55,652. Wrench.** (*Clé à écrou.*)



Joseph Warshasky and Edward Molesworth Croker, both of Toronto, Ontario, Canada, 17th April, 1897; 6 years. (Filed 12th February, 1897.)

*Claim.*—1st. A wrench comprising a handle bar, stationary jaw, at one end thereof, a movable jaw through which the handle bar extends, a series of recesses arranged in alignment longitudinally on the back of the handle bar and a thumb-screw extending through the back of the movable jaw and designed to engage with one of the recesses, as and for the purpose specified. 2nd. A wrench comprising a handle bar, stationary jaw, at one end thereof, a movable jaw through which the handle bar extends, a series of recesses arranged in alignment longitudinally on the back of the handle bar, the recesses gradually increasing in size as they recede from the stationary jaw, and a thumb-screw extending through the back of the movable jaw and designed to engage with one of the recesses, as and for the purpose specified.

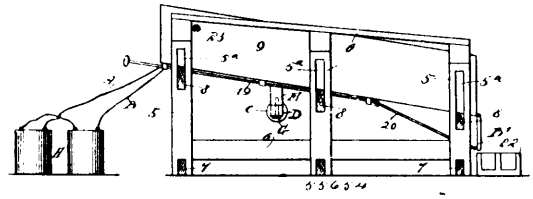
**No. 55,653. Nut Lock.** (*Arrête-écrou.*)



Logan M. Cunningham, Erie, Pennsylvania, U.S.A., 17th April, 1897; 6 years. (Filed 15th March, 1897.)

*Claim.*—1st. In a nut-lock, the combination with a bolt, of a washer-plate, having spring-tongues at the upper edges and spring-tongues in the main portion of plate and a nut having ratchet-teeth and an annular base, all arranged substantially as shown and described. 2nd. In a nut-lock, the combination with a bolt, of a washer plate, having crimped or corrugated spring-tongues upon the upper edge of the plate, and spring-tongues within the main portion of plate, and the nut having its base constructed with central annular portion and the ratchet-faced outer portion, substantially as shown and described. 3rd. In a nut-lock, the combination with a bolt, of a washer-plate, the upper edge of which is reduced, cut-away and slitted providing a spring tongue or tongues, said tongue or tongues being crimped or corrugated transversely, the spring-tongues in the main portion of plate, and a nut having the ratchet-teeth and flat central portion upon its base, all arranged substantially as shown and described.

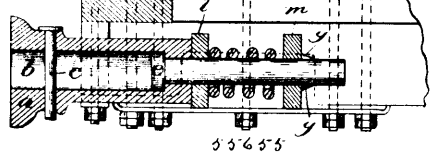
**No. 55,654. Ore Concentrator.** (*Concentrateur de minerai.*)



Joseph Owen Dimmick, Edward Kinney Woods and De Browne, all of Denver, Colorado, U.S.A., 17th April, 1897; 18 years. (Filed 10th February, 1897.)

*Claim.*—1st. In an ore concentrator, a pair of inclined tables, each comprising a metal bed-plate, a bed of insulating material over the metal bed, and rows of metallic pins extending from the metal bed through the bed of insulation material, and an electro-magnet having one pole connected to the metal bed-plate of one table and the other pole to the metal bed-plate of the other table, substantially as specified. 2nd. In an ore concentrator, a table comprising an iron plate or plates, a cover of insulating material on said plate or plates, metal pins extending through said cover to contact with the plate or plates, the said pins being arranged in several rows, the pins of one row alternating with those of another row, and means for magnetizing the plate or plates and consequently the pins which project above the surface of the table, substantially as specified. 3rd. In an ore concentrator, the combination with a frame, of an inclined table comprising a base-board, a metal plate on said base-board, a top-board on the metal plate, metal pins extended through the top-board to contact with the plate, metal pole pieces at opposite sides of the table connected with a source of electric supply, and means for magnetizing said plate and through it the pins, substantially as specified. 4th. In an ore concentrator, the inclined adjustable table, comprising a base or bed-board, a metal plate on said board, a top-board on the metal plate, a covering of textile material on the top-board, a number of metal pins or rods extended through the textile material and top-board to the metal plate, and means for magnetizing said metal plate and pins or rods, substantially as specified. 5th. An ore concentrator table, comprising a metal plate, a top piece thereon, a cover of textile material on the top-piece, metal pins extended from the metal plate upward above the plane of the table, an electro-magnet for magnetizing said plate and pins, metal pole-pieces at opposite sides of the table, and connections from said pole-pieces to a source of electricity, substantially as specified. 6th. An ore concentrator, comprising two tables, each consisting of a bed-board, a metal plate on the bed-board, a top-board on the metal plate, a textile cover on the top-board, and metal pins extended from the metal plate above the top plane of the table, and an electro-magnet having its opposite poles connected respectively to the metal plates of adjacent tables, substantially as specified. 7th. An ore concentrator, comprising in combination a table consisting of a bed-piece, a metal plate on said bed-piece, a top-piece on the metal plate, a textile covering, metal pins extending from the metal plate through the top-piece and textile covering, the said plate having connection with an electro-magnet, pole-pieces at the sides of the table having connection with a source of electricity, and a feed-trough, substantially as specified.

**No. 55,655. Draught-Bolt.** (*Cheville de tirage.*)

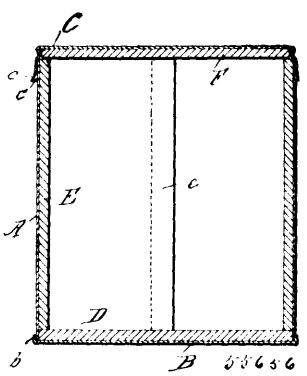


George H. Caugherty, Allegheny, Pennsylvania, U.S.A., 17th April, 1897; 6 years. (Filed 18th March, 1897.)

*Claim.*—1st. A draw-head fastener, consisting of a bolt provided near its end with a slot having lugs pivotally secured therein, and a coil-spring arranged between the said lugs, substantially as shown

and described. 2nd. In a draw-head fastener, a bolt provided on one end with a suitable head, and provided near the other end with a longitudinal slot, lugs pivotally secured in said slot, said lugs being provided with arms adapted to engage a shank formed across the slot, said lugs having a spiral spring arranged between same, the rear ends of the lugs being adapted to engage the bolt in the slot, substantially as shown and described. 3rd. In a draw-head fastener, a suitable bolt carrying a head on one end, and provided with a slot near the other end, lugs carrying arms pivotally secured in said slot, a spring arranged between said lugs, said bolt carrying a following-plate adapted to abutt against the draw-head, a draft-plate engaging the lugs, and a coil-spring arranged on the bolt between the following and the draft-plate, substantially as and for the purpose set forth. 4th. In a draw-head fastener, the combination of a bolt carrying a head on one end, a slot arranged near the other end, said slot having secured therein lugs carrying arms, said arms engaging shanks formed on said bolt, a spring arranged between the lugs and a following plate, draft-plate and a coil-spring arranged on the bolt, all parts arranged and operating, substantially as described and shown. 5th. In a draw-head fastener, a bolt having at one end a slot, said slot ending in recesses penetrating the solid portion of the bolt, shanks extending across the slot at the top and bottom, spring pressed lugs having arms to engage the shanks and having rear extensions operating in the recesses and in combination a draft-plate arranged over the shanks, a following-plate and coil-spring arranged on the bolt, as and for the purpose described.

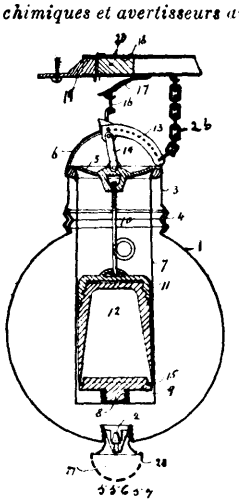
**No. 55,656. Butter Box.** (*Boîte à beurre.*)



Henry Levi Miller, Kingsbury, Quebec, Canada, 17th April, 1897; 6 years. (Filed 15th March, 1897.)

*Claim.*—A butter box comprising an outer cylindrical casing, a bottom secured thereto, a cover provided with a bell-mouthed flange slidable over the top of the casing, a wooden disc in the bottom, a wooden cylinder provided with a lap joint and resting on the said disc, and a second wooden disc arranged in the cover and resting on the top of the said cylinder, substantially as set forth.

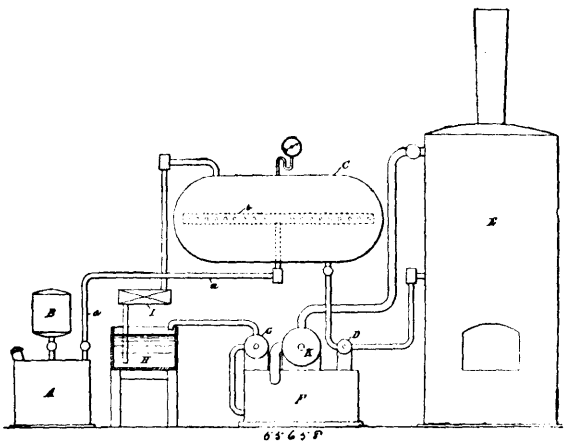
**No. 55,657. Chemical Fire Extinguisher and Alarm.**
(*Extincteurs chimiques et avertisseurs automatiques.*)



Jean-Baptiste Lalime, Joseph Coté et Arthur Hypolite Durand, tous de Montréal, Québec, Canada, 17 avril 1897; 6 ans. (Déposé le 12 février 1897.)

*Résumé.*—1° Dans un extincteur chimique, la combinaison d'une sphère hermétiquement fermée contenant un vase en verre qui peut être fermé ou ouvert à l'aide d'un levier pivoté sur la tête de la sphère, ayant à sa base un bec d'arrosoir laissant échapper dans toutes directions des jets de gaz extincteurs, et suspendu à l'aide d'un anneau fusible et d'une chaîne fixée au dit levier de la sphère, tel que décrit. 2° Dans un avertisseur automatique en cas d'incendie, la combinaison d'un canon chargé d'une cartouche Lefaucheux, la détente duquel est tenu baissée au moyen d'un poids qui y est accroché par un anneau fusible, le canon étant mis en communication avec une boîte à porte à bascule, contenant une fusée et un drapeau avertisseur, le tout tel que décrit précédemment.

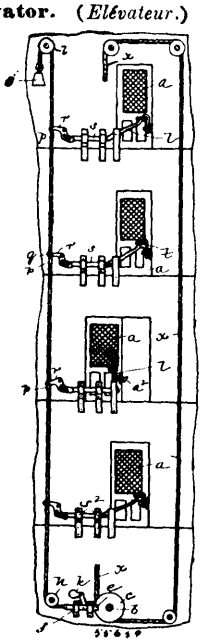
**No. 55,658. Generation of Motive Power.**
(*Génération de force motrice.*)



Carlo Guattari, 70 Milkwood Road, Herne Hill, London, England, 20th April, 1897; 6 years. (Filed 26th March, 1897.)

*Claim.*—The herein described improvement in the generation of motive power which consists in generating a mixture of steam and carbonic acid gas, by the evaporation in a boiler of water impregnated with carbonic acid gas in combination with Dutch liquid or ethene chloride, substantially as specified.

**No. 55,659. Elevator.** (*Elévateur.*)

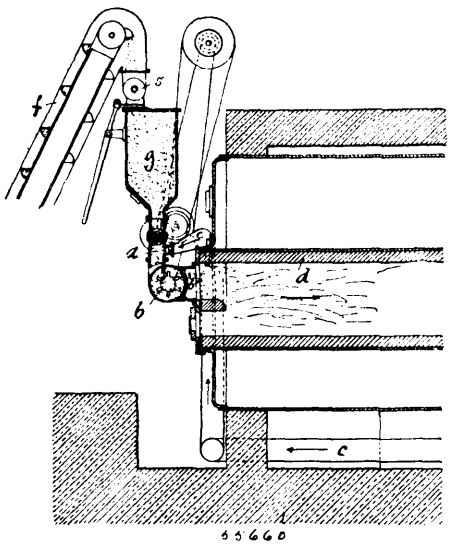


Edward Lyon Hail and George Hail, both of Providence, Rhode Island, U.S.A., 20th April, 1897; 6 years. (Filed 22nd March, 1897.)

*Claim.*—1st. In an elevator, a corridor door, a motor-controlling line, a motor-controlling device between the line and the motor, a lock for said device, means for opening the corridor door, and connections between said door-opening means and said lock whereby, when the door is opened, the motor-controlling device is locked against movement. 2nd. In an elevator, a corridor door, means for opening said door, a motor-controlling line, a motor-controlling device between the line and the motor, a lock for said device and a line connected with said lock and with said door-opening means whereby when the door is opened the motor-controlling device is locked. 3rd. In an elevator, a corridor door, a lever for opening said door, a motor-controlling line, a motor-controlling device between the line and the motor, and a lock for said motor-controlling device co-acting with the door-opening lever whereby when the door

is opened the motor-controlling device is locked. 4th. In an elevator, a corridor door, a lever for opening said door, a motor-controlling line, a motor-controlling device between the line and the motor, a lock for said motor-controlling device, a line connected with said lock, and means extending from the door-opening lever and adapted to engage said line for causing the lock to engage the motor-controlling device when the door is opened. 5th. In an elevator, a motor-controlling line, a motor-controlling device between the line and the motor, a lock for the same, a weighted line normally holding the lock out of engagement with said device, means for acting upon said weighted line to allow the lock to engage the motor-controlling device, and means for opening the corridor door and connected with the last said means whereby when the door is opened the motor-controlling device is locked. 6th. In an elevator, the combination with a motor-controlling line, a motor-controlling device between the line and the motor, a weighted bolt adapted to normally engage the motor-controlling device, means for holding the bolt out of engagement with the motor-controlling device, and a lever connected with the last said means in such way that when the door is opened the lock will be allowed to engage the motor-controlling device. 7th. In an elevator, a movable door, a motor-controlling device, a lock for said device, a lever for opening said door and fulcrumed on a support relatively to which the door moves, and connections between said lever and said lock for locking said controlling device prior to any movement of the door towards open position. 8th. In an elevator, a movable door, a motor-controlling device, a lock for said device, a lever for opening said door and fulcrumed on a support relatively to which the door moves, said door-opening lever being connected to said door but having a limited movement relatively thereto, and connection between said lever and said lock, whereby the said lever may be actuated to lock the motor-controlling device prior to its opening the door. 9th. In an elevator, a movable door, a motor-controlling device, a lock for said device, a lever for opening the door and having a pin and a bell-crank lever having a cam slot to receive the pin on said lever, and connections between said bell-crank lever and the said lock. 10th. In an elevator, a motor-controlling line, a motor-controlling device between the line and the motor, a lock for said device, a hand-operated lever, and connections between said lever and said lock whereby when the lever is actuated the motor-controlling device is locked. 11th. In an elevator, a corridor door, a movable latch thereon, in combination with a motor-controlling line, a motor-controlling device operated by said line, a lock for said motor-controlling device, a lever for opening said door, and connected to said lock for the motor-controlling device, said lever having means for yieldingly engaging the latch, whereby when said lever is operated the latch is disengaged from its catch, the motor-controlling device is locked, and the door is opened.

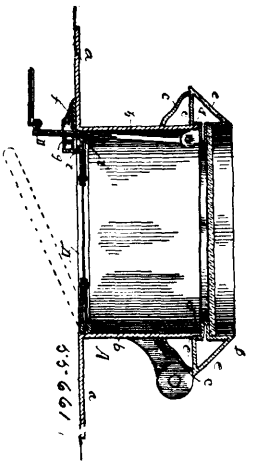
**No. 55,660. Method of Burning Pulverulent Fuel and Apparatus Therefor.** (*Appareil pour consumer le combustible pulvérulent.*)




Andreas Freitag, Amsterdam, Holland, 20th April, 1897; 6 years. (Filed 25th March, 1897.)

*Claim.*—1st. The method of firing, in the combustion of pulverulent fuel, which consists in conducting the fuel in the crude state from the place whence it is taken to rapidly rotating beaters of a disentegrator which is in communication with the furnace through a dust separator furnished with fine apertures in such manner that the dust will pass into the furnace with the air necessary for combustion (which air may be preliminary heated) in intimate mixture under the action of the beaters through the fine apertures of the dust separator. 2nd. For carrying out the method described, a casing *b*, provided with rapidly rotating beaters, such casing being in connection with a pipe *a*, for introducing the crude fuel by an admission valve *h*, with introduction of air by a pipe *c*, and with the furnace *d*, through the fine apertures in the wall $b^1$, of casing *b*.

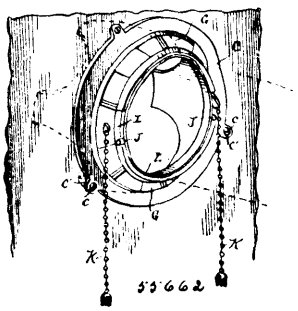
**No. 55,661. Skylights and Ventilator.** (*Claire-voie et ventilateur.*)




Dirk Landstra, Hackensack, New Jersey, U.S.A., 20th April, 1897; 6 years. (Filed 20th March, 1897.)

*Claim.*—In a ventilator, the combination with the frame A, having a surrounding lower and upper flange, a cover hinged to said frame, provided with a surrounding flange of an operating-handle pivoted to said cover, a plate secured to said frame having a central opening, a spring secured to said plate, the handle-bar having the notches and a woven-wire frame hinged to the main frame, having the notch and cam, all substantially as described.

**No. 55,662. Combined Ventilator and Thimble.** (*Ventilateur et dé combinés.*)

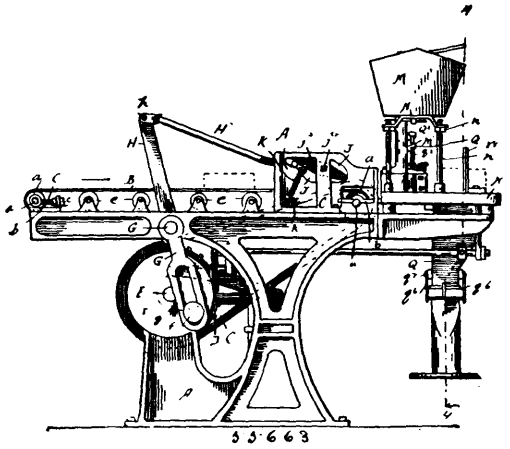



Robert L. Underwood and James L. France, both of Fostoria, Ohio, U.S.A., 20th April, 1897; 6 years. (Filed 22nd March, 1897.)

*Claim.*—1st. The combination of the outwardly-tapering collar having ventilating-openings, a ring tapering in form to fit the outer side of and surround the collar, said ring being formed with openings to correspond with the ventilating openings of the collar and also formed upon its outer edge with elongated notches I, and pins J projected from the outer smaller end of the collar into the said notches I, for holding the ring from displacement on the collar and limiting its movement, substantially as shown and described. 2nd. The combination of the outwardly-tapering collar adapted to be secured to position, and at its outer end formed with the cylindrical flange L, ring H of tapering form and adapted to fit and encircle the outer side of the collar, the outer end of the tapering ring formed with the cylindrical flange which encircles flange L of the collar, the said ring-flange being formed with elongated notches and pins J projected outward from flange L into said slots of the ring-flange, whereby the reciprocal movement of the ring is governed and the same is also held from displacement upon the collar, the collar and ring being formed with openings, which are adapted to register, substantially as shown and described. 3rd. The combination of the thimble, the outwardly-tapering collar and damper-ring, the ring surrounding the collar, devices for holding the damper in place upon the collar and which devices also limit the reciprocal movement of the damper, and the converging flanges projected outward from the thimble and having the convergence at the inner side of the collar, and to which the said collar is secured, substantially as shown and described.

**No. 55,663. Brick Roughers and Sanders.**

(*Machine à sabler et rendre la brique rude.*)



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John G. Kurst, Springfield, Illinois, U.S.A., 20th April, 1897; 6 years. (Filed 22nd March, 1897.)

*Claim.*—1st. The combination, in a brick-sanding machine, with the sanding devices and the brick-carrying belt and with a pusher having pins, of pivoted plates forming with the plates on the sides of the machine a path to be traversed by the pins of the pusher, and a crank-disc and connections embodying a slotted arm the slot of which receives the crank pin of said disc, and an oscillating shaft from which said arm depends between the same and the pusher for actuating the latter, and hinged doors for edging the bricks as they are delivered from the belt, said doors being connected with and operated from the main shaft, substantially as specified. 2nd. The combination with the pusher, the push-bars connected therewith, the pivoted switch, plates and levers, an arm secured to said shaft and having an elongated slot, and a disc provided with a crank-pin working in said slot, and hinged doors connected with and from the main shaft for edging the bricks after they are delivered from the belt, substantially as and for the purpose specified. 3rd. The combination with the sanding devices and the means for moving the bricks, of pivoted doors having their pivots parallel with the line of travel of the brick-moving devices and movable upward at right angles to said device for turning the bricks on edge after they are delivered therefrom, as set forth. 4th. The combination with the brick-moving belt and the sanding machanism of hinged doors arranged at the discharge end of the belt on pivots parallel with the edges of the belt and movable at right angles thereto to edge the bricks after they are delivered from said belt, substantially as specified. 5th. The combination with the brick-moving devices and the sanding mechanism, of the hinged doors for edging the bricks, the main shaft and the cam thereon and intermediate connections for actuating said doors, as and for the purpose specified. 6th. The combination with the brick-moving devices and the sanding mechanism, of the hinged doors for edging the bricks, the main shaft, the cam thereon, the arm with roller engaged by said cam, and connections between the shaft of said arm and the doors for actuating the latter as and for the purpose specified. 7th. The combination with the platform and the means mounted for pivotal movement at right angles to the travel of the bricks for edging the bricks on the platform, of means from preventing the bricks from falling over after being edged, as set forth. 8th. The combination with the platform and the hinged doors for edging the bricks, of the vertical arm having a sharpened edge as and for the purpose specified. 9th. The combination with the platform having an opening, of the door hinged within said opening with a space around the doors, substantially as and for the purpose specified. 10th. The combination with the platform with opening, of the hinged doors mounted for simultaneous opposite movement at right angles to the travel of the bricks and their actuating means, and a spout supported beneath the opening in the platform substantially as specified. 11th. The combination with the platform with its opening and hinged doors, of the spout beneath the said opening and the extension adjustable suspended from the spout, as set forth. 12th. The combination with the sanding mechanism and means for delivering the bricks to the same, of a hinged sweep at the discharge end of the machine, and a rougher carried by said sweep, substantially as specified. 13th. The combination with the sanding mechanism and the means for moving the bricks thereto, of a hinged sweep at the discharge end of the machine, a rougher carried by said sweep and a spring bearing upon the sweep to hold it down to its work, substantially as specified. 14th. In a brick sanding and roughing machine, the combination with the sanding mechanism, of a hinged spring-actuated sweep at the discharge end of the machine, as set forth. 15th. In a brick-sanding and roughing machine, the combination with the sanding mechanism, of a cross-bar secured to the tubes thereof at the discharge end of the machine and sweeps carried by rods mounted to slide in openings in said cross-bar, as set forth. 16th. The combination with the main shaft and the cam thereon, of the hinged doors, the oscillating rods arranged at right angled to said shaft, connections between said rods and the doors, a cam on the main shaft, a shaft parallel therewith, a slotted arm mounted on said shaft and provided with a roller with which the cam engages, and connections between said shaft and the oscillating rods, all substantially as and for the purpose specified. 17th. In a brick-sanding and roughing machine, the combination with the sanding mechanism, of a cross-bar secured to the tubes thereof, sweeps pivotally mounted on the frame-work and attached to rods mounted to slide in openings in said cross-bar and springs around the said rods, substantially as and for the purpose specified. 18th. In a brick-sanding and roughing machine, the combination with the sanding mechanism, of a cross-bar secured to the tubes, sweeps mounted on the framework and attached to rods mounted to slide through openings in the cross-bar, springs around said rods and a rougher adjustably mounted on each sweep, substantially as specified. 19th. The combination with the hinged curved walls of the partitions of the sanding-chamber, of a spring arranged between the same and means for limiting the outward movement of said walls, substantially as specified. 20th. The combination with the curved walls of the partitions of the sanding-chamber, of hinges therefor, a spring arranged between and connecting the said walls, to limit their outward movement, substantially as and for the purpose specified. 21st. The platform designed for a four-brick machine, the same having inner vibrating partitions, with spring-pressed walls and a plate for limiting the outward movement thereof, substantially as and for the purpose specified. 22nd. The combination, in a brick-sanding machine, with the sanding devices and the brick-carrying belt and with a pusher having pins and its acutating means, of pivoted plates forming with the plates on the side of the machine, a path to be traversed by pins on said pusher, as set forth. 23rd. The combination, in a brick-sanding machine, with the sanding devices and the brick carrying belt and with a pusher having pins at its ends, of means for actuating said pusher, and pivoted substantially diamond-shaped plates and plates on the side of the machine for determining the path traversed by said pins, substantially as specified. 24th. The combination, in a brick-sanding machine, with the sanding device and the brick-carrying belt and with a pusher having pins, of the pivoted plates and plates on the side of the machine determining the path to be travelled by said pins, and a spring acting upon said plates to change the course of said pins, substantially as specified. 25th. The combination, in a brick-sanding machine, with the sanding devices of the belt, the pusher, the switch-plates, plates on the side of the machine, and the pins on the pusher adapted to travel first upon the lower and then upon the upper face of the plates, and means for reciprocating the pusher, as set forth. 26th. In a brick-sanding machine, in combination with the device for moving the brick, a sanding chamber provided with vibrating partitions with their front edges rounded and their rear ends spring-pressed, means for supplying sand to said chamber, and serrated plates at the discharge end of said chamber, substantially as and for the purpose specified. 27th. The combination in a brick-sanding machine and with the sanding devices and with the belt, the transverse shaft with the levers and the arm or rod with roller, of the cam having a groove in which said roller travels, the pusher rods pivotally connected with the said levers, the pusher carried by said rods, and the switch-plates and plates on the side of the machine for determining the path travelled by said pusher, substantially as specified. 28th In a brick-sanding and roughing machine, the combination of the belt and the sanding devices, the pusher and its pivoted pusher-rods and the cam and connections for actuating the same, the pins on the pusher, and the pivoted diamond-shaped plates and plates on the side of the machine for determining the course travelled by said pins substantially as specified. 29th. The combination with the sanding-chamber with its partitions, with their front ends surrounded and their rear ends spring-pressed, of the tubes for supplying the sand to the chamber between the partitions, substantially as specified. 30th. The combination with the sanding-chamber having partitions, with their front ends rounded and their rear ends spring-pressed and the means for forcing bricks therethrough, of the tubes supplying sand to the chambers through the top of the same, substantially as specified.

**No. 55,664. Lubricant.** (*Lubrifiant.*)

Vincent Paul Travers, assignee of Charles Efros, both of New York, State of New York, U.S.A., 20th April, 1897; 6 years. (Filed 17th June, 1896.)

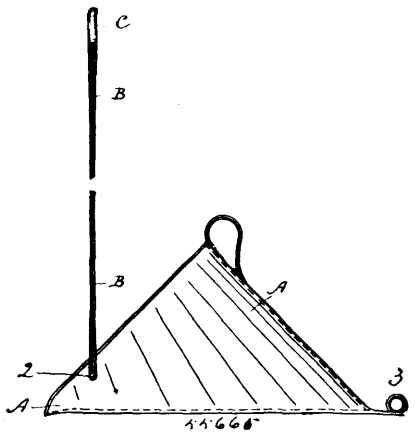
*Claim.*—1st. A composition for lubricating and waterproofing vegetable fiber consisting of vaseline, tar, coal tar oil, naphthalene, paraffine, paraffine oil and plumbago. 2nd. The herein described composition for lubricating and waterproofing vegetable fiber consisting of vaseline, tar, coal tar oil, naphthalene, paraffine and paraffine oil in about the proportions specified.

**No. 55,665. Dust Pan.** (*Porte-ordure.*)

Joseph Tisdale and Frederick Lar[illegible]ins, both of Hamilton, Ontario, Canada, 20th April, 1897; 6 years. (Filed 27th March, 1897.)

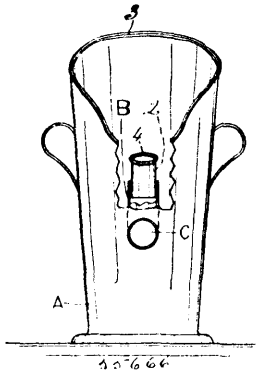
*Claim.*—1st. A dust pan of the character described having a long forked handle pivoted to the forward part of the sides of said pan, substantially as described. 2nd. In a dust pan of the character described, consisting of a pan having rear closed part, open front with raised sides tapering to the front, a long handle having upper loop

and lower forked ends pivoted to the forward part of the sides of said pan, substantially as described. 3rd. A dust pan of the char-




acter described having a handle with upper loop and lower forked ends capable of pivoting to the forward part of the sides thereof, and a foot rest in rear of said pan, substantially as described.

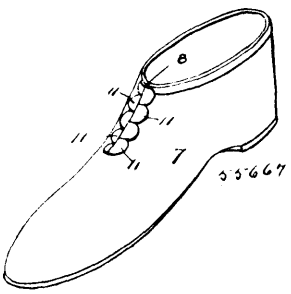
**No. 55,666. Face Steamer.** (*Bain à vapeur pour le visage.*)




Katherine H. Gilmore, Hamilton, Ontario, Canada, 20th April, 1897; 6 years. (Filed 27th March, 1897.)

*Claim.*—1st. In a face steamer, a vessel suitably devised and shaped and provided with an air tube to suit the person operating, substantially as described. 2nd. In a face steamer a vessel suitably devised and shaped and provided with an air tube to suit the person operating, the upper part of said air tube being adjustable, substantially as described. 3rd. In a face steamer, a vessel suitably devised and shaped having a coping of rubber, and provided with an air tube to suit the person operating, the upper part of said air tube being adjustable, substantially as described. 4th. In a face steamer, a vessel suitably devised and shaped having a coping of rubber, and provided with an air tube to suit the person operating, the upper part of said air tube being adjustable and provided with a coping of rubber, substantially as described.

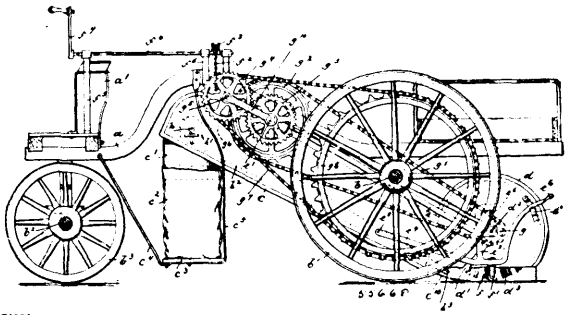
**No. 55,667. Device for Rubber shoe Lacing.**
(*Appareil pour le lacage de chaussures en caoutchouc.*)




Charles Victor Hoffman, Sidney, New Jersey, U.S.A., 20th April, 1897; 6 years. (Filed 29th March, 1897.)

*Claim.*—1st. A shoe, provided with the usual front opening, at each side of which are formed inter-locking heads, which are connected with the sides of the shoe by necks at each side of which are formed spaces or openings which are over-lapped by said heads, substantially as shown and described. 2nd. A shoe, provided with the usual front opening, which is formed centrally of the instep of the shoe, the sides of the shoe adjacent to said opening being provided with semi-circular heads which are connected with said sides by necks at each side of which are formed spaces or opening, said heads being adapted to inter-lock, substantially as shown and described.

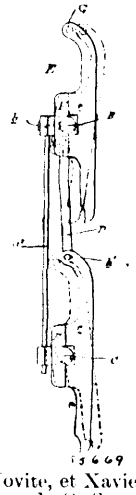
**No. 55,668. Street Sweeper.** (*Balayeuse de rue.*)



William S. Mears, Scranton, Pennsylvania, U.S.A. 20th April, 1897; 6 years. (Filed 29th March, 1897.)

*Claim.*—1st. A sweeper consisting of a truck on wheels, an inclined elevator casing fulcrumed on the axle of the rear wheels, a hood arranged at the lower end of said casing and provided at each of its sides with a radial elongated slot, the revolving brush carrying shaft arranged in said hood and penetrating said slots, a fulcrumed lever on each side of the casing and furnishing bearings for the said shaft, a shorter lever on each side of and fulcrumed on the casing and provided with an upwardly extending arm, chains connecting said arms with the levers forming the bearings for the shaft, a wheel swiveled on each of said shorter levers, and means for revolving said brush, substantially as and for the purposes described. 2nd. A sweeper consisting of a truck on wheels, an inclined elevator casing fulcrumed on the axle of the rear wheels, a hood arranged at the lower end of said casing and provided on each of its sides with a radial elongated slot, a revolving brush carrying shaft in said hood and penetrating said slots, means for self-adjustably supporting said shaft, two parallel shafts arranged at or near the upper end of said casing, a gear wheel on each of said shafts and meshing into each other, a sprocket wheel loosely mounted on one of said shafts and receiving its motion from the rear driving wheels, a clutch controlling said sprocket wheel, a sprocket wheel on the other one of said shafts, a sprocket wheel on the revolving brush carrying a shaft, a sprocket chain connecting the two last mentioned sprocket wheels, an elevator mechanism in the casing, and means for transmitting motion from one of said parallel shafts to said elevator mechanism, substantially as described. 3rd. The combination with elevatory chains, of a series of scrapers alternately arranged on said chains, and means for simultaneously operating said chains, substantially as described. 4th. A sweeper consisting of a truck on wheels, an inclined elevator casing fulcrumed on the axle of the rear wheels, a hood arranged at the lower rear end of said casing and provided at each of its sides with an elongated radial slot, a revolving brush carrying shaft in said hood and penetrating said slots, means for self-adjustably supporting said shaft, means for operating said shaft, and means for raising and lowering the casing, all said parts substantially as described.

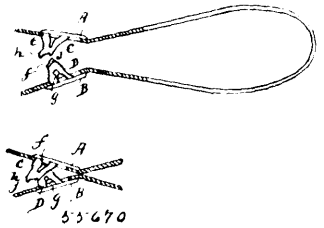
**No. 55,669. Sleigh.** (*Sleigh de travail.*)



Alphonse Leblanc, Saint-Jovite, et Xavier Legault dit Deslauriers, Saint-Faustin, tous deux de Québec, Canada, 20 avril 1897; 6 ans. (Déposé le 27 mars 1897.)

*Résumé.*—Un traineau de bob-sleigh E, H, à patins mobiles *c*, *c*, oscillant librement autour de leurs essieux B et C respectivement, le tout tel que ci-dessus décrit et pour les fins sus-mentionnées.

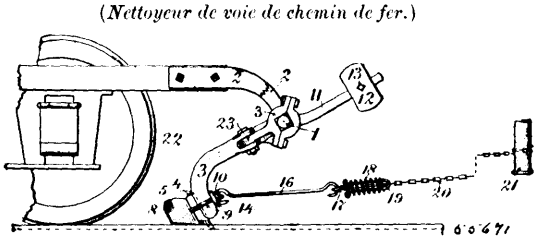
**No. 55,670. Cuff Button.** (*Bouton de poignet.*)



William H. Glines, Providence, Rhode Island, U.S.A., 20th April, 1897; 6 years. (Filed 29th March, 1897.)

*Claim.*—1st. The above-described detachable cuff-button consisting of two buttons each having a thin piece of metal attached at right angles to its back, one of said pieces having a slot therein, and the other having a cross-armed piece, as *f*, properly shaped to pass through and turn across the slot in the first piece, substantially as described. 2nd. The above-described detachable cuff-button consisting of two buttons each having a thin piece of metal attached at right angles to its back, one of said pieces having a slot therein, and the other having a cross-armed piece, as *f*, properly shaped to pass through and turn across the slot of the first piece, and also a curved lip, such as *g*, the two pieces being so proportioned that when put and turned together the edge of the first piece will pass under the lip of the second piece, substantially as described. 3rd. The above-described detachable cuff-button, consisting of two buttons each having a thin piece of metal attached at right angles to its back, one of said pieces having a slot therein and a projection as *h* on the outer edge thereof, and the other having a cross-armed piece, as *f*, properly shaped to pass through and turn across the slot of the first piece, and also a curved lip, such as *g*, the two pieces being so proportioned that when put and turned together the edge of the first piece will pass under this lip and the projection come into contact with its upright portion, substantially as described. 4th. The above-described detachable cuff-button consisting of two buttons each having a thin piece of metal attached at right angles to its back, one of said pieces having a slot therein and projections, such as *h* and *j*, on its outer edge, and the other having a cross-armed piece, as *f*, properly shaped to pass through and turn across the slot of the first piece and also a curved lip, such as *g*, the two pieces being so proportioned that when put and turned together the edge of the first piece and its projection *j* will pass under this lip and the projection *h* will come into contact with its upright portion, substantially as described. 5th. The above-described detachable cuff-buttod consisting of two buttons each having a thin piece of metal attached at right angles to its back, one of said pieces having a slot therein, and the other having a cross-armed piece, as *f*, properly shaped to pass through and turn across the slot in the first piece, and the slot or cross-armed piece or other being inclined at an angle to the rear surface of its button, substantially as described.

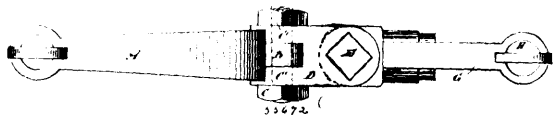
**No. 55,671. Railway Track Cleaner.**
(*Nettoyeur de voie de chemin de fer.*)



Michael Power, Toronto, Ontario, Canada, 20th April, 1897; 6 years. (Filed 29th March, 1897.)

*Claim.*—1st. In a track cleaning device, the combination of a tool having a stud at the upper end adapted to fit into each of a series of holes in the tool holder arm, to adjust for wear, the curved tool-holder arm having a groove in the rear side, a series of holes in said groove, and a shovel having rearwardly inclining wings, said shovel adapted to fit in rear of said tool, substantially as shown as described. 2nd. In a track cleaning device, the combination of the rocker shaft carried in hangers at its ends, curved arms secured on said shaft near its ends, a groove in the rear side of said arms, a series of holes in said groove, a tool having a stud to fit in any of said holes at its upper end, a shovel having rearwardly inclined wings and clamped in rear of said tool, a U-shaped clamp to secure said tool and shovel to said curved arms, a gauge or tie bar secured to said curved arms and extending transverse of the truck frame, draw rods connected to said tie bar near its ends, a clutch connected to said draw rods at centre of track and passing through a spiral spring, a second clutch passing through said spring and connected to a chain, said spiral spring carried on said clutches, and a second brake mast to wind said chain on to operate the device, substantially as shown and described. 3rd. In a track cleaning device, the spiral spring having clutch rods passed from opposite ends through it and acting by compression, substantially as shown and described.

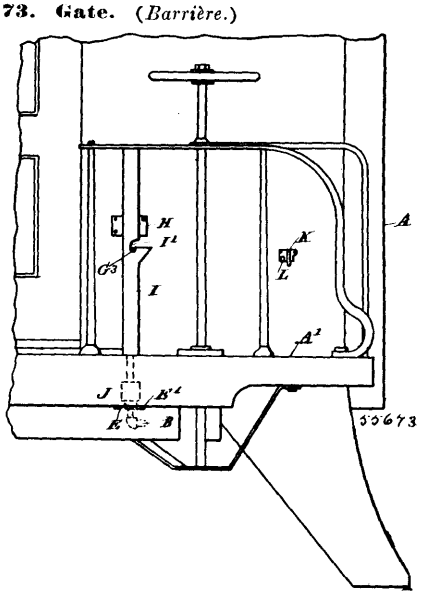
**No. 55,672. Draft Attachment.** (*Attache de tirage.*)



Walter Henry Nelson, Northport, Michigan, U.S.A., 20th April, 1897; 6 years. (Filed 29th March, 1897.)

*Claim.*—1st. A draft attachment, comprising a clevis having a draft pin connecting the open jaws and having at its other end a flange having a hole at right angles to the aforesaid pin, an intermediate link or clevis having holes in opposite ends at right angles to each other, a swivel clevis having a draft pin connecting its open jaws and an eye bolt forming the swivel, and pivot pins connecting each end of the intermediate clevis or link respectively with the flange of the first clevis and the eye bolt of the swivel clevis, substantially as described. 2nd. A draft attachment, comprising a clevis having a hole through the body thereof at the central bend, an intermediate clevis having double jaws at each end, each pair of jaws being at right angles to the other, a swivel clevis having an eye in the outer end of the swivel bolt, the jaws of the intermediate clevis being perforated and adapted at each end to embrace the central bend of the first clevis and the eye of the swivel bolt, and pivot pins adapted to enter said holes and join the parts together, substantially as described.

**No. 55,673. Gate.** (*Barrière.*)



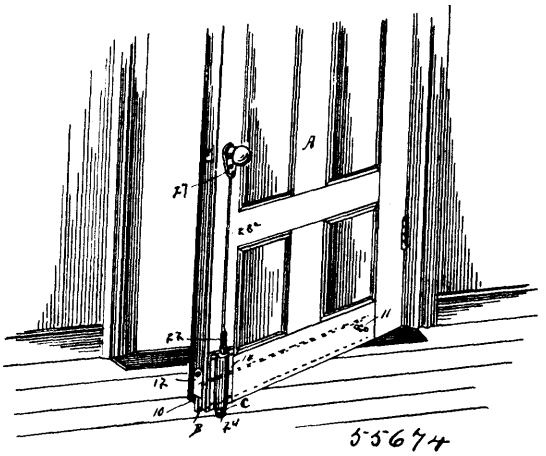
Seth Armingtage Crone, New York, State of New York, U.S.A., 21st April, 1897; 6 years. (Filed 29th March, 1897.)

*Claim,*—1st. A gate provided with a post rigidly secured thereto and mounted to turn and slide in bearings, a piston controlled by fluid-pressure and engaging the lower end of the post for sliding it, and means for turning the post as it is slid by the piston, substantially as described. 2nd. A gate provided with a post rigidly secured thereto and mounted to slide and to swing, a pin held on the said post and engaging an angular groove in a fixed part, and a piston controlled by fluid-pressure and engaging the lower end of the said post, substantially as shown and described. 3rd. A gate provided with a post rigidly secured thereto and fitted to slide and to turn in fixed bearings, a pin projecting from the said post and engaging an angular slot in one of the said bearings, a piston loosely engaging the lower end of the said post to lift the latter, and a cylinder containing the said piston and connected with a fluid-supply, substantially as shown and described. 4th. A gate provided with a post fitted to slide and to turn in fixed bearings, a pin projecting from the said post and engaging a slot in one of the said bearings, a piston loosely engaging one end of the said post to lift the latter, a cylinder containing the said piston and connected with a fluid-supply, and a keeper formed with a recess adapted to be engaged by a pin held on the free end of the said gate to lock the latter in a closed position, substantially as shown and described. 5th. A gate provided with a post mounted to turn and to slide in fixed bearings, a pin projecting from the said post and engaging an angular slot in one of the said bearings, and a keeper formed with a recess adapted to be engaged by a pin projecting from the free end of the said gate, substantially as shown and described. 6th. A gate provided with a post fitted to slide and to turn in fixed bearings, a pin projected from the said post and engaging a slot in one of the said bearings, a piston loosely engaging one end of the said post to lift the latter, a cylinder containing the said piston and connected with a fluid supply, and a cap held on the piston-rod of the said

piston and engaging the said cylinder, substantially as shown and described. 7th. In a gate, the combination with a gate provided with a post rigidly secured to the gate and having a recess in its lower end, and bearings in which the post is mounted to turn and slide, of a cylinder connected with a fluid supply, a piston in the cylinder and having its piston rod projecting into the recess in the lower end of the post, and means for turning the post as it is slid by the piston, substantially as described. 8th. In a gate, the combination of a gate provided with a pin projecting from its free end, a post secured to the opposite end of the gate and provided with a laterally projecting pin, bearings in which the post slides and turns, one of the bearings being provided with a slot having a vertical lower portion and an inclined and curved upper portion, and a keeper provided with a recess to receive the pin of the gates, substantially as described.

### No. 55,674. Weather Strip and Door Stop.

(*Bourrelet et seuil de porte.*)




Adolphus M. Doyle, Lesti, Kansas, U.S.A., 21st April, 1897; 6 years. (Filed 29th March, 1897.)

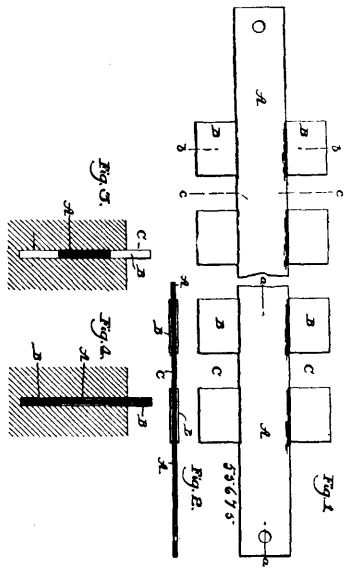
*Claim.*—1st. The combination of a stop adapted for attachment to a door, a spring normally exerting pressure downward on the said stop, a weather strip adapted for pivotal connection with the door, and a pin likewise adapted for pivotal connection with the door, the said pin being passed through the weather strip to an engagement with the said stop, the engagement being so made that the said pin will communicate the pressure from the spring controlling the stop to the weather strip, as and for the purpose specified. 2nd. The combination of a vertically-movable stop, a pivotally mounted weather strip having an opening therein, and a pin pivotally mounted off the stop and weather strip, the pin being passed through the opening in the weather strip and having loose connection with the stop, substantially as described. 3rd. The combination with a door having a slot extending through a portion of the door and communicating with the lower edge thereof, the door having also a triangular passage intercepting the slot, a pin having one end pivotally mounted in the small end of the triangular passage and passed through the same and projecting beyond the door, a weather strip pivotally mounted within the slot and having an opening through which the pin is passed, a casing extending vertically with the door and secured to the side opposite the side to which the pin is pivoted, and a stop vertically movable in the casing and having loose connection with the pin, substantially as described.

### No. 55,675. Saw Blade for Stone Sawing Machines.

(*Lame de scie pour machines à scier la pierre.*)

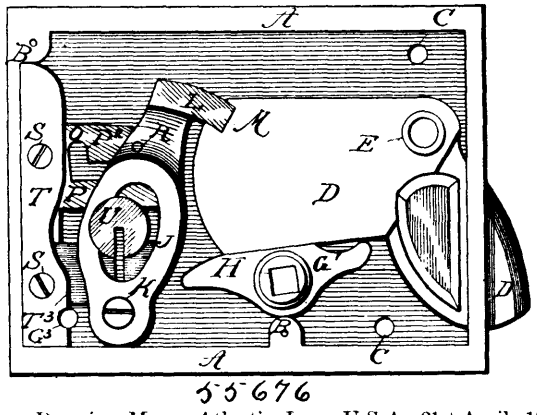
The Rapid Stone Saw Co., assignee of James Peckover, Philadelphia, Pennsylvania, U.S.A., 21st April, 1897; 6 years. (Filed 30th March, 1897.)

*Claim.*—1st. A saw blade for machines of the character described, consisting of a thin central body portion, and relatively thicker cutting blades on opposite sides thereof, each of the latter being slotted or notched to form serrated or toothed edges, substantially as described. 2nd. A saw blade for machines of the character described, consisting of a thin central body portion and relatively thicker cutting blades on opposite sides thereof, each of the latter being slotted or notched the entire depth thereof, substantially as described. 3rd. A saw blade for machines of the character described, consisting of a central body or blade portion and relatively thicker edge portions on either side thereof, said edge portions being of uniform thickness and one of the same being slotted or notched to form cutting teeth, substantially as described. 4th. A saw blade for machines of the character described, consisting of a central body or blade, a relatively thicker serrated cutting edge integral therewith, on one side of the central body, with means such as teeth B B on the opposite side, operating to steady the saw in the kerf, substantially as described. 5th. A saw blade for machines of the character described, consisting of a blade or body A, a series of teeth B B of greater relative thickness than the body or blade, and arranged on




one side thereof, with means such as other teeth B B and of uniform thickness therewith, arranged on the opposite side of the body or blade A adapted and operating to fill the kerf space in the stone above the cutting edge, substantially as described.

### No. 55,676. Gravity lock. (*Serrure à gravité.*)




James Downing Moore, Atlantic, Iowa, U.S.A., 21st April, 1897; 6 years. (Filed 30th March, 1897.)

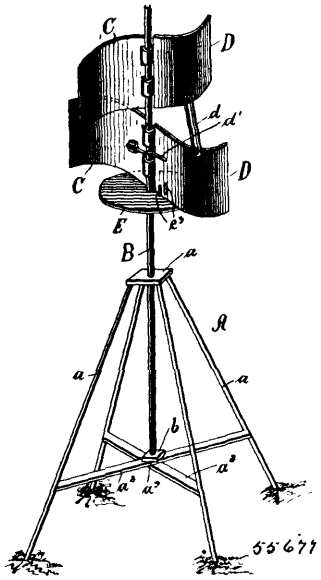
*Claim.*—The combination in a gravity lock, having a pivoted bolt normally held outwardly by gravity and having a notch therein and means for withdrawing the bolt, of a locking device comprising a locking block pivoted at its lower end and having a hook to enter said notch, a pin R on said locking block, a locking tumbler O having the slots P with extensions $P^2$, a bearing block T having a slot $T^2$ and two guides $T^3$, substantially as set forth.

### No. 55,677. Wind Wheel. (*Roue à vent.*)

John P. Fruit, Russillville, Kentucky, U.S.A., 21st April, 1897; 6 years. (Filed 31st March, 1897.)

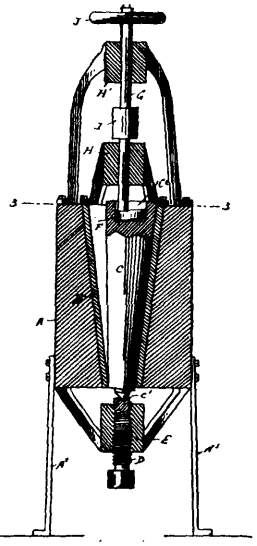
*Claim.*—1st. In a wind wheel, the combination with a suitable supporting frame, of a vertical shaft journalled therein, vanes mounted upon said shaft, one above the other, and each comprising a rigid vane and a hinged vane, means connecting the hinged vanes so that they move together, and an adjusting wheel loosely mounted upon said shaft and connected to one of said hinged vanes, substantially as described. 2nd. In a wind wheel, the combination with a suitable supporting frame, of a vertical shaft journalled therein, cima-shaped vanes mounted upon said shaft one above the other, and each consisting of a rigid vane and a hinged vane, a link connecting the hinged vanes so that they move together, an adjusting wheel loosely mounted upon said shaft and connected to the hinged blades, and means for adjusting said wheel in connection with the shaft whereby said hinged vanes may be opened or closed at will to start or stop the wheel, substantially as described. 3rd. In a wind wheel, the combination with a suitable supporting frame, of a vertical shaft journalled therein, cima-shaped vanes mounted upon said shaft one above the other, and also at right angles to

each other, each of said vanes comprising a rigid and a hinged vane, means for connecting said hinged vanes whereby they are moved




together, an adjusting wheel loosely mounted upon the shaft and connected to the hinged vanes, a notched wheel rigidly mounted upon said shaft below the adjusting wheel, a spring-pressed pawl mounted upon the adjusting wheel and engaging the notched wheel so as to hold said adjusting wheel in any desired position in relation to the vertical shaft, substantially as described.

**No. 55,678. Reducing Mill.** (*Moulin à réduire.*)



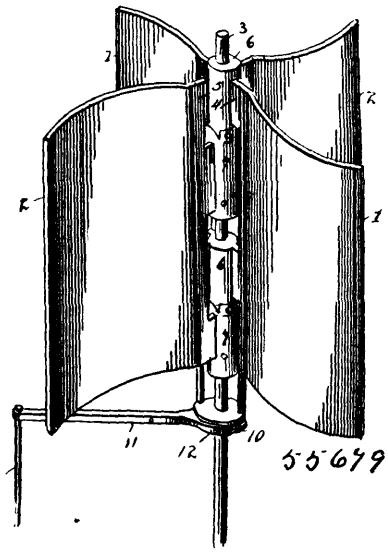
William C. Cofield, Piqua, Ohio, U.S.A., 21st April, 1897 ; 6 years. (Filed 1st April, 1897.)

*Claim.*—1st. A reducing-mill comprising a fixed casing having an inverted cone-shaped grinding-surface, an inverted cone adapted to roll upon the said surface to grind the material placed between the cone and the surface, said cone having a recess in its top or large end and an eccentric mounted on a revolving shaft and engaging the recess of the said cone to impart a rolling motion to the latter, substantially as shown and described. 2nd. A reducing-mill comprising a fixed casing having an inverted cone-shaped grinding-surface, an inverted cone adapted to roll upon the said surface to grind the material placed between the cone and the surface, said cone having a central recess in its top or large end, an eccentric mounted on a revolving-shaft and engaging the said recess of the cone to impart a rolling motion to the latter, and a screw forming a step for the lower, pointed end of the said cone, substantially as shown and described.

**No. 55,679. Windmill.** (*Moulin à vent.*)

Thomas Bayle Gassett, Taylor, Texas, U.S.A., 21st April, 1897 ; 6 years. (Filed 1st April, 1897.)

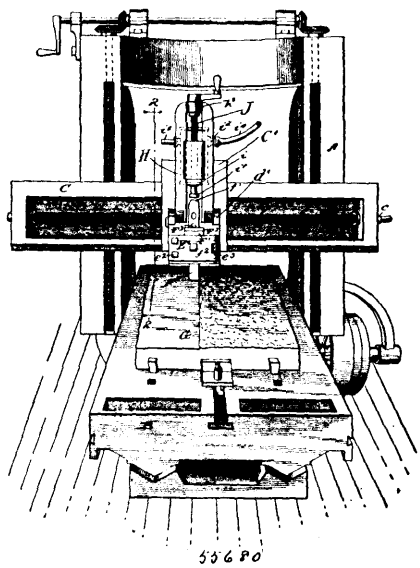
*Claim.*—1st. In a windmill, the combination of a horizontal wind-wheel comprising a vertical shaft, the movable and fixed blades each extending outward from both sides of said shaft and provided at their inner edges with vertical bars 4 and 5, the bars 4 being extended




below the wind-wheel, the vertical sleeves 7 fixed to the shaft and provided at their upper ends with tapered recesses and carrying the fixed blades, the bars 5 being secured to the sleeves 7, the movable sleeves 6 located above the sleeves 7, and provided with depending projections and connected with the bars 4 of the movable blades, said projections adapted to interlock with the said recesses to hold the fixed and movable blades at right angles to each other, a grooved pulley dispose horizontally and fixed to the extensions of the vertical bars 4, and a lever provided with arms and embracing the pulley and engaging the groove thereof, said lever being adapted to lift the movable sleeves out of engagement with the fixed sleeves, substantially as described.

**No. 55,680. Stone Dressing Machine.**

(*Machine à tailler la pierre.*)

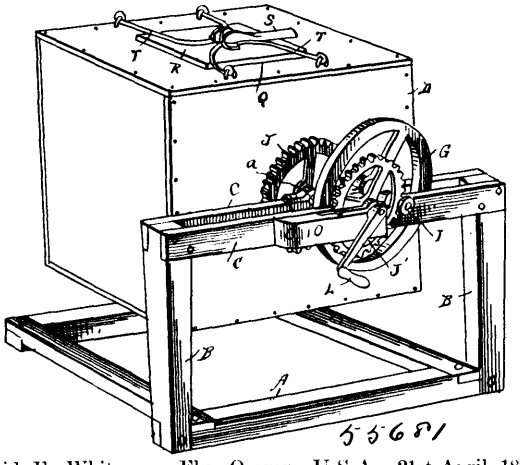



William Robert Hinsdale, Evanston, Illinois, U.S.A., 21st April, 1897 ; 6 years. (Filed 1st April, 1897.)

*Claim.*—1st. In a stone dressing machine, the combination with a movable tool holder and means for feeding the same to its work, of a cutting tool and mechanism for imparting a succession of blows to the tool. 2nd. In a stone dressing machine, the combination with a movable tool holder, and suitable feed mechanism therefor, of a cutting tool adjustably secured in the tool holder, and means for delivering a succession of blows to the tool. 3rd. In a stone dressing machine, the combination with a tool holder and means for feeding it to its work, of a cutting tool longitudinally in the tool holder, mechanism for imparting a succession of blows on the head of the tool, and a cushioning device or buffer in engagement with said tool. 4th. In a stone dressing machine, a tool holder and a tool movably secured therein, of a shoulder on the tool holder, a buffer resting upon said shoulder and a suitable pin or projection upon the tool

engaging said buffer, in combination with means for imparting a succession of blows to the tool. 5th. In a stone dressing machine, the combination with a tool holder and means for feeding it to its work, of a tool movably secured in said holder, means on the tool holder for delivering a succession of blows to the tool, and means for adjusting the position of the cutting point. 6th. In a stone dressing machine, the combination with a tool holding frame and means for feeding it across the machine, of a pivoted tool holder carrying a tool mechanism for delivering a succession of blows upon the tool, and means for adjusting the tool point comprising a screw pin or bolt movably secured in the face of the frame and against the head of which the tool holder rests. 7th. In a stone dressing machine, the combination with a tool carrying frame and means for moving the same transversely of the machine, of means for adjusting the frame vertically, substantially as described. 8th. In a stone dressing machine, the combination with a travelling tool holder and mechanism for delivering a succession of blows to the tool, of a cutting tool movably secured in said tool holder, provided with a plurality of slotted openings and a pin engaging said opening and engaging said tool holder whereby the longitudinal movement of the tool in one direction is controlled. 9th. In a stone dressing machine, the combination with a travelling tool carrier, of mechanism mounted thereon for delivering a series of blows to the cutting tool, of a cutting tool movably secured in said tool carrier and provided near its upper end with a series of slotted apertures, a pin or bolt passing through one of said apertures and extending on either side of the tool, a buffer or other cushioning device located beneath said pin and resting upon a suitable shoulder on the tool holder. 10th. In a stone cutting machine, the travelling tool carrier comprising an adjustable frame portion, and a tool carrier pivotally and adjustably secured to said frame, said tool holder being relatively thick at its lower portion and provided with a recess in its face equal in depth to the thickness of the tool, and a cap or plate removably secured to the face of said lower thickened portion of the tool holder, a tool positioned in said recess and provided with an elongated slotted opening therethrough, and a pin passing through a suitable aperture in said cap plate and said opening in the tool and secured at its inner end in a suitable recess in the face of the tool holder by means of a screw-threaded connection at the outer end of said pin with a registering recess in the cap plate.

**No. 55,681. Washing Machine.** (*Machine à laver.*)



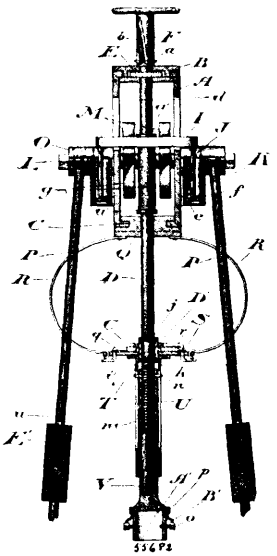
David F. Whiteman, Ely, Oregon, U.S.A., 21st April, 1897; 6 years. (Filed 2nd April, 1897.)

*Claim.*—1st. A washing machine comprising a rotating body having a plurality of separated strips on the inner side thereof and extending in the direction of rotation, forming circulating-spaces between the strips under the clothes in the direction of rotation, said strips having a plurality of circumferentially-closed cavities, with open outer ends, forming cups for the purpose described. 2nd. A washing-machine comprising a rotating body having a plurality of separated strips on the inner side thereof and extending in the direction of rotation, forming circulating spaces between them under the clothes in the direction of rotation, said strips having throughout their length a plurality of transversely-extending projections, the projections having a plurality of circumferentially-closed cavities with open outer ends, substantially as shown and described.

**No. 55,682. Rock Drill.** (*Perçoir à rocher.*)

John Raitter Brown, Harrison, Hot Springs, British Columbia, 21st April, 1897; 6 years. (Filed 1st April, 1897.)

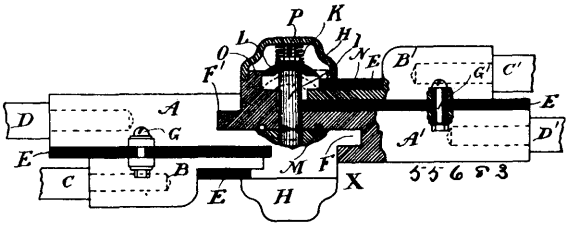
*Claim.*—1st. In a drill, a frame and a drill bar movably supported therein, in combination with a shaft journalled in the said frame, cams carried by the said shaft and adapted to raise the said drill bar, and springs adapted to return the drill bar to its original position, substantially as and for the purpose specified. 2nd. In a drill, a frame, a drill bar movably supported therein, and a tappet formed on or connected to the drill bar, in combination with a shaft journalled in the said frame, cams carried by the said shaft and adapted to raise the said drill bar, and springs adapted to return the drill



bar to its original position, substantially as and for the purpose specified. 3rd. In a drill, a frame, a drill bar movably supported therein, a tappet connected with the drill bar, and pistons connected to the ends of the tappet, in combination with a shaft journalled in the said frame, cams carried by the said shaft and adapted to raise the said tappet and vacuum cylinders in which the said pistons play, a vacuum being formed below the pistons when the drill bar is raised which tends to return the drill bar to its original position, substantially as and for the purpose specified. 4th. In a drill, a frame, a drill bar movably supported therein, a tappet connected with the drill bar, and pistons connected to the ends of the tappet, in combination with a shaft journalled in said frame, cams carried by the said shaft and adapted to raise the said drill bar, and vacuum cylinders in which the said pistons play, a vacuum being formed below the pistons when the drill bar is raised, which tends to return the drill bar to its original position, and springs connected with the drill bar and the frame to produce the same effect, substantially as and for the purpose specified. 5th In a drill, a frame with slotted sides, a drill bar movably supported therein, and provided with collars, and a tappet passing through the slots and embracing the said drill bar between the collars, in combination with a shaft journalled in the said frame, cams carried by the said shaft and adapted to raise the said tappet and drill bar, means for returning the said drill bar to its normal position, a sleeve surrounding a suitable portion of the drill bar and provided with one or more diagonal slots, a ratchet wheel suitably supported and connected to the said sleeve, a spring-actuated pawl upon the frame engaging with said ratchet wheel, and one or more pins projecting from the drill bar into the slots in the sleeve, substantially as and for the purpose specified. 6th. In a drill, a frame, a drill bar movably supported therein, and means for reciprocating the drill bar, in combination with a sleeve surrounding a suitable portion of the drill bar, and provided with one or more diagonal slots, a ratchet wheel suitably supported and connected to the said sleeve, a spring-actuated pawl upon the frame adapted to engage said ratchet wheel, one or more pins projecting from the drill bar into the slots in the sleeve, a drill holder screwed upon the end of the drill bar, a sleeve suitably supported about the said holder and held from turning, and pins connected to the holder and adapted to engage with slots in the said sleeve, substantially as and for the purpose specified. 7th. In a drill, a frame, a drill bar movably supported therein, and means for reciprocating the drill bar, in combination with a sleeve surrounding a suitable portion of the drill bar and provided with one or more diagonal slots, a ratchet wheel suitably supported and connected to the said sleeve, a spring-actuated pawl upon the frame adapted to engage with the said ratchet wheel, one or more pins projecting from the drill bar into the slots in the sleeve, a drill holder screwed upon the end of the drill bar, a plate supported from the frame of the drill so as to be capable of a reciprocating motion only with the drill bar, a sleeve suitably supported about the said drill holder, a ratchet wheel rigidly connected to the said sleeve, a spring-actuated pawl upon the said plate adapted to engage with the said ratchet wheel, and pins connected to the holder and adapted to engage with slots in the said sleeve, substantially as and for the purpose specified. 8th. In a drill, a frame, a drill bar movably supported therein and means for reciprocating the drill bar, in combination wth a sleeve surrounding a suitable portion of the drill bar, and provided with one or more diagonal slots a ratchet wheel suitably supported and connected to the said sleeve, a spring-actuated pawl upon the frame adapted to engage with said ratchet wheel, one or more pins projecting from the drill bar into the slots in the sleeve, a drill

holder screwed upon the end of the drill bar, a plate supported from the frame of the drill so as to be capable of a reciprocating motion only with the drill bar, a sleeve suitably supported about the said drill holder, two ratchet wheels rigidly connected to the said sleeve with their teeth set in opposite directions, two spring-actuated pawls upon the said plate adapted to engage with the said ratchet wheels, and one or more pins connected to the holder and adapted to engage with slots in the said sleeve, substantially as and for the purpose specified. 9th. In a drill, a frame with slotted sides, a drill bar movably supported therein and provided with collars, and a tappet passing through the slots and embracing the said drill bar between the collars, in combination with a shaft journalled in the said frame, cams carried by the said shaft and adapted to raise the said tappet and drill bar, means for returning the said drill bar to its normal position, a sleeve surrounding a suitable portion of the drill bar and provided with one or more diagonal slots, a ratchet wheel suitably supported and connected to the said sleeve, a spring-actuated pawl upon the frame engaging with said ratchet wheel, one or more pins projecting from the drill bar into the slots in the sleeve, a drill holder screwed upon the end of the drill bar, a sleeve suitably supported about the said holder and held from turning, and one or more pins connected to the holder and adapted to engage with slots in the said sleeve, substantially as and for the purpose specified. 10th. In a drill, a frame with slotted sides, a drill bar movably supported therein and provided with collars, and a tappet passing through the slots and embracing the said drill bar between the collars, in combination with a shaft journalled in the said frame, cams carried by the said shaft and adapted to raise the said tappet and drill bar, means for returning the said drill bar to its normal position, a sleeve surrounding a suitable portion of the drill bar and provided with one or more diagonal slots, a ratchet wheel suitably supported and connected to the said sleeve, a spring-actuated pawl upon the frame engaging with said ratchet wheel, and one or more pins projecting from the drill bar into the slots in the sleeve, a drill holder screwed upon the end of the drill bar, a plate supported from the frame of the drill so as to be capable of a reciprocating motion only with the drill bar, a sleeve suitably supported about the said drill holder, a ratchet wheel rigidly connected to the said sleeve, a spring-actuated pawl upon the said plate adapted to engage with the said ratchet wheel, and one or more pins connected to the holder and adapted to engage with slots in the said sleeve, substantially as and for the purpose specified. 11th. In a drill, a frame with slotted sides, a drill bar movably supported therein and provided with collars, and a tappet passing through the slots and embracing the said drill bar between the collars, in combination with a shaft journalled in the said frame, cams carried by the said shaft and adapted to raise the said tappet and drill bar, means for returning the said drill bar to its normal position, a sleeve surrounding a suitable portion of the drill bar and provided with one or more diagonal slots, a ratchet wheel suitably supported and connected to the said sleeve, a spring-actuated pawl upon the frame engaging with said ratchet wheel, one or more pins projecting from the drill bar into the slots in the sleeve, a drill holder screwed upon the end of the drill bar, a plate supported from the frame of the drill so as to be capable of a reciprocating motion only with the drill bar, a sleeve suitably supported about the said holder, two ratchet-wheels rigidly connected to the said sleeve with their teeth set in opposite directions, two spring-actuated pawls upon the said plate adapted to engage with the said ratchet-wheels, and one or more pins connected to the holder and adapted to engage with slots in the said sleeve, substantially as and for the purpose specified. 12th. In a drill, a frame with slotted sides, a drill bar movably supported therein and provided with collars, and a tappet passing through the slots and embracing the said drill bar between the collars, in combination with a shaft journalled in the said frame, cams carried by the said shaft and adapted to raise the said tappet and drill bar, a sleeve surrounding a suitable portion of the drill bar and provided with one or more diagonal slots, a ratchet-wheel suitably supported and connected to the said sleeve, a spring-actuated pawl upon the frame engaging with said ratchet-wheel, one or more pins projecting from the drill bar into the slots in the sleeve, a drill holder screwed upon the end of the drill bar, a plate connected by springs with the frame of the drill and with the drill bar so as to return the drill bar to its extended position after it has been raised, without interfering with its rotation, a sleeve suitably supported about the said drill holder, a ratchet-wheel rigidly connected to the said sleeve, a spring-actuated pawl upon the said plate adapted to engage with the said ratchet-wheel, and pins connected to the drill holder and adapted to engage with slots in the said sleeve, substantially as and for the purpose specified. 13th. In a drill, a frame with slotted sides, a drill bar movably supported therein and provided with collars, and a tappet passing through the slots and embracing the said drill bar between the collars, in combination with a shaft journalled in the said frame, cams carried by the said shaft and adapted to raise the said tappet and drill bar, pistons connected to the tappet, vacuum cylinders in which the said pistons play, a sleeve surrounding a suitable portion of the drill bar and provided with one or more diagonal slots, a ratchet-wheel suitably supported and connected to the said sleeve, a spring-actuated pawl upon the frame engaging with said ratchet-wheel, one or more pins projecting from the drill bar into the slots in the sleeve, a drill holder screwed upon the end of the drill bar, a plate connected by springs with the frame of the drill and with the drill bar so as to tend to return the drill bar to its extended position after it has been raised, without interfering with its rotation, a sleeve suitably supported about the said drill holder, a ratchet-wheel rigidly connected to the said sleeve, a spring-actuated pawl upon the said plate adapted to engage with the said ratchet-wheel, and one or more pins connected to the drill holder and adapted to engage with slots in the said sleeve, substantially as and for the purpose specified. 14th. In a drill, a frame and corrugated projections formed thereon, in combination with sleeves fitted thereon and provided with legs, substantially as and for the purpose specified. 15th. In a drill, a frame and corrugated projections formed thereon, in combination with split sleeves fitted thereon and provided with hinges and clamps, and legs connected to the said sleeves, substantially as and for the purpose specified. 16th. In a drill, a frame and corrugated projections formed thereon, in combination with split sleeves fitted thereon and provided with hinges and clamps, legs connected to the said sleeves, and detachable ballast baskets connected to the said legs, substantially as and for the purpose specified. 17th. In a drill, a drill holder provided with a drill socket, in combination with a pinch bolt, a Y-shaped spring plate adapted to embrace the bolt head, and a guide for the stem of the plate, substantially as and for the purpose specified.

**No. 55,683. Electric Brake.** (*Frein électrique.*)



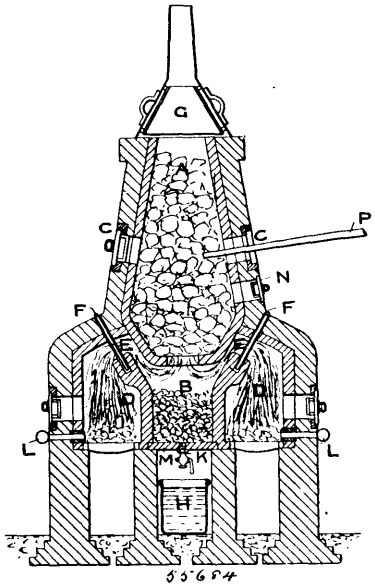

The Canadian General Electric Co., Toronto, Ontario, Canada, assignee of William B. Potter, Schenectady, New York, U.S. A., 21st April, 1897; 6 years. (Filed 8th July, 1896.)

*Claim.*—1st. In combination, an electric motor car, a trailer attached thereto, braking apparatus upon both cars normally actuated by the motors upon the motor car when operated as generators, an auxiliary normally idle source of electro-motive force carried upon the trailer, and means whereby the auxiliary generator is thrown into closed circuit with the braking magnets upon the trailer by the accidental separation of the trailer from the motor car. 2nd. In combination, an electric motor car, a trailer, braking apparatus upon the two cars and normally operated by the motors upon the motor car when operating as generators, an auxiliary normally idle dynamo-electric generator carried upon or driven by the axle of the trailer, and suitable couplings and connections between the braking apparatus and the auxiliary generator whereby the accidental separation of the connection between the motor car and trailer acts to set the brake upon the trailer. 3rd. In combination, an electric motor car, a trailer, an auxiliary normally idle dynamo-electric machine upon the trailer car, and means whereby the accidental separation of the two cars will close the auxiliary generator upon a local circuit acting to stop the trailer car. 4th. In combination, an electric motor car, a trailer, braking apparatus upon the two cars normally operated by the motors upon the motor car when acting as generators, an auxiliary normally idle dynamo-electric machine upon the trailer car, and means whereby the accidental separation of the two cars will first momentarily short-circuit the auxiliary machine and then throw it upon a local circuit including the brake magnets. 5th. In combination, an electric motor car, a trailer, braking apparatus upon the two cars normally operated by the motors upon the motor car when acting as generators, an auxiliary normally idle dynamo-electric machine upon the trailer, and means for causing the accidental separation of the two cars to impart an initial excitation to the filled-magnets of the auxiliary machine, and then throw it upon a local circuit including the braking apparatus of the trailer. 6th. In combination, an electric motor car, a trailer, braking apparatus upon the two cars normally actuated by the motors upon the motor car when operating as generators, an auxiliary normally idle dynamo-electric machine upon the trailer, contacts and connections whereby the auxiliary machine is first momentarily short-circuited to obtain an initial field-magnetization, and is then thrown upon a local circuit including the braking apparatus upon the trailer, and means for preventing the accidental displacement of the contacts and connections. 7th. As a means for arresting a moving vehicle, a normally idle dynamo-electric generator thereon, braking apparatus, means for imparting an initial magnetization to the generator, a local circuit, and means for including the generator in the local circuit with the braking apparatus. 8th. In an electric braking apparatus, a dynamo-electric generator composed of an armature mounted upon the axle of the vehicle, a field-magnet also rotatably mounted on such axle, and a stop limiting the motion of the field-magnet in either direction, whereby the relation of the field-magnet and armature may be reversed to correspond to the direction of motion of the car. 9th. As a means for arresting a movable vehicle, a normally idle dynamo-electric generator thereon, braking apparatus, means for

throwing the generator into a local circuit including the braking apparatus, and means for adjusting the relation of armature and field in accordance with the direction of motion of the vehicle.

**No. 55,684. Ore Disintegrator.**

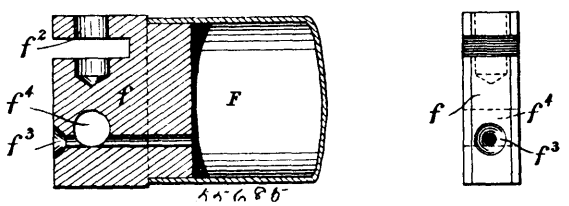
(*Procédé de désagrégation de minerai.*)




Louis Henry Goodman, Joseph Edward Lilley and John Chapman, assignees of Adolf Gutensohn, all of London, England, 21st April, 1897; 6 years. (Filed 31st July, 1896.)

*Claim.*—1st. A process for the cracking and rendering friable of quartz or similar ore, consisting of the application of heat and hot non-oxidising or reducing gases of combustion to the quartz in a retort furnace, chilling the ore repeatedly in situ by water and finally dropping the finely-divided pieces of ore when while hot into cold water, substantially as described. 2nd. In a process for the disintegration of quartz, the employment of hot gases of combustion rendered non-oxidising or reducing by the admission of steam to the fire in the presence of red hot iron, substantially as described. 3rd. In a process for the disintegration of quartz, the employment of a solution of sulphate or bi-sulphate of soda for soaking the ore prior to heating in the retort furnace or for afterwards chilling the same by injection into the furnace or in a receptive tank, substantially as described. 4th. The arrangement of a retort furnace for the disintegration of quartz or similar ore with a steam supply pipe to external fire lower exit door to discharge contents of lower part of retort to a water tank, and other fittings and accessories, substantially as shown and illustrated herewith.

**No. 55,685. Thermostat.** (*Thermostat.*)




William Fiddes Bristol, Gloucester, and W. & B. Cowan, Smith's Square Works, Westminster, all in England, 22nd April, 1897; 6 years. (Filed 3rd October, 1896.)

*Claim.*—1st. A device for indicating or recording temperatures, or for acting under the influence of changes of temperatures, consisting of or comprising a closed tube or equivalent vessel containing alcohol or other fluid under pressure and connected with a pointer or other device to be acted upon, substantially as hereinbefore described. 2nd. A device for indicating or recording temperatures or for acting under the influence of changes of temperature, consisting of or comprising a closed tube or equivalent vessel containing alcohol or other fluid charged thereinto to such a pressure as to distort the said tube or vessel, the said tube or vessel being connected with a pointer or other device to be acted upon, substantially as hereinbefore described. 3rd. In devices for the purpose indicated, a tube or equivalent vessel having an end piece through which holes are made transverse to each other, a filling material being placed in one hole and perforated for the passage of fluid under pressure, the said filling material being afterwards compressed to confine the fluid under pressure in the said tube or vessel, substantially as hereinbefore described. 4th. In gas meters, the combination with a registering device and a measuring device, of a body which is acted upon by changes of temperature in such a way as to automatically alter the amount of movement of the measuring device relatively to the movement of the registering device, substantially as hereinbefore described. 5th. In a dry gas meter, an arrangement of mechanism for automatically varying the capacity of the measuring device for passing gas, and comprising in combination with the cranked shaft or spindle A an arm E, curved rod or tube F, pin and slot connection $f^2$, lever G having curved slots $e$, stud H, links 1, arms K and rods L, substantially as and for the purpose hereinbefore described. 6th. In a wet gas meter such as a station meter, an arrangement of mechanism for automatically varying the capacity of the measuring device or space for passing gas, and comprising in combination with the chamber L outlet tube K and its sliding portion, the fulcrum $g$, lever G, pin and slot connection $f^2$, rod or tube F, and link $L^2$, substantially as and for the purpose hereinbefore described.

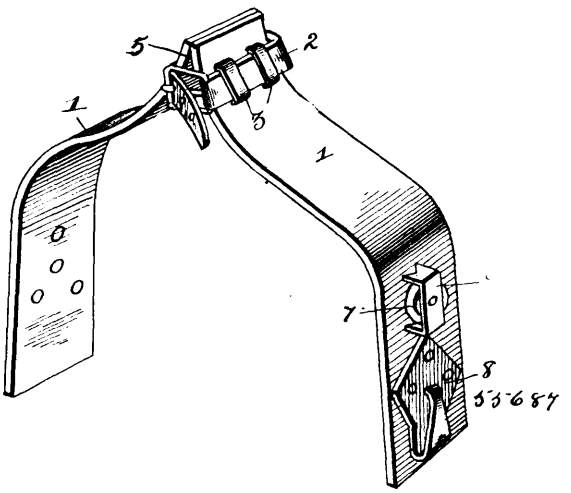
**No. 55,686. Combustible Wick for Burning Hydrocarbon Oil.** (*Mèche pour brûleurs à huile à hydro-carbures.*)

The Lee Lamp (Parent) Co. Halbour London, assignee of Joseph Beverly, Fenby, Castle Bromwick, Warwick, both of England, 22nd April, 1897; 6 years. (Filed 14th November, 1896.)

*Claim.*—1st. Making incombustible wicks for burning hydrocarbon oils, by combining with a suitable textile fabric, such as calico, a paste or cement, such as flour paste, drying same and carbonizing the whole, as set forth. 2nd. The incombustible carbon wicks for burning hydrocarbon oils, and composed of a textile fabric and paste carbonized as described. 3rd. Incombustible carbon wicks for burning hydrocarbon oils, the said wicks being made from textile fabric, substantially as hereinbefore described.

**No. 55,687. Adjustable Spine Protecting Back Band.**

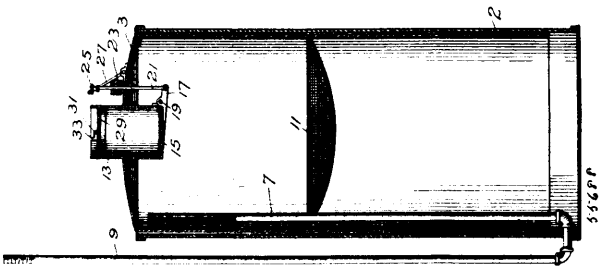
(*Bande protectrice pour épine du dos.*)




Joseph Philemow Deadwyler and Hardman Wade, both of Fort Lamar, Georgia, U.S.A., 22nd April, 1897; 6 years. (Filed 5th February, 1897.)

*Claim.*—1st. The herein described adjustable, spine protecting back band, consisting of a pair of strips of wood, bent from their upper ends downwardly, outwardly and downwardly again to fit snugly the sides of the horse, loops or staples on the upper ends of said strips and a strap or other fastening device passing through said loops for the purpose of adjusting the size of the band, substantially as and for the purpose described. 2nd. The herein described adjustable, spine protecting back band, consisting of a pair of strips of wood, bent from their upper ends downwardly, outwardly and downwardly again and formed with depressions or cut-away portions on their rear inner surfaces, loops or staples on the upper ends of said strips and a strap or other fastening device passing through said loops for the purpose of adjusting the size of the band, substantially as and for the purpose described. 3rd. The herein described adjustable, spine protecting back band, consisting of a pair of strips of wood, bent from their upper ends downwardly, outwardly and downwardly again to fit snugly the sides of the horse, loops or staples on the upper ends of said strips, a strap or other fastening device passing through said loops for the purpose of adjusting the size of the band and pulleys mounted in suitable bearings on the sides of said strips through which the lines or reins are adapted to pass, substantially as and for the purpose described.

**No. 55,688. Gas Generator.** (*Générateur à gaz.*)



The American Acetylene Gas Co., assignee of Oliver G. Seward, Otto E. Wille and Union J. Ham, all of Minneapolis, Minnesota, U.S.A., 22nd April, 1897; 6 years. (Filed 4th March, 1897.

*Claim.*—1st. The combination of the liquid-holding tank, the rising and falling gas-holder, closed at its top and open at its bottom, located in said liquid-tank and provided with a diaphragm for supporting a gas-generating material, the feed-receptacle opening into and carried by said gas-holder in its up-and-down movement, and provided with a top cover, a movable bottom for said feed-receptacle, an operating device outside of said gas-holder, and connected to said movable bottom for lifting the same into engagement with the bottom of said feed-receptacle, means for locking said operating device and a gas exit pipe opening into the upper part of said gas-holder, substantially as and for the purpose specified. 2nd. The combination of the liquid-holding tank, the rising and falling gas-holder, closed at its top and open at its bottom, located in said liquid-tank and provided with a diaphragm for supporting a gas-generating material, the feed-receptacle opening into and carried by the gas-holder in its up-and-down movement, and provided with a top cover, a hinged bottom to the feed-receptacle, an operating device passed through the gas-holder and connected to said hinged bottom for lifting the hinged bottom to close the same against the bottom of the feed-receptacle, means for locking said device to hold the hinged bottom against the bottom of the feed-receptacle, and a gas-exit pipe opening into the upper part of the gas-holder, substantially as and for the purposes described. 3rd. The combination of the liquid-holding tank, the rising and falling gas-holder, closed at its top and open at its bottom, located in said liquid-tank and provided with a diaphragm for supporting a gas-generating material, the feed-receptacle opening through and carried by the gas-holder in its up-and-down movement, and provided with a top cover, the hinged bottom to the feed-receptacle, the operating-rod 21 connected to the hinged bottom and extending through the gas-holder, and the link 27 for locking said rod and holding the hinged bottom against the bottom of the feed-receptacle, and a gas-exit pipe opening into the upper part of the gas-holder, substantially as and for the purposes described.

**No. 55,689. Fire Back.** (*Dos de grille*)

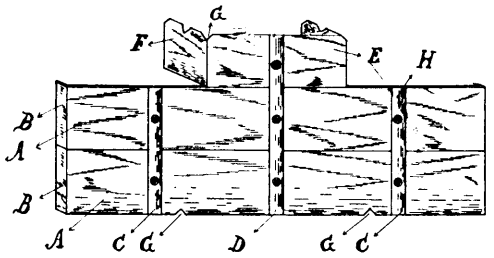


*Fig. 1.*

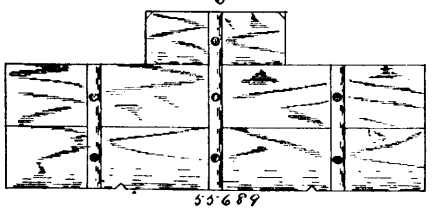
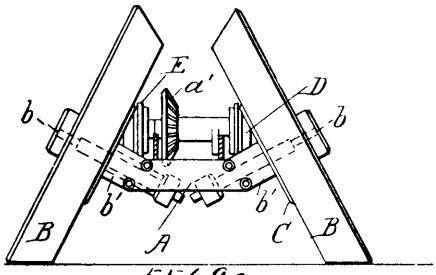


*Fig. 2.*

Henry Good, Corestogo, Ontario, Canada, 22nd April, 1897; 6 years. (Filed 13th April, 1895.)

*Claim.*—The combination of A, A; B, B; C, D, C; and E, F, with a cooking stove, substantially as and for the purpose hereinbefore set forth.

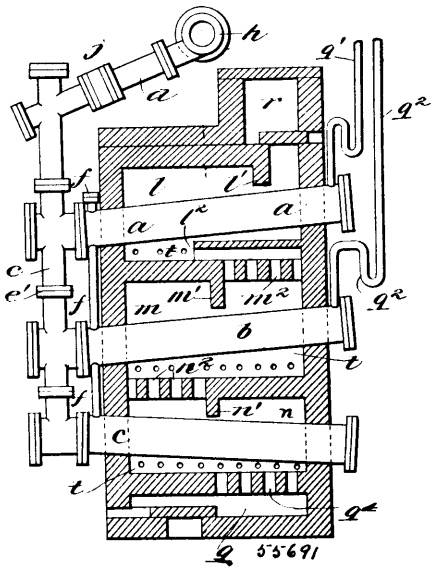
**No. 55,690. Harvester Driving Mechanism.**
(*Mécanisme conducteur pour moissonneuses.*)



Amedée Térault, Montreal, Quebec, Canada, 22nd April, 1897; 6 years. (Filed 9th September, 1895.)

*Claim.*—In an agricultural emplement, the combination, with a frame, and a horizontal shaft journalled therein and provided with a driving device, of two conical ground wheels, two upwardly and outwardly inclined axles journalled in the frame and supporting the said ground wheels, beveled toothed wheels C operatively secured to the said ground wheels, beveled toothed wheels D journalled on the said shaft and gearing into the wheels C, internal ratchet wheels secured on the said shaft, and pawls pivoted to the wheels D and engaging with the said ratchet wheels, substantially as set forth.

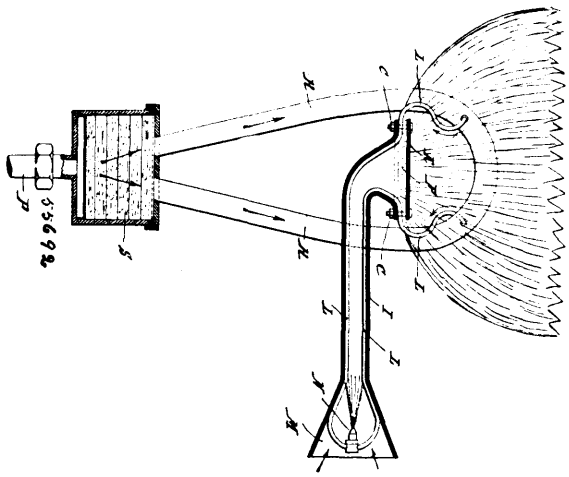
**No. 55,691. Apparatus for Preparing Hydrocarbons.**
(*Appareil pour la préparation d'hydrogène carburé.*)



Richard Varley Horsfall, Slaithwaite, York, England, 22nd April, 1897; 6 years. (Filed 3rd January, 1896.)

*Claim.*—1st. In apparatus for distilling, cracking or gasifying oils, tars, or any liquid hydrocarbons, the use of a bench or tier of retorts in which said retorts are placed either horizontally or at an angle and inclosed each in separate heating chambers which may be constructed with baffles, and with flues by which the hot gases from an adjacent furnace or furnaces are conveyed in a circuitous course over and around each of said retorts in the manner and for the purpose substantially as hereinbefore described. 2nd. In apparatus for distilling, cracking or gasifying oils, tars, or any liquid hydrocarbon, the use of a bench or tier of retorts in which each of the lower retorts is placed or encased in a separate heating chamber, and one or more retorts inclosed in the top of the upper heating chamber said retorts being placed either side by side or one over the other substantially as hereinbefore described. 3rd. In apparatus for distilling, cracking or gasifying oils, tars, or any liquid hydrocarbons in which retorts are employed placed either horizontally or at an angle, the combination therewith of a subsidiary pipe as *f* for the purpose and in the manner substantially as hereinbefore described. 4th. In apparatus for distilling, cracking or gasifying oils, tars, or any liquid hydrocarbons, the combination of retorts placed either horizontally or at an angle, separate heating chambers with or without baffles, and in which said retorts are separately inclosed, vertical ascension pipes as *e* and subsidiary pipes as *f*, all substantially as and for the purpose hereinbefore described. 5th. Apparatus for distilling, cracking or gasifying oils, tars, or any liquid hydrocarbons, arranged and constructed substantially as hereinbefore described and as shown.

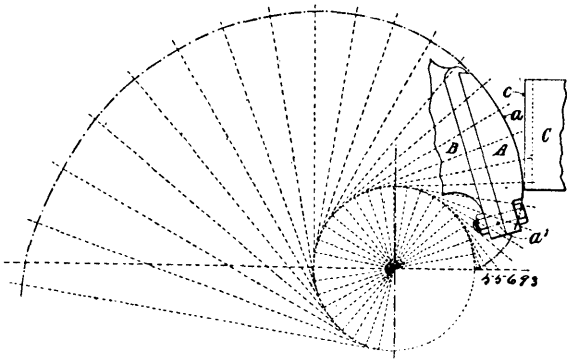
**No. 55,692. Apparatus for Vaporizing Oils and for Consuming the Vapours.** (*Foyer à hydrocarbures.*)



René Augustin Poitrimol, Paris, France, 22nd April, 1897; 6 years. (Filed 28th May, 1896.)

*Claim.*—1st. In a heating apparatus designed for furnishing a blue flame, and in which heavy or light oil or hydrocarbon in general can be consumed at will, a vapourizer directly heated by the sole flames from the burner fed either by capillarity with the aid of wicks or other materials capable of producing molebular division, or by causing the liquid to traverse a filter box with the object of obtaining, by a pipe under pressure, a continuous and regular feed, and to obviate counter pressures, or by providing the tube before the inlet for the liquid to the boyler with an apparatus designed to regulate this uninterrupted arrival of the liquid proportionately to the quantity of gas consumed by the burner, for resisting the counter pressures, substantially as described. 2nd. In a heating apparatus designed to furnish a blue flame, and in which heavy or light oil or hydrocarbons in general can be consumed at will, the combination, with a vapourizer such as described in the first claim, of one or more supplies of vapour heated specially and apart by the flames from the burner, and continued directly, and without any intermediary, by one or more pipes designed to conduct to the burner the hydrocarbon gas formed, after mixing it intimately with the quantity of air necessary for forming carburetted air, before its arrival in the burner, substantially as described. 3rd. In a reservoir designed to feed a series of apparatus of the kind set forth in the second claim a flexible tube fixed to the bottom of the reservoir and continuing the feed pipe through the liquid, and whose free extremity may be raised out of the liquid when the feed is to be stopped, substantially as described. 4th. For feeding a series of apparatus, such as described in the first claim, an inclined pipe upon which the several apparatus are branched, the branches being connected below the apparatus with a second inclined pipe terminating in a small reservoir, with the object of emptying the pipes when the feed has been arrested, and obviating leakage, substantially as described.

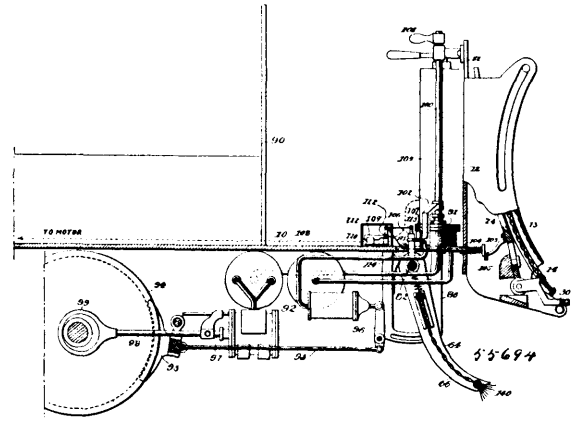
**No. 55,693. Apparatus for Grinding Hard Substances.**
(*Machine à broyer.*)



Alfred Jordan, 27 Mincing Lane, London, England, 22nd April, 1897; 6 years. (Filed 4th July, 1896.)

*Claim.*—1st. Forming the working surface of the movable jaw of a crushing or disintegrating machine of the shape of a segment of the involute of a circle, substantially as described. 2nd. For use in a machine for reducing or disintegrating hard substances, a movable jaw the working surface of which is shaped so that any transverse vertical section shows a curve which is a segment of the involute of a circle, substantially as shown and described. 3rd. A machine for reducing or disintegrating hard substances in which the movable jaws are attached to a centre-piece and so disposed that the upper parts of the working surfaces are outside a circle which is described from the centre of oscillation, and the radius of which is equal to the distance of the lower portion of the working surface from such centre of oscillation, substantially as shown and described. 4th. For use in a machine for reducing or disintegrating hard substances, the combination of the centre-piece B, the jaws A with their working surfaces having the shape of an involute of a circle, the central shaft *b*, and means for actuating the centre-piece, substantially as shown and described. 5th. For use in a machine as hereinbefore described and claimed, the sliding jaw, and springs, substantially as described and shown.

**No. 55,694. Street Car Fender.** (*Défense de chars.*)

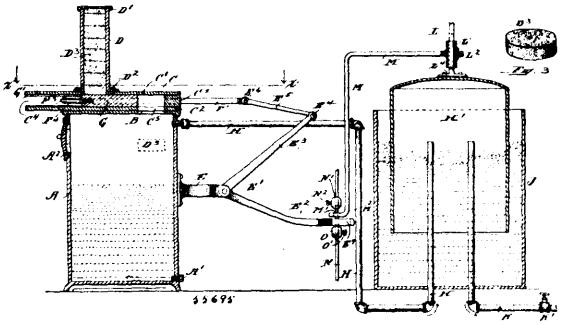


Albert Edward Hughes, New Canaan Road, Darien, Connecticut, U.S.A., 22nd April, 1897; 6 years. (Filed 11th February, 1896.)

*Claim.*—1st. A wheel-guard for a car consisting essentially of long flexible fingers or members arranged closely together and projecting from the car downwardly toward the ground normally clearing the same and serving themselves essentially as the guard, and means for forcibly jamming said members endwise against the ground for preventing a person from passing under them. 2nd. A wheel-guard for a car comprising closely-arranged sets of long flexible fingers or blades extendig obliquely downward with their lower ends normally clearing the ground so that the impact of the prostrate person against them will cause them to move into close yielding contact with the ground and receive the person and prevent him from passing thereunder, said members serving themselves essentially as the guard. 3rd. A wheel-guard for a car comprising non rigid or flexible members adapted to be forced endwise into close but yielding contact with the ground thereby conforming to inequalities of the same, and serving themselves essentially as the guard, means for holding said members normally out of contact with the ground, and a trip device extending normally in advance of said guard for actuating the same when said device collides with a person. 4th. The combination of a wheel-guard carried normally out of contact with the ground and adapted to be forced into close contact therewith, a trip-device extending normally in advance thereof for actuating the same upon colliding with a person, and means for elevating the trip-device at will and independently of the action of the guard whereby the trip device may be caused to clear an obstacle. 5th. A wheel-guard carried normally out of contact with the ground and adapted to be forced into close contact therewith, springs tending to force the guard against the ground, sliding locking-mechanism for normally holding the guard against the action of the springs, and a swinging vertically-movable trip-device for actuating said locking-mechanism. 6th. The combination of a wheel-guard carried normally out of contact with the ground and adapted to be forced into close contact therewith, and a trip-device swinging on a horizontal axis with its bearings or axle vertically-movable and extending normally in advance of the guard for actuating the same upon colliding with a person, said device being constructed to move out of the way after colliding with a person and actuating the guard. 7th. The combination of a wheel-guard carried normally out of contact with the ground but tending to move into contact therewith, sliding locking-mechanism for normally holding said guard clear of the ground, a trip-device swinging on a horizontal axis with its bearings or axle vertically-movable and extending normally in advance of the guard and controlling the movement of said locking-mechanism. 8th. The combination of a rigid back-plate placed beneath a car in advance of the wheels and a wheel-guard mounted thereon and consisting of a broom-like device having the head-piece thereof mounted in guides upon said back-plate, springs tending normally to move the same downwardly so as to force the fingers or flexible members of the broom into close but yielding contact with the ground and means for normally holding the guard against the action of the springs. 9th. A wheel-guard comprising in combination a broom-like device

extending transversely the car in front of the wheels thereof and adapted to be moved downwardly so as to force the free ends of the fingers or members of the the broom into close but yielding contact with the ground, and a non-yielding back-plate for preventing the fingers or members of the broom from being forced backwardly beyond a prescribed limit. 10th. The combination of a car and a telescoping-screen comprising a curved screen section moving in the arc of its curvature and another screen section sliding upon the same. 11th. The combination of a car, a curved telescoping-screen mounted in front of the dash-board and sliding in the arc of its curvature, a net arranged in said screen with its upper and lower ends made fast therein and left free at its sides so as to move independently thereof and having springs incorporated in the body of the net for holding it normally taut but permitting it to sag under the weight of a person. 12th. The combination of a car, a telescoping-screen mounted in front of the dash-board and comprising an upper sliding-frame and a lower frame sliding thereon and provided with a net, said upper frame being adapted to slide downwardly and forwardly upon being released, and means for sliding said lower frame on the upper one simultaneously with the sliding of said upper one whereby the projection of the screen may be accelerated. 13th. The combination of a car, a telescoping-screen mounted in front of the dash-board and comprising an upper sliding frame and a lower frame sliding thereon and provided with a net, said frame being adapted to slide downwardly and outwardly upon being released, connections intermediate said lower and upper frames whereby the lower one may be slid on the upper one while the latter itself is moving. 14th. The combination of a car, a telescoping-screen mounted in front of the dash-board and comprising an upper sliding-frame and a lower frame sliding thereon and provided with a net, said upper frame being adapted to slide downwardly and outwardly upon being released, a rope, chain or the like made fast to a point near the upper end of the lower frame and to a suitable stationary point near the frame and passing about a fixed point on said upper frame for sliding the lower frame upon the upper when the latter is moving forwardly. 15th. The combination of a car, and a screen placed forwardly of the dash-board thereof for receiving a person thereon, said screen being provided with a loose net having spiral springs incorporated in the body of the net for holding it taut and permitting it to sag under the weight of a person. 16th. The combination of a screen adapted to be projected forwardly, a pivoted locking-device for holding the screen in retracted position, a frame pivoted to said locking-device having a limited range of movement thereon, said frame projecting in advance of said locking-device and the screen when the latter is retracted and acting as a trip-device. 17th. The combination of a screen adapted to be projected forwardly, a pivoted locking-device for holding the screen in retracted position and tending constantly to swing into locking position, a frame pivoted to said locking-device having a limited range of movement thereon, said frame being carried by said locking device and projecting in advance of the same and the screen when the latter is retracted and acting as a trip-device. 18th. The combination of a screen adapted to be projected forwardly, a pivoted locking-device for holding the screen in retracted position, and a frame pivoted to said locking-device and having a different pivotal axis from that of the locking-device, said frame being carried by said locking-device and having a limited range of movement thereon and projecting normally in advance of said device and said screen when the latter is retracted and acting as a trip-device. 19th. The combination of a screen adapted to be projected forwardly, a pivoted spring-actuated locking-device for holding the screen retracted and tending normally to swing into locking position, a frame pivoted to said locking-device below the pivotal line of the same and having a limited range of movement thereon and projecting normally in advance thereof and also in advance of the screen when the latter is retracted. 20th. The combination of a sliding-screen normally tending to shoot forwardly, a roller mounted upon a moving part adapted to move simultaneously with said screen, a pivoted locking-device provided with a blade for engaging the periphery of said roller to hold the screen retracted, a trip-device extending normally in advance of said locking-device and also of the screen when the latter is in retracted position and controlling the movement of said locking-device. 21st. The combination of a sliding-screen normally tending to shoot forwardly, a roller mounted upon a moving part adapted to move simultaneously with said screen, a pivoted locking device adapted to engage and lock said screen in retracted position and provided with a blade for engaging the periphery of said roller, and a trip-device controlling the movement of said locking-device projecting normally in advance thereof and also in advance of said screen when the latter is retracted. 22nd. The combination of a sliding-screen adapted to be projected forwardly, a spring-actuated slide connected therewith and provided with a roller, a locking-device provided with a blade for engaging the periphery of said roller to hold the screen retracted, and a trip-device controlling the movement of the locking-device extending normally in advance thereof and in advance of said screen when retracted. 23rd. The combination of a sliding-screen comprising telescoping sections with connections intermediate said sections and a fixed adjacent point for moving one section on the other as the latter is itself moved, a pair of arms each pivoted at one end to a fixed point so that their free ends have a wide range of movement and said free ends connected with said screen for moving it and means for simultaneously moving the arms on their centres to project the screen. 24th. The combination of the dash-board of a car, of a curved screen mounted in front thereof and adapted to be slid downwardly and forwardly in the arc of its curvature, and a shield consisting of a sheet of rubber placed forwardly of said screen and covering the same when in retracted position but forming substantially a continuation thereof when the screen is projected. 25th. A car-fender having a telescoping-screen comprising a sliding-screen section with another screen section sliding upon it. 26th. A telescoping-screen comprising a sliding section having another sliding section mounted upon it, means for projecting said screen forwardly when released, a locking-device engaging said means and normally holding it so as to keep the screen retracted and also engaging the outermost section of the screen to hold it retracted, and a trip-device for actuating said locking-device. 27th. The combination of a car, a vertically-movable swinging-guard adapted to be forced into close but yielding contact with the ground and consisting of a broom-like device comprising a horizontal shaft or head having long flexible fingers or members depending obliquely therefrom and serving themselves essentially as the guard, a rigid piece or frame arranged back of said flexible fingers or members for limiting the rearward movement thereof, springs for forcing said fingers or members in contact with the ground and means for normally holding the same out of contact with the ground. 28th. The combination of a car, a vertically-movable swinging-guard adapted to be forced into close but yielding contact with the ground and consisting of a broom-like device comprising a horizontal shaft or head having long flexible fingers or members depending obliquely therefrom and serving themselves essentially as the guard, a rigid piece or frame arranged back of said flexible fingers or members for limiting the rearward movement thereof, spring for forcing said fingers or members in contact with the ground and means for normally holding the same out of contact with the ground, a trip-device extending normally in advance of said guard for actuating the same on colliding with a person, means for elevating the trip-device at will and independently of the action of the guard, whereby the trip-device may be caused to clear a small obstacle on the track. 29th. The combination of a sliding-screen, a pivoted locking-device $38^1$, for holding the screen in retracted position, a frame $45^1$ pivoted to said locking-device having a limited range of movement thereon and projecting in advance of the screen when the latter is retracted and acting on a trip-device. 30th. The combination of a screen adapted to be projected forwardly, a slide connected with and controlling the movements of said screen and provided with a roller $43^1$, a pivoted locking-device $38^1$ provided with a member or projection for engaging the periphery of said roller $43^1$ to hold the slide in normal position, and a trip-device $45^1$ pivoted to said locking-device and having a limited range of movement thereon and projecting in advance of the screen. 31st. A wheel-guard carried normally out of contact with the ground and adapted to be forced in close contact therewith, means for holding the guard in normal position, and a trip-device $63^1$ swinging on a horizontal axis with its bearings or axle vertically-movable and adapted to engage and actuate said locking means. 32nd. A wheel-guard carried normally out of contact with the ground and adapted to be forced into close contact therewith, slides $59^1$, $59^1$, for normally engaging said guard and holding it out of contact with the ground, and a trip-device $63^1$ swinging on a horizontal axis with its bearings or axle vertically-movable for engaging and actuating said slide. 33rd. A wheel-guard comprising a member $50^1$, provided with non-rotating long flexible fingers or blades $50^1$, projecting obliquely toward the ground, springs for drawing the guard downwardly in close contact with the ground when released, locking-mechanism for holding the guard against the action of the springs and a trip-device for actuating said locking-mechanism.

**No. 55,695. Method of and Apparatus for Generating Gas.** (*Générateur à gaz.*)

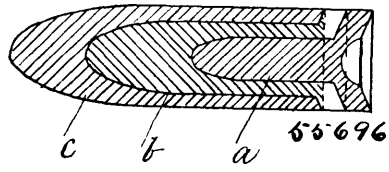


James A. Deuther, Boston, Mass., U.S.A., 23rd April, 1897; 6 years. (Filed 19th September, 1896.)

*Claim.*—1st. In a gas generating apparatus, a gas generating chamber for holding water or other liquid and provided with a gas outlet, a receptacle for holding metallic carbide compounds in compact bodies, and mechanism for automatically feeding said compact bodies of metallic carbide compounds to said gas generating chamber and adapted to be operated by the variations of the volume of the gas generated. 2nd. In a gas generating apparatus, a gas generating chamber for holding water or other liquid and provided

with a gas outlet, a receptacle for holding metallic carbide compounds in compact bodies which contain a determined amount of metallic carbide, and mechanism for automatically feeding said compact bodies of metallic carbide compounds to said gas generating chamber and adapted to be operated by the variations of the volume of the gas generated. 3rd. In a gas generating apparatus, a gas generating chamber for holding water or other liquid and having a gas outlet, a gasometer with which said gas outlet communicates and in which the gas generated is stored, a receptacle for holding metallic carbide compounds in compact bodies, and mechanism for feeding said compact bodies of metallic carbide compounds to said gas generating chamber and adapted to be operated by the variations of the volume of the gas in the gasometer. 4th. In a gas generating apparatus, a gas generating chamber for holding water or other liquid and having a gas outlet and a port through which metallic carbide compounds are fed to said gas generating chamber, a gasometer with which said gas outlet communicates and in which the gas generated is stored, a chamber located on said gas generating chamber and having a port registering with the port of said gas generating chamber, a receptacle for holding metallic carbide compounds in compact bodies and communicating with said chamber, and mechanism for feeding said compact bodies of metallic carbide compounds to said gas generating chamber and adapted to be operated by the variations of the volume of the gas in the gasometer. 5th. In a gas generating apparatus, a gas generating chamber for holding water or other liquid, and having a gas outlet and a port through which metallic carbide compounds are fed to said gas generating chamber, a gasometer with which said gas outlet communicates and in which the gas generated is stored, a chamber located on said gas generating chamber, a receptacle for holding metallic carbide compounds in compact bodies and communicating with said chamber, and mechanism for feeding said compact bodies of metallic carbide compounds to the gas generating chamber and consisting of a piston adapted to feed said metallic carbide compounds and devices co-operating with said piston to actuate the same and adapted to be operated by the variations of the volume of the gas in the gasometer. 6th. The method of generating a determined quantity of gas, which consists, (1) in bringing into contact with water or other liquid in a gas generating chamber, a determined amount of metallic carbide in a compact body, and (2) in controlling the feeding of said compact body of metallic carbide to the liquid by the volume of the gas generated.

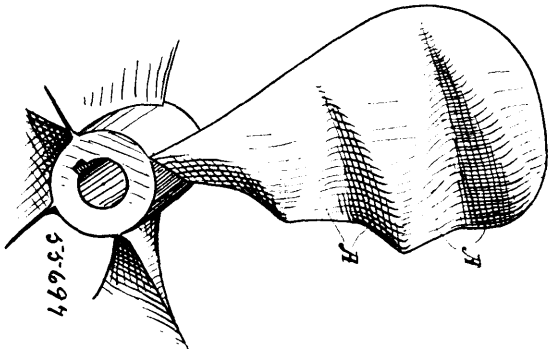
**No. 55,696. Projectile.** (*Projectile.*)




Gerald Connell Baker, Westminster, London England, 23rd April, 1897; 6 years. (Filed 5th November, 1896.)

*Claim.*—A projectile consisting of a plurality of component parts, wholly or partially inserted one within another, each part constituting in itself a complete projectile and each or any of them provided with an air hole or with air holes, to facilitate the separation of the component parts, substantially as and for the purpose specified.

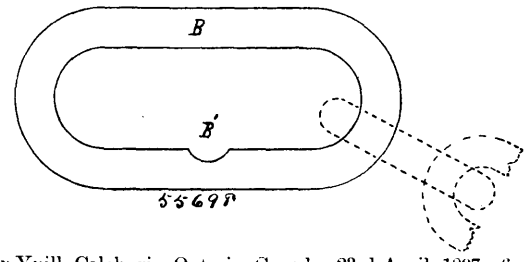
**No. 55,697. Propeller.** (*Hélice.*)




Frederick Wittram, San Francisco, California, U.S.A., 23rd April, 1897; 6 years. (Filed 4th December, 1896.)

*Claim.*—1st. A propeller consisting of radial blades, the edges of which are composed of inclined planes meeting each other at an angle to form a zigzag line, said planes decreasing in depth transversely towards the opposite edge of the blade. 2nd. In a propeller, blades extending radially from the hubs with an appropriate pitch, one of the edges of said blades being smooth or slightly irregular and the other edge forming zigzag lines caused by the meeting of oppositely inclined surfaces whereby transverse valleys are formed, decreasing in depth from one edge towards the other edge of the blade.

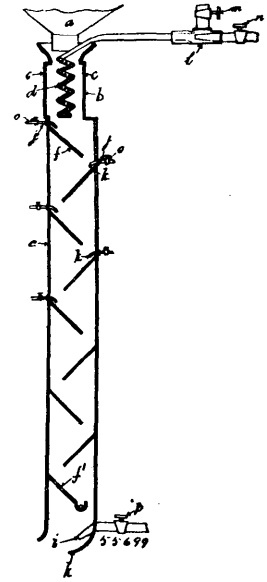
**No. 55,698. Boom Chain Hook and Link.**
(*Crochet et anneau de chaîne.*)




John Yuill, Calabogie, Ontario, Canada, 23rd April, 1897; 6 years. (Filed 15th January, 1897.)

*Claim.*—In a boom chain, end link B having a notch $B^1$, on the inside in combination with a hook, on the other end of the chain, having a bevelled projection "C" and with or without cross bar D, substantially as and for the purpose hereinbefore set forth.

**No. 55,699. Gold Amalgamation System.**
(*Système d'amalgamation de l'or.*)




Emil Lawrence Oppermann, Finsbury Park, Middlesex, England, 23rd April, 1897; 6 years. (Filed 21st January, 1897.)

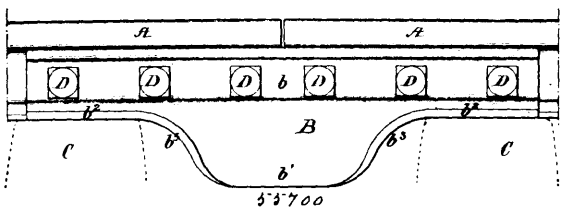
*Claim.*—1st. In an apparatus for amalgamating gold and the like metals in dry crushed ores, a perforated pipe or nozzle suspended within a suitable jacketed chamber or passage, preferably as shown, in which the dry crushed ore is subjected during its passage through same to the action of mixed mercury vapour and steam which issues under pressure from the apertures or perforation in the pipe aforesaid, and upon the exit of the mass from this chamber or passage the same falls into a chamber provided with amalgamating surfaces set at a suitable angle, preferably as shown, said chamber being supplied when required with blasts of mixed steam and mercury vapour at the position shown, at a pressure depending upon the amount of and nature of the ore under treatment, and when required finally employing a blast of cold air at *i* for the purpose of condensing any mercury vapour which might otherwise escape. 2nd. In an apparatus for effecting the amalgamation of gold and the like metals in dry crushed ores by means of mixed mercury vapour and steam under pressure the employment of a steam or other jacketed chamber or passage surrounding a perforated pipe or nozzle in communication with mixed mercury vapour and steam supply for the purpose set forth. 3rd. In combination with a chamber having inclined surfaces, a steam or other jacketed chamber or passage surrounding a perforated pipe or nozzle, in communication with a supply of mixed mercury vapour and steam.

**No. 55,700. Rail Joint.** (*Joint de rail.*)

Adolphus Bonzano, Philadelphia, Pennsylvania, U.S.A., 24th April, 1897; 6 years. (Filed 8th February, 1897.)

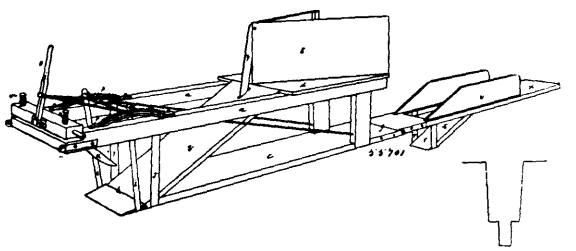
*Claim.*—1st. The within described joint plate for railroad rails, said plate having an upper chord adapted to be secured to the webs

of the rails, a lower chord adapted to project downwardly beyond the base flange of the rails, and feet adapted to extend outwardly




beyond the base flanges on each side of the lower chord and webs connecting the feet to the lower chord, substantially as described. 2nd. The within described joint plate for railroad rails, said plate having vertical upper and lower chords, the said upper chord adapted to be secured to the rails, the lower chord extending below the base flange of the rails, feet adapted to extend outwardly beyond the base flanges of the rails and diagonal webs connecting the feet to the lower chord, substantially as described. 3rd. The combination of the abutting rails, a joint plate having upper and lower chords arranged at each side of the said rails, the upper chord of each plate fitting between the head and base flanges of the rail and secured thereto in the manner common to fish joints, feet projecting outwardly from the said plates in the same plane as the base of the rails and webs connecting the feet to the lower chord, substantially as described.

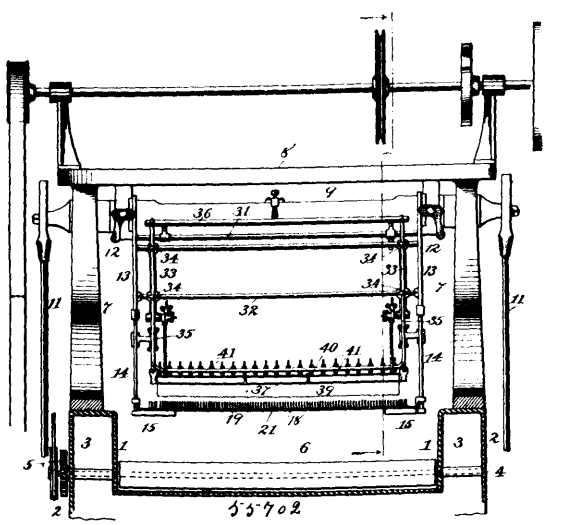
**No. 55,701. Ditching Machine.** (*Machine à fossoyer.*)



Calvin C. Green, Ladner, British Columbia, Canada, 24th April 1897; 6 years. (Filed 8th February, 1897.)

*Claim.*—A ditching machine, comprising the inclined plane *b* with the hinged shovel at *h*, and operated by the lever at *o*, together with the dividing knife *y*, and the cutter knives *k*, *i* and *j*, and the rolling cutter *l*, also the coil spring attachment at *m*, also the small machine or tonguer at rear of large machine, comprising the inclined plane *s*, and the cutter knives *t*, with the guide boards *v*, secured to the plank *x*, all arranged and combined substantially as and for the purpose hereinbefore set forth.

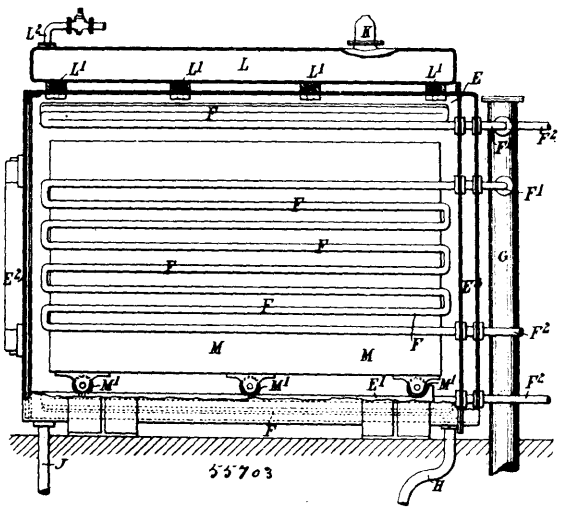
**No. 55,702. Confectionery Coating Machinery.**
(*Machine à enduire les confiseries.*)




John Reave Van Dewer, New York, State of New York, U.S.A., 24th April, 1897; 6 years. (Filed 11th February, 1897.)

*Claim.*—1st. In a machine of the character herein specified, the combination with drop dipping mechanism, of means for automatically applying a ridge or marking of the coating material to each drop, substantially as shown and described. 2nd. In a machine of the character herein specified, a vertically reciprocatable drop support, means for automatically moving the drops from said support after dipping, and far marking the surface of each drop by a deposit of the coating material, the whole combined and arranged to operate substantially as shown and described. 3rd. In a machine of the character herein specified, the combination with a vertically reciprocatable drop dipping support, of a series of coating material carriers, located above the drop support, substantially as shown and described. 4th. In a machine of the character herein specified, the combination with a vertically reciprocatable drop dipping support, having a fixed horizontal portion, of a tiltable portion at the front of the fixed portion, and a series of coating material carriers located above the point of meeting of the said two parts, substantially as shown and described. 5th. In a machine of the character herein specified, the combination with a vertically reciprocatable drop dipping support, of a series of adjustable coating material carriers located above said support, means for holding the drops in place upon the support, moving them over and off of the support, and a brushing device located in front of the drop holder, substantially as shown and described. 6th. In a machine of the character herein specified, a series of coating material carriers and distributors located above the drop dipping support, and carried by said support, substantially as shown and described. 7th. In a machine of the character herein specified, means for automatically marking the drops by the application of superposed coating material, substantially as shown and described.

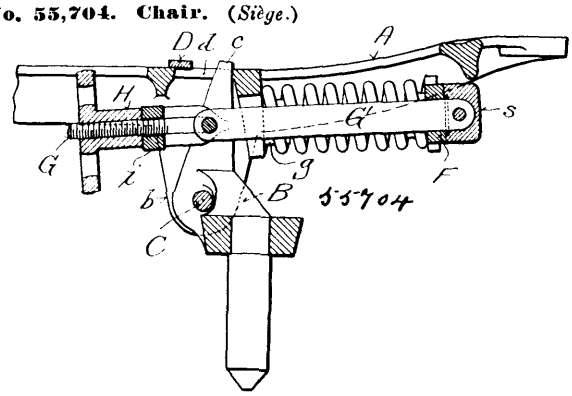
**No. 55,703. Manufacture of Artificial Stone, Marble, etc.** (*Fabrication de pierre artificielle, marbre, etc.*)




William Owen, Briton, Surry, England, 24th April, 1897; 6 years. (Filed 27th February, 1897.)

*Claim.*—1st. A method of manufacturing artificial stone in which the components of the stone are submerged in water under pressure which is deprived of air, and which is heated and maintained at a high temperature by a heating medium having no direct access to either the stone or the water, substantially as and for the purpose described. 2nd. A method of manufacturing artificial stone and the like in which the components of the stone are subjected to treatment with and subsequently without water under pressure, substantially as hereinbefore described. 3rd. A method of manufacturing artificial stone and the like, in which the components of the stone are subjected to treatment with water (either with or without subsequent treatment without water) under pressure substantially as hereinbefore described and approximately for the periods and at the temperatures specified. 4th. Artificial marble produced by subjecting a mixture of pulverized or broken marble with hydraulic lime to heat and pressure in the manner and substantially as described. 5th. An apparatus of the class specified, the suitably covered cylinder E, in combination with coils F, provided with steam inlet $F^1$, and exhaust inlet $F^2$, the water supply pipe H, and means for pumping water into the cylinder, the water exit pipe J, the drum L, connected with the cylinder E, by tubular screws $L^1$, the relief valve K, the outlet $L^2$, and the mould-box M, substantially as described and for the purpose specified. 6th. In apparatus of the class specified, the cylinder E, provided with hinged cover $E^2$, and steam-jacketted cover $E^3$, in combination with coils F, provided with steam inlet $F^1$, and exhaust outlet $F^2$, the main supply steam-pipe G, the water supply pipe H, and means for pumping water into the cylinder, the water exit pipe J, the drum L, connected with the cylinder E, by tubular screws $L^1$, the relief valve K, the outlet $L^2$, the mould-box M, provided with wheels $M^1$, movable on rails $E^1$, substantially as described and for the purpose specified.

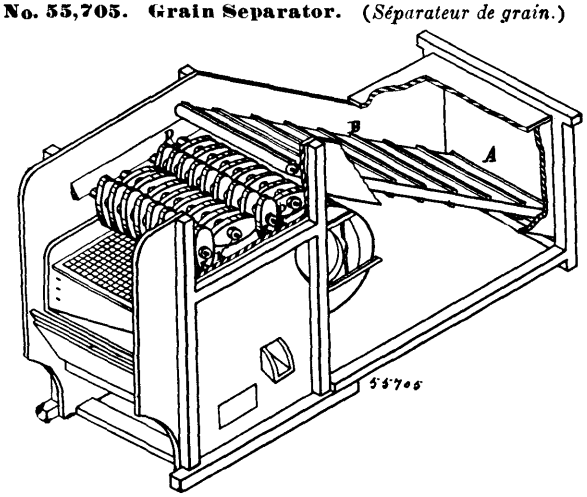
**No. 55,704. Chair.** (*Siège.*)




John Gibson, Port Washington, Wisconsin, U.S.A., 24th April, 1897; 6 years. (Filed 1st March, 1897.)

*Claim.*— 1st. The combination of a suitable standard having vertical arms united by a bail, a pivotal spring-controlled spider, and a spring tension-rod that has a hinge-joint intermediate of its extremities and extends through the bail, together with an adjustment-nut operative on an end of the rod against said bail. 2nd. The combination of a standard having vertical arms, a pivotal spring-controlled spider provided with longitudinal slots engaged by the standard-arms, and a transverse plate adjustably secured on the spider in opposition to said standard-arms. 3rd. The combination of a suitable standard, a spider pivoted thereto, a hinge-jointed rod in connection with standard and having a flat bar-section, a plate having a slot loosely engaged by the flat bar rod-section, a head on said rod-section arranged to bear against the flat rear face of said plate, and springs supported by the spider and plate. 4th. The combination of a suitable standard, a spider pivoted thereto, a hinge-jointed rod in connection with the standard, a plate having an aperture loosely engaged by a section of the rod, a head on this rod-section arranged to bear against the flat rear face of said plate, and spring supported by the spider and plate.

**No. 55,705. Grain Separator.** (*Séparateur de grain.*)




John Dickieson, Summerside, P.E.I., 24th April, 1897; 6 years. (Filed 1st March, 1897.)

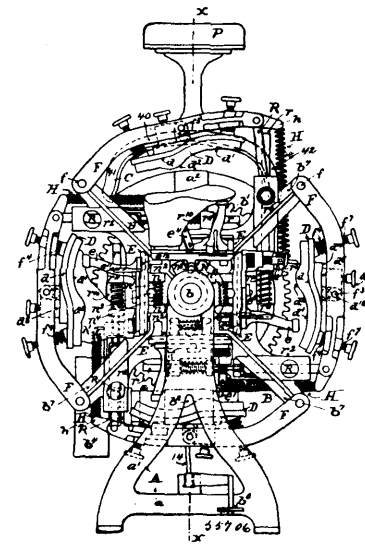
*Claim.*—1st. In a straw and grain separating machine, the agitators D fixed on a series of revolving spindles K adjusted so as *to intermesh with one another*, with the longest axle of the agitators of one series inclined at a considerable angle with the longest axis of the agitators of the neighbouring series, substantially as and for the purpose set forth. 2nd. In a straw and grain separating machine, the combination of the agitators D with the spindles K, substantially as and for the purpose set forth.

**No. 55,706. Sole Laying Machine.**

(*Machine à poser les semelles.*)

Erastus E. Winkley, Lynn, Mass., U.S.A., 24th April, 1897; 6 years. (Filed 6th March, 1897.)

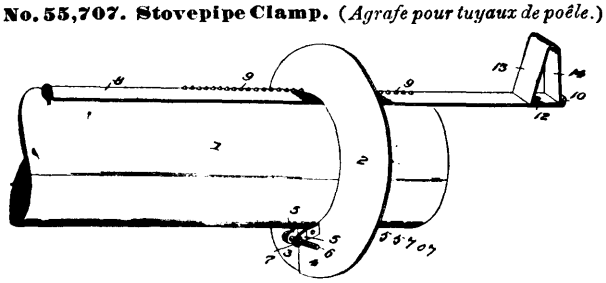
*Claim.*—1st. In a sole laying machine, the combination, with a pressing form and shoe supporting jack, *of mechanism for relatively* actuating the form and jack, to secure pressure upon the sole of a shoe placed upon the jack, comprising a reciprocating rod, means for actuating said rod, a collar loose upon said rod, and suitable connection between said collar and actuating means for cramping said collar to move the rods, substantially as described. 2nd. The combination, with associated parts of a sole laying machine, of a pressing form having a projected shank portion, and a shoe supporting jack comprising a toe rest and heel support movable toward and




from each other, and mechanism actuated by the movement of one acting to impart to the other a movement proportionately differing in extent, whereby the shanks of shoes of different sizes are brought into the proper position to receive the projected shank, of the form, substantially as described. 3rd. In a sole laying machine, the combination of a rotating carrier, a series of shoe supporting jacks mounted upon the carrier, a series of swinging levers fulcrumed upon the carrier, a series of forms supported by said levers, and means for actuating the levers to move the forms from a position of clearance to a position of pressure, substantially as described. 4th. In a sole laying machine, the combination, with suitable pressing forms, of a rotating carrier, a series of jacks mounted on the carrier and free to tip transversely to the plane of its rotation, a fixed cam, and arms projected from said jacks and arranged to engage said cam, substantially as described. 5th. The combination, with associated parts of a sole laying machine, of a suitable pressing form and a shoe supporting jack, comprising a heel support and toe rest movable toward and away from each other, and an eccentric pivoted lever connecting the heel support and toe rest, substantially as described. 6th. In a sole laying machine, the combination of a rotating carrier, a series of jacks mounted upon the carrier, *a series of swinging* levers fulcrumed upon the carrier, a series of pressing forms supported by the levers, springs connecting said levers, with the carrier acting to seat the forms, and a fixed cam for raising the levers to bring the forms into a position of clearance, substantially as described. 7th. In a sole laying machine, the combination, with a rotary carrier, of a series of jacks and pressing forms mounted thereon, automatic means for relatively actuating each jack and its associated form to seat the form, and mechanism, actuated by the rotation of the carrier, acting after the form is seated to bring the jack and form into a position of pressure, substantially as described. 8th. In a sole laying machine, the combination, with a suitable jack, a pressing form comprising a rigid bed having the general longitudinal contour of a last, a continuous elastic pad secured to said bed, a reinforcing strip for the edge pressing portions, of said pad, a projected shank portion forming part of said pad, and an elastically supported laterally concave shank block interposed between the shank portion of the form and the bed, substantially as described. 9th. In a sole laying machine, the combination, with a suitable jack, of a pressing form comprising a rigid bed, a continuous elastic pad secured to said bed, a reinforcing strip for the edge pressing portions of said pad, a projected shank portion forming a part of said pad, and an elastically supported shank block, interposed between the shank portion of the pad and the bed, held in contact with the pad, at points adjacent to the reinforcing strip upon opposite sides of the shank, and laterally concaved between said points to avoid contact with intermediate portions of the pad, when the pad is not under pressure, substantially as described. 10th. In a sole laying machine, the combination, with a rotating carrier, of a series of jacks mounted upon the carrier, a series of pressing forms arranged to co-operate with the jacks, means for to seating the forms, mechanism acting after the forms are seated bring the jacks and forms into a position of pressure, and a fixed cam and suitable mechanism connected with the jacks whereby the jacks are moved out of operative relation to their forms, substantially as described. 11th. In a sole laying machine, the combination, *with a shoe supporting jack and pressing form, of mechanism for* relatively actuating the jack and form to seat the form upon the sole of a shoe upon the jack, mechanism for securing pressure between the jack and form, and a device, actuated by the seating mechanism, acting to regulate the pressure mechanism to prevent injury to the machine when the jack is empty, substantially as described. 12th. In a sole laying machine, the combination, of a shoe supporting jack,

an elastic pressing pad, a rigid bed carrying said pad, substantially centrally pivoted to a suitable support and free to tip longitudinally, and adjustable elastic stops interposed between the bed and its support upon opposite sides of their point of connection, substantially as described. 13th. The combination, with the associated parts of a shoe machine, of a jack comprising a toe rest and heel support movable to and from each other, and mechanism actuated by the movement of one acting to impart to the other a movement proportionately differing in extent, substantially as described. 14th. A pressing form for sole laying machines comprising a yielding pressing pad, a rigid bed having a chambered boss, a shank block having a stem entering the chamber, an adjusting bolt having a threaded engagement with the bed, a collar with which the bolt engages and a spring interposed between the collar and shank block, substantially as described. 15th. A pressing form for sole laying machines comprising a pressing pad and bed, a shank block, a tubular bolt having a threaded engagement with the bed, a stem entering the bolt and engaging the block, and a spring interposed between the bolt and block, substantially as described. 16th. In a sole laying machine, the combination, with a frame and a rotary carrier, of a jack pivotally mounted on the carrier, a fixed cam with which the jack engages, and means for holding the jack in engagement with the cam, substantially as described. 17th. In a sole laying machine, the combination, with a rotary carrier, of a series of shoe supporting jacks, and a series of co-operating forms supported in the carrier, mechanism for producing pressure between the jacks and forms, and means acting during the movement of the carrier to adjust the pressure mechanism, substantially as described. 18th. In a sole laying machine, the combination, with a suitable support therefor, of a rotating frame, a series of shoe supporting jacks mounted upon said frame, a series of movable pressing forms also mounted upon said frame, a series of springs acting upon the pressing forms and connected with a fixed portion of the frame, for bringing each form in contact with a last placed upon its associated jack, cam ways secured to said support, and cam rolls connected with said pressing forms acting with the cam ways to bring each form into a position of clearance, substantially as described. 19th. In a sole laying machine, the combination, with a suitable support therefor, of a rotating frame, a series of shoe supporting jacks mounted upon said frame, a series of movable pressing forms also mounted upon said frame, a series of springs arranged to bring each form in contact with a last placed upon its associated jack, and mechanism common to all the forms for raising each form independently into a position of clearance, substantially as described. 20th. In a sole laying machine, the combination of a vertical rotating frame, a series of last supporting jacks mounted therein, and movable through the side of said frame into a convenient position for the removal of a last therefrom, and a support for said frame arranged to allow said motion of the jacks, substantially as described. 21st. In an organized sole laying machine, the combination of a rotary carrier, a series of pressing forms mounted upon the carrier, a series of shoe supporting jacks, associated respectively with the pressing forms, mounted upon the carrier and movable transversely to the plane of its rotation, and connected mechanisms, operating automatically to produce compression and clearance between each form and its associating jack, and to rotate the carrier and actuate the jacks, whereby one jack is presented to the operator in convenient position for the removal of a shoe thereform, while the other jacks remain under pressure, substantially as described. 22nd. In a sole laying machine, the combination of a rotary carrier, a series of pressing forms mounted upon the carrier, a series of shoe supporting jacks, associated respectively with the pressing forms, mounted upon the carrier and movable transversely to the plane of its rotation, means for producing compression and clearance between each jack and its associated form means for rotating the carrier, and mechanism common to all the jacks for independently actuating each jack, substantially as described. 23rd. In an organized sole laying machine, the combination of a rotary carrier, a series of pressing forms mounted upon the carrier, a series of jacks mounted upon the carrier each arranged to co-operate with a form and movable out of operative relation thereto, and connected mechanisms, operating automatically to produce compression and clearance between each form and its associated jack, to rotate the carrier, and to actuate the jacks, substantially as described.

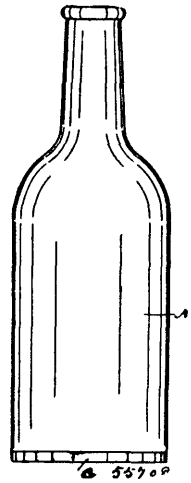
**No. 55,707. Stovepipe Clamp.** (*Agrafe pour tuyaux de poêle.*)




Frederick Harry Livingston, Ithaca, New York, U.S.A., 24th April, 1897; 6 years. (Filed 9th March, 1897.)

*Claim.*—An adjustable stovepipe clamp, comprising the collar provided with the ears and bolt, in combination with the sheet metal brace provided with the integral tits and the right angular arm and integral brace, substantially as shown and described.

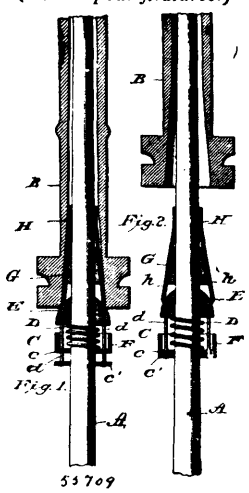
**No. 55,708. Bottles, Tankards, Glassware, &c.**
(*Coquemards, Bouteilles, etc.*)




Robert Ross Wales and Alfred Ross Wales, both of Westover, Ontario, Canada, 24th April, 1897; 6 years. (Filed 15th March, 1897.)

*Claim.*—1st. A device of the character described, consisting of an attached rubber base cemented to a bottle or drinking vessel, as herein described. 2nd. A device of the character described, consisting of a rubber base having a dovetail for insertion into a dovetail recess of a bottle or drinking vessel as herein set forth. 3rd. A device of the character described, consisting of a rubber base as cushion attached to bottles and drinking vessels by means of a tongue and groove and cement, as herein set forth. 4th. A device of the character described, consisting of a rubber base with raised centre to fit into a recess formed in the base of the bottle or drinking vessel, as herein set forth.

**No. 55,709. Bobbin for Spinning Machine.**
(*Bobine pour filatures.*)



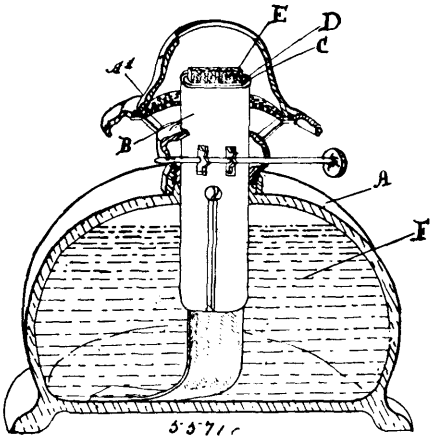

Oliver Cronnell Burr, North Adams, Massachusetts, and Waldo Loren Curtis, Winsted, Connecticut, both in the, U.S.A., 26th April, 1897; 6 years. (Filed 20th March, 1897.)

*Claim.*—1st. In a thread holder for spindles, the combination with a revoluble spindle having a fixed member thereon, of a second member reciprocally mounted on the spindle, means to move one member away from the other controlled by the bobbin as it is placed on the spindle, and a spring for actuating the movable member against the movement imparted thereto by the bobbin. 2nd. The combination with the spindle having a fixed collar or member mounted thereon which is provided with apertures, of a movable collar or member having pins which pass through the apertures in the fixed member, a spring mounted upon the spindle to bear against the movable member, and a third member or collar mounted upon the spindle which engages with the upper ends of the pins, together with a bobbin holder carried by the spindle. 3rd. In a bobbin and thread holder for spindles, the combination of the bobbin holder adapted when engaged by the bobbin to actuate the

thread holder to separate the thread grasping members thereof, and means for actuating one of the movable members of the thread holder so that it will move towards a fixed member thereof when the bobbin is raised. 4th. In combination with a bobbin holder having arms which are moved towards the spindle when engaged by the bobbin, of a thread holder comprising a member fixedly attached to the spindle, movable members above and below the fixed member and connected to each other, a spring for engagement with the fixed member and one of the movable members, the face of the movable member adjacent to the bobbin holder being inclined whereby the inward movement of the arms of the bobbin holder will actuate the movable members of the thread holder. 5th. In combination with the spindle and bobbin, of the bobbin holder and thread holder consisting of a sleeve having arms, means for forcing said arms outward carried by the spindle and located above the ends of said arms, the thread holder comprising a fixed member and movable members, the upper movable member having an inclined face with which the ends of the arms of the bobbin holder engage, so that when the arms of the bobbin holder are forced inward, said upper member will be moved upon the spindle. 6th. In a thread holder for spindles, the combination with a spindle having a fixed member thereon, two movable members connected to each other so that they will move in unison, one being spring actuated towards the fixed member, a spring encircling the spindle, and a ring to partially inclose the spring, 7th. In a thread holder for spindles, the combination with a revoluble spindle having a fixed member thereon, a collar or member below the same connected to another member or collar having an inclined face, together with a bobbin holder having arms which are moved inward by placing the bobbin on the spindle and in engagement therewith, said movement automatically actuating the thread holder. 8th. A bobbin holder for spindles, consisting of a tube or collar rigidly attached to the spindle and provided with projecting arms, together with means carried by the spindle which engage the arms to force the same outward. 9th. A bobbin holder for spindles, consisting of a tube or collar having arms and a section of cork carried by the spindle to engage the arms at a point above the lower ends.

### No. 55,710. Lamp Burner and Electrical Lighter.

(*Bec de lampe et allumoir électrique.*)



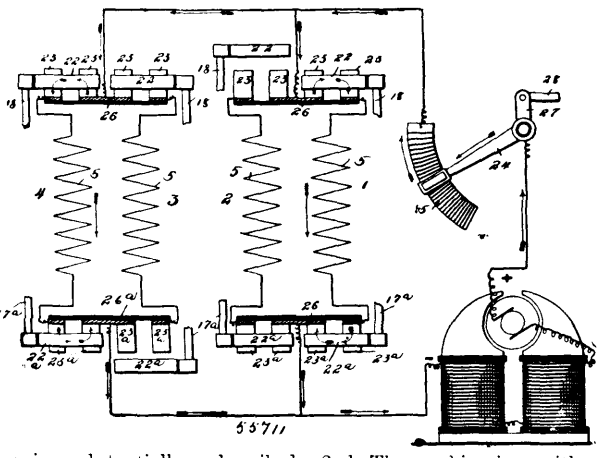

John Henry Stone, Toronto, Ontario, Canada, 26th April, 1897; 6 years. (Filed 25th March, 1897.)

*Claim.*—1st. In a lamp or lantern and in combination with the wick, burner, bowl and oil, a voltaic couple connected to or abutting against the wick and extending into the oil, as and for the purpose specified. 2nd. In a lamp or lantern and in combination with the wick, burner, bowl and oil, a voltaic couple comprising zinc plate on the inside and copper plates on the outside connected to the wick and extending into the oil, as and for the purpose specified. 3rd. In a lamp or lantern and in combination with the wick, burner, bowl and oil, a wick tube forming a couple comprising an inner zinc case inclosing the wick and an outer copper case, such cases extending downwardly into the oil, as and for the purpose specified. 4th. In a lantern and in combination the burner, the bowl, the oil, the casing around the burner, the tubes, the peripheral apertures in the burner, the perforated plate, and the voltaic couple connected to or forming the wick tube and extending into the oil as and for the purpose specified.

### No. 55,711. Steam Repeater. (*Réchauffeur de vapeur.*)

Oscar Dunreath McClellan, Wilkinson Thomas Girling, John Joseph Torpey and Robert Charles Cunningham, assignees of Oscar D. McClellan and Wilkinson T. Girling, all of Philadelphia, Pennsylvania, U.S.A., 26th April, 1897; 6 years. (Filed 25th March, 1897.)

*Claim.*—1st. The method of treating exhaust steam, which consists in providing a suitable air-tight chamber, supplying exhaust steam thereto, subjecting the steam within the chamber to an electric flash heat, and then returning the steam to the engine for




service, substantially as described. 2nd. The combination, with a steam-engine, of a heating chamber, means whereby the exhaust steam from the engine is delivered to said chamber, electrical heating devices in said chamber, and means whereby the re-heated steam in said chamber is returned to the engine, substantially as described. 3rd. The combination, with a steam engine, of a heating chamber, means whereby the exhaust steam from the engine is delivered to said chamber, means for producing an electrical flash heat in said chamber, and means whereby the re-heated steam in said chamber is returned to the engine, substantially as described. 4th. The combination, with a steam engine, of a series of heating chambers, means whereby the exhaust steam from the engine is delivered to the successive chambers, means for producing an electrical flash heat in said chambers, and means whereby the re-heated steam in the successive chambers is returned to the engine, substantially as described. 5th. The combination, with a steam engine, of a series of heating chambers, means whereby the exhaust steam from the engine is delivered to said chambers, valves to control such delivery, resistance coils in said chambers, switch devices for controlling the passage of the electrical current thereto at pre-determined intervals, and means whereby the re-heated steam in the successive chambers is returned to the engine, substantially as described. 6th. The combination, with a steam engine, of a series of heating chambers, ingress and egress pipes providing communication between said chambers and the steam engine, valves controlling the communication between said pipes and the chambers, means for locking and releasing said valves at predetermined intervals, electrical resistance devices in said chambers, a source of electric energy, and electrical connections between the same and said devices, substantially as described. 7th. The combination, with a steam engine, of a series of heating chambers, ingress and egress pipes providing communication between said chambers and the steam engine, valves controlling the communication between said pipes and the chambers, means for locking and releasing said valves at predetermined intervals, electrical resistance devices in said chambers, switches connected with said valves and resistance devices, a source of electric energy, and electrical communications between the same and said switches, substantially as described. 8th. The combination, with a steam engine, of a series of heating chambers, ingress and egress pipes providing communication between said chambers and the steam engine, valves controlling the communication between said pipes and the chambers, means for locking and releasing said valves at predetermined intervals, electrical resistance devices in said chambers, a source of electric energy, and electrical connections between the same and said devices, together with a rheostat, and controlling devices therefor between the same and the governor of the engine, substantially as described.

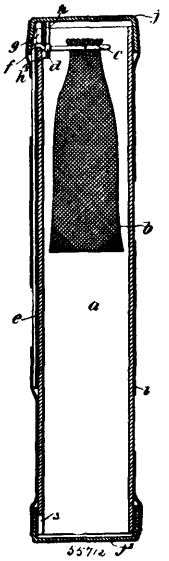
### No. 55,712. Transporting Welsbach, etc.

(*Moyen de transporter les pellicules ou autres incandescents fragiles*)

Townsend Stiles, Gloucester, New Jersey, U.S.A., 26th April, 1897; 6 years. (Filed 30th March, 1897.)

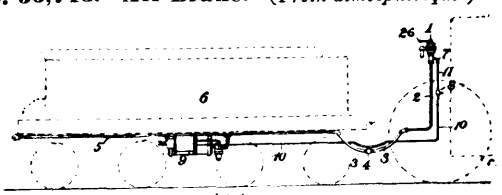
*Claim.*—1st. Means for transporting welbach and other fragile mantles or incandescents comprising the combination of, a tube or receptacle, a mantle support provided with a shank, a forked key or clevis accommodating said shank and wedging the support in respect to the tube or receptacle, and means for attaching the rod of the support to the tube or receptacle, substantially as described. 2nd. Means for transporting welsbach and other fragile mantles or incandescents comprising the combination of, a tube or receptacle notched at its end, a mantle support provided with a knot and with a shank adapted to said notch, a forked key or clevis accommodating said shank and interposed between the knot and tube or receptacle, and means for attaching the rod of the support to the tube or receptacle, substantially as described. 3rd. Means for transporting welsbach and other fragile mantles or incandescents comprising the combina-

tion of, a tube or receptacle, a mantle support provided with a shank, and knot, a forked key or clevis adapted to accommodate said shank



and provided with legs of different thicknesses, and means for attaching the rod of the support to the tube or receptacle, substantially as described.

**No. 55,713. Air Brake.** (*Frein atmosphérique.*)

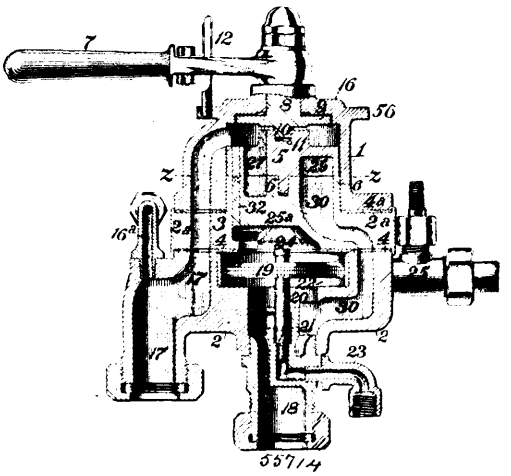


Henry Herman Westinghouse, Pittsburg, Pennsylvania, U.S.A., 26th April, 1897; 6 years. (Filed 30th March, 1897.)

*Claim.*—1st. In an automatic fluid pressure brake system, the combination, with a train pipe, an engineer's brake valve and a brake cylinder, of a device which is actuated by fluid pressure, accumulated in the application of the brakes, and which operates when so actuated to cut off the release of fluid from the train pipe through the engineer's brake valve, substantially as set forth. 2nd. In an automatic fluid pressure brake system, the combination, with a train pipe and engineer's brake valve and a brake cylinder, of a device which automatically controls the release of fluid from the train pipe through the engineer's brake valve in making applications of the brakes, and which is independent of the pressure in the train pipe or auxiliary reservoir, substantially as set forth. 3rd. In an automatic fluid pressure brake system, the combination, with a train pipe, an engineer's brake valve and a brake cylinder, of a passage for releasing fluid from the train pipe by means of the engineer's brake valve, and a valve device controlling the passage and actuated by the pressure in the brake cylinder, substantially as set forth. 4th. In an automatic fluid pressure brake system, the combination with a train pipe, a brake cylinder and an engineer's brake valve, of an exhaust passage for releasing fluid from the train pipe by means of the engineer's brake valve, and a valve device controlling the exhaust passage and actuated by pressure in the brake cylinder, substantially as set forth. 5th. In a railway-train automatic brake apparatus, wherein are employed a brake cylinder, an auxiliary reservoir and a triple valve on each car, the combination therewith of a valve operated by a movable abutment, an open communication from the brake cylinder to one side of the abutment, and a communication from the exhaust port of the engineer's valve, to an escape port adapted to be closed by a movement of the abutment, substantially as set forth. 6th. In automatic fluid pressure brake system, the combination, with a train pipe an auxilliary reservoir and a brake cylinder, of a device which is actuated by fluid pressure, accumulated in the application of the brakes, and which operates to cut off a release of fluid from the train pipe and thereby to limit the admission of fluid from the auxiliary, to the brake cylinder, substantially as set forth. 7th. In an automatic fluid pressure brake system, the combination, with a train pipe and a brake cylinder, of a fluid pressure actuated device which automatically controls the release of fluid from the train pipe, in making service application of the brakes, and which is independent of the pressure in the train pipe or auxiliary reservoir, substantially as set forth. 8th. In an automatic fluid pressure brake system the combination, with a train pipe and a brake cylinder, of a fluid pressure actuated device which automatically controls the release of fluid from the train pipe, in making service applications of the brakes, and thereby limits the admission of fluid from the auxiliary reservoir to the brake cylinder, and which is independent of the pressure in the train pipe, or auxiliary reservoir, substantially as set forth. 9th. In an automatic fluid pressure brake system, the combination, with a train pipe, a brake cylinder and an auxiliary reservoir, of a release passage through which fluid is released from the train pipe in making service applications of the brake, and a device controlling the release passage which is actuated by pressure in the brake cylinder to close the release passage, and thereby to limit the pressure with which the brakes are applied, substantially as set forth.

**No. 55,714. Engineer's Brake Valve.**

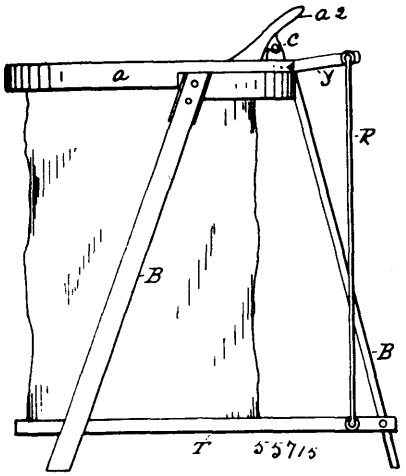
(*Soupape de freins.*)



George Westinghouse, Pittsburg, Pennsylvania, U.S.A., 26th April, 1897; 6 years. (Filed 30th March, 1897.)

*Claim.*—1st. In an engineer's brake valve, the combination of a main valve, a discharge valve, and connections by which the discharge valve may be opened by train pipe pressure in making emergency applications of the brakes, substantially as set forth. 2nd. In an engineer's brake valve, the combination of a main valve which releases air from the train pipe when in position to make an emergency application of the brakes, a discharge valve and connections by which the discharge valve is opened by train pipe pressure and releases air from the train pipe when the main valve is in position to make an emergency application of the brakes, substantially as set forth. 3rd. In an engineer's brake valve, the combination of a discharge valve, a piston or diaphragm connected thereto and operated by variations of fluid-pressure on its opposite sides and a main valve controlling said variations of pressure and having ports, or passages, for releasing the fluid under pressure from the train pipe and from one side of the piston, or diaphragm, directly to the atmosphere in emergency applications of the brakes, substantially as set forth. 4th. In an engineer's brake valve, the combination of a main valve, a discharge valve for releasing air from the train pipe, a piston, or diaphragm connected to the discharge valve and exposed to fluid pressure on its opposite sides, an exhaust port in the seat of the main valve through which fluid under pressure is released in making emergency applications of the brakes, and a passage in the main valve through which the fluid under pressure is released from one side of the piston to said exhaust port when the main valve is in the service position, substantially as set forth. 5th. In a fluid pressure brake system, the combination of an engineer's brake valve, a train pipe, a passage from the engineer's brake valve to the train pipe, a regulating valve in the passage, and a piston, or diaphragm which is independent of the regulating valve and is moved by the pressure of a spring to effect the opening of the valve when the train pipe pressure is below a determined maximum, and is moved by fluid pressure to permit the closure of the valve when the train pressure is above the determined maximum, substantially as set forth. 6th. In a casing for an engineer's brake valve, the combination of a cap section which covers and incloses the main valve, a section on which a raised seat is formed for the main valve, and a lower section containing the piston chamber of the discharge valve and having nozzles, or passages, for connecting the pipes leading to the engineer's brake valve, substantially as set forth. 7th. In an engineer's brake valve, a casing consisting of an upper section which covers the main valve and forms a bearing for its stem, a middle section having a raised seat for the main valve, and which covers the piston chamber of the discharge valve, and a third section which contains the piston chamber of the discharge valve and is connected to all the pipes communicating with the engineer's valve, whereby the upper and middle sections may be removed, to examine the main valve and its seat and the discharge valve and its piston, without breaking the pipe connections to the casing, substantially as set forth.

**No. 55,715. Device for Holding Bags.** (*Accroche-sac.*)

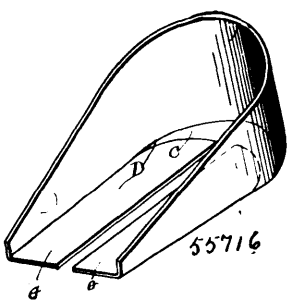



James Spurr, L'Amable, Ontario, Canada, 26th April, 1897 ; 6 years. (Filed 30th March, 1897.)

*Claim.*—1st. In a bag holder the combination of grip rings A and $A^2$, with a frame post X supported by legs B, a table T with connecting rods R R, substantially as and for the purpose specified. 2nd. A bag holder having two adjustible grip rings, hinged together at their back and having a projection Y and rods R R, attached to the same a table T hinged to said rods R R, adapted to raise the grip rings A and $A^2$, by the downward pressure of the contents of the bag on said table T, a stationary frame part X having suitable supports or legs B, substantially as and for the purpose specified. 3rd. The combination of a fixed frame X having legs B, and suitable projecting lugs to which similar lugs on the ring A are hinged by suitable pins, the grip ring A having projections Y with rods R, and table T, an upper grip $A^2$, adapted to hinge or fold into a ring A, substantially as and for the purpose specified.

**No. 55,716. Heel Stiffener.**

(*Machine à renforcir les talons de chaussure.*)




William H. Buell, Laughlintown, Pennsylvania, U.S.A., 26th April, 1897 ; 6 years. (Filed 30th March, 1897.)

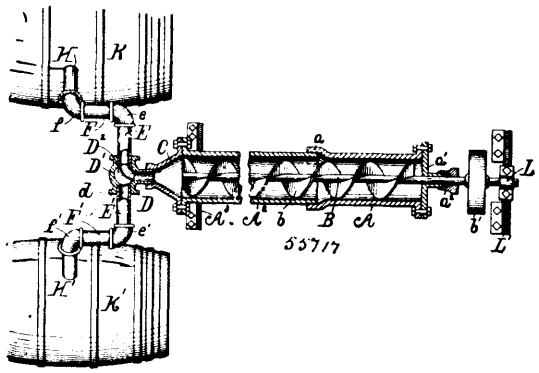
*Claim.*—1st. An improved stiffener comprising the curved back or body portion A, the inward extensions G having their adjacent edges substantially in parallel lines and cut backward and outward at their inner ends to afford space between said ends and the body A, for the purpose substantially as herein shown and described. 2nd. An improved stiffening device comprising the vertical curved back or body portion A, the integral bottom flange-plates formed by turning inward the bottom edge of the curved portion A, the inner ends of the said flange-plate being bent backward and outward to afford a space between the same and the curved backing A, for the purpose substantially as shown and described.

**No. 55,717. Apparatus for Barrelling Soap Stock.**

(*Appareil pour mettre en baril des matières à faire du savon.*)

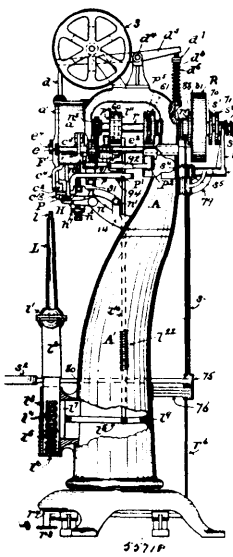
William Christian Rhenbeck, Brenham, Texas, U.S.A., 26th April, 1897 ; 6 years. (Filed 30th March, 1897.)

*Claim.*—In an apparatus of the character described, a cylindrical chamber, a tank opening into one end of the said chamber, a conical cap closing the other end of the said chamber, a spiral conveyor within the said chamber, and means for rotating the said conveyor of a three-way valve controlling the flow from the said chamber, a handle on the said three-way valve having indicators $d^1$ and $d^2$, discharge-pipes leading from the sides of the said three-way valve,




said discharge-pipes being formed in sections connected by elbows to allow the said discharge-pipes to be raised or lowered substantially as described.

**No. 55,718. Sole Machine.** (*Machine à semelles.*)

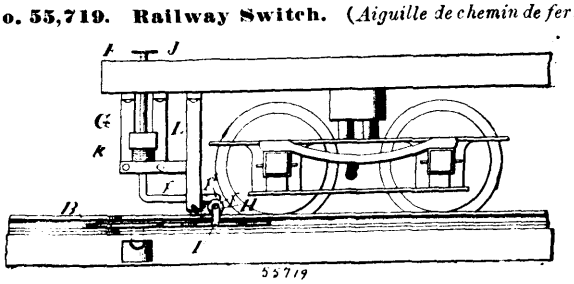



George H. Gifford, Brockton, Mass., U.S.A., 26th April, 1897 ; 6 years. (Filed 31st March, 1897.)

*Claim.*—1st. In a machine for operating upon the soles of boots and shoes, the combination of a nailing device, a trimming device, connected mechanisms for actuating the nailing and trimming devices, and means for independently actuating the trimming device, substantially as described. 2nd. In a machine for operating upon the soles of boots and shoes, the combination of a nailing device, a trimming device, connected mechanism for actuating the nailing and trimmings devices, and a gauge formed and held in position to bear upon the lasted upper against the counter and to guide the shoe to the nailing and trimming devices while being turned to pass the gauge around the back of the last, substantially as described. 3rd. In a machine for operating upon the soles of boots and shoes, the combination of a movable trimming knife for operating upon the edge portion of the sole, a movable tool for operating upon the bottom of the sole, connected mechanisms for actuating the knife and tool, and means controlled by the operator for throwing the tool out of operation during the operation of the knife, substantially as described. 4th. In a machine for operating upon the soles of boots and shoes, the combination of a nailing device, a trimming device, a work feeding device, connected mechanisms for operating the nailing, trimming and work feeding devices, and means for operating the trimming and work feeding devices independently of the nailing device, substantially as described. 5th. In a machine for operating upon the soles of boots and shoes, the combination of a nailing device, a trimming device, a work feeding device, connected mechanisms for actuating the nailing, trimming, and work feeding devices, and means controlled by the operator for stopping the operation of the nailing device during the operation of the trimming and work feeding devices, substantially as described. 6th. In a machine for operating upon the soles of boots and shoes, the combination of a nailing device, a vibrating trimming device, mechanism for actuating said devices, and work feeding mechanism timed and arranged to present the edge of the sole to the trimming device and to space the nails by the nailing device, substantially as described. 7th. In

a machine for operating upon the soles or boots and shoes, the combination of a tool for operating upon the bottom of the sole, a trimming knife for operating upon the edge portion of the sole, a shaft and suitable connections for actuating the tool, a shaft and suitable connections for actuating the knife, suitable clutches connecting said shafts with a common driving mechanism, said driving mechanism, and means for controlling the clutches, substantially as described. 8th. In a machine for operating upon the soles of boots and shoes, the combination of a tool for operating upon the bottom of the sole, a trimming knife for operating upon the edge portion of the sole, independent operating mechanisms connected respectively with the tool and knife, actuating means common to both operating mechanisms, and means under the control of the operator for connecting one or both operating mechanism with the common actuating means to secure a joint operation of the knife and tool, and a separate operation of the knife, ssubstantially as described. 9th. In a machine for operating upon the soles of boots and shoes, the combination with suitable wire cutting and driving mechanisms, of a pair of feed rolls for feeding the wire to the wire cutting mechanisms, and mechanism for actuating one of said rolls, comprising a shaft upon which the roll is mounted, a disc fixed upon said shaft, a casing movable independently of the disc and arranged to frictionally engage the same, a positively actuated swinging lever, and a connecting rod pivotally and adjustably connected with the swinging lever, substantially as described. 10th. In a machine for operating upon the soles of boots and shoes, the combination of a tool for working upon the bottom of the sole, a trimming knife for working upon the edge portion of the sole, a shaft and tubular shaft inclosing the same, suitable connections between the shaft and tool, suitable connections between the tubular shaft and trimming knife, means for rotating the tubular shaft independently of its inclosed shaft, and means for rotating both shafts together, substantially as described. 11th. In a machine for operating upon the soles of boots and shoes, the combination with a suitable nailing mechanism, of a trimming knife, a work gauge, and means for adjusting both the work gauge and knife transversely to the direction of the travel of the work, substantially as described. 12th. In a machine for operating upon the soles of boots and shoes, the combination, with a suitable nailing mechanism, of a work gauge and trimming knife both adjustable transversely to the direction of the travel of the work, and means for vertically adjusting the work gauge, substantially as described. 13th. In a machine for operating upon the soles of boots and shoes, the combination, with a trimming knife, of a cutter plate movable vertically and transversely to the direction of the travel of the work, an adjustable stop for limiting the downward movement of the cutter plate, and clamping means for holding the cutter plate from motion transversely to the direction of the travel of the work, substantially as described. 14th. In a machine for operating upon the sole of boots and shoes, the combination, with a nailing device for operating upon the bottom of a sole, of a trimming knife for operating upon the edge portion of the sole, an oscillating lever carrying the trimming knife, and connected mechanisms for actuating the lever and nailing device, substantially as described. 15th. In a machine for operating upon the soles of boots and shoes, the combination of a nailing device acting upon the bottom of the sole, a vibrating trimming knife operating upon the edge of the sole, connected mechanisms for actuating the nailing device and knife, and means for interrupting the operation of the nailing device during the continued operation of the knife, substantially as described. 16th. In a machine for operating upon the soles of boots and shoes, the combination, with associated parts of a nailing device of a reciprocating driver, a trimming device, a work feeding device, a single actuating means and suitable connecting mechanisms for reciprocating the driver, and actuating the work feeding device, and means for interrupting the reciprocation of the driver during a continued operation of the work feeding device by said actuating means, substantially as described. 17th. In a machine for operating upon the soles of boots and shoes, the combination, with a nailing device and a trimming device, of connected mechanisms for positively actuating said devices, and means for interrupting the action of the nailing device, permitting a continued operation of the trimming device by said connected mechanisms, substantially as described.

**No. 55,719. Railway Switch.** (*Aiguille de chemin de fer.*)

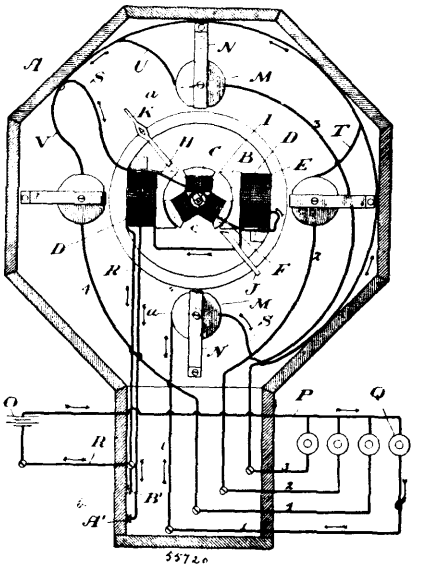



Henry Patrick Spain, Daketown, Georgia, U.S.A., 26th April, 1897; 6 years. (Filed 31st March, 1897.)

*Claim.*—1st. The combination of the rail, the pivoted switch on a spring arm arranged alongside the rail and inclined outward, and having its other end passed through the rail and engaging the switch, and the spring acting to normally force the switch against the rail, substantially as described. 2nd. The combination of the rail, a pivoted switch on a spring arm arranged alongside the rail and inclined outward, and having its other end passed through the rail and engaging the switch, a spring mounted to act upon the switch to normally force it against the rail, and the plates carried by the switch and covering the slot through which its arm works, substantially as described. 3rd. The combination with the rail and a pivoted switch on an inclined arm having an end passed through the rail and mounted to act upon the switch, of a rod on the car having a portion to engage said arm, and a spring acting upon said rod to normally hold it in its uppermost position, substantially as described.

**No. 55,720. Electric Annunciator.**

(*Annonciateur électrique.*)



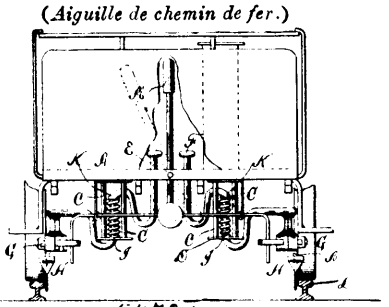

James Adam Gowans, Samuel Street Fuller and Malcolm Macfarlane, all of Stratford, Ontario, Canada, 26th April, 1897; 6 years. (Filed 31st March, 1897.)

*Claim.*—1st. In an electric annunciator, a suitably-carried motor and a stop arm connected to the shaft of the motor, in combination with one or more electrically actuated stop mechanisms, and means for causing a current to pass through the motor and any one of the stop mechanisms so as to draw the stop arm round to and arrest it at the said stop mechanism, substantially as and for the purpose specified. 2nd. In an electric annunciator, a suitably-carried motor and a stop arm connected to the shaft of the motor in combination with one or more electro-magnets each provided with a movable armature adapted when attracted to the magnet to engage and hold the said stop arm, and means for causing a current to flow through the motor and any one of the said stop mechanisms, substantially as and for the purpose specified. 3rd. In an electric annunciator, the combination of a suitably-carried motor in circuit with a battery or other source of electricity, a push button or switch adapted to make and break the circuit, a stop arm fast on the shaft of the motor, and an electro-magnet in the same circuit with the motor and provided with a suitably supported armature adapted when drawn down to arrest the motion of the stop arm, substantially as and for the purpose specified. 4th. In an electric annunciator, the combination of a suitably carried motor and a series of electro-magnets each arranged in an independent circuit with the motor and a battery or source of current, a push button in each circuit adapted to make and break contact, a stop arm connected to the shaft of the motor and a suitably-supported armature for each electro-magnet adapted when drawn down to arrest the motion of the stop-arm, substantially as and for the purpose specified. 5th. In an electric annunciator, the combination of a suitably carried motor and a series of electro-magnets each arranged in an independent circuit with the motor and a battery or source of current, a push button in each circuit adapted to make and break contact, a stop arm connected to the shaft of the motor and a suitably-supported armature for each electro-magnet adapted when drawn down to arrest the motion of the stop arm, and a bell so connected electrically as to ring whenever a call is made, substantially as and for the purpose specified. 6th. In an electric annunciator, the combination of a suitably carried motor and a series of electro-magnets each arranged in an independent circuit with the motor, and a battery or source of current, a push button in each circuit adapted to make and break contact, a stop arm connected to the shaft of the motor, a suitably supported armature for each electro-magnet adapted when drawn down to arrest the motion of the stop arm, and a bell in a shunt circuit connected with the battery and with

the main circuit before it enters the motor, substantially as and for the purpose specified. 7th. In an electric annunciator, the combination of a suitably carried motor and a series of electro-magnets each arranged in an independent circuit with the motor, and a battery or source of current, a push button in each circuit adapted to make and break contact, a stop arm connected to the shaft of the motor, a suitably supported armature for each electro-magnet adapted when drawn down to arrest the motion of the stop arm, a pointer connected to the motor shaft and a dial beneath the pointer, substantially as and for the purpose specified. 8th. In an electric annunciator, stop mechanism comprising an electro-magnet, a suitably supported armature having its end wedge-shaped and provided with a stop, the parts being so located and proportioned that a stop arm may be held between the spool of the electro-magnet and the armature when the latter is drawn down, substantially as and for the purpose specified. 9th. In an electric annunciator, stop mechanism comprising an electro-magnet, a suitably supported armature having its end wedge-shaped and provided with a stop, the parts being so located and proportioned that a stop arm may be held between the spool of the electro-magnet and the armature, when the latter is drawn down, and a brass steadying and regulating screw passing through a hole in the armature into the core of the magnet, substantially as and for the purpose specified. 10th. In an electric annunciator, stop mechanism comprising a two pole electro-magnet, one pole forming the core of the magnet and the other a standard, an armature flexibly connected to the said standard by a brass strip and provided with a stop at its outer end, and a brass steadying and regulating screw passing through a hole in the armature into the core of the magnet, substantially as and for the purpose specified.

**No. 55,721. Railway Switch.**

(*Aiguille de chemin de fer.*)

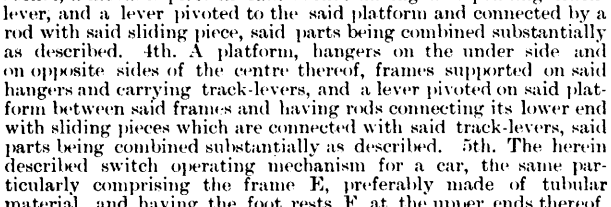


55721

Marcel Tremblay and Pierre Lussier, jr., both of Springfield, Mass., U.S.A., 27th April, 1897; 6 years. (Filed 30th March, 1897.)

*Claim.*—1st. A frame having an end extending above a suitable support, the other end provided with a socket, a hanger or bracket supporting said frame, a spring bearing against said bracket and normally raising said frame, a sliding plate movable in said socket and carrying a depending track-lever, said parts being combined substantially as described. 2nd. A platform, a depending hanger secured to the under side of said platform, a frame having an end passing upwardly through said platform, a vertical portion passing through an opening in said bracket and another end portion provided with a socket, a spring bearing against said bracket and normally raising said frame, a sliding piece in said socketed end carrying a depending track-lever, said parts being combined substantially as described. 3rd. A car-platform, a hanger secured to the under side thereof, a frame guided on said hanger and having an end projecting through said platform, and another end provided with a socket, a movable piece in said socket having a depending track-lever, and a lever pivoted to the said platform and connected by a rod with said sliding piece, said parts being combined substantially as described. 4th. A platform, hangers on the under side and on opposite sides of the centre thereof, frames supported on said hangers and carrying track-levers, and a lever pivoted on said platform between said frames and having rods connecting its lower end with sliding pieces which are connected with said track-levers, said parts being combined substantially as described. 5th. The herein described switch operating mechanism for a car, the same particularly comprising the frame E, preferably made of tubular material, and having the foot rests F, at the upper ends thereof, detachable, substantially as and for the purpose set forth.

**No. 55,722. Hay Press.** (*Presse à foin.*)



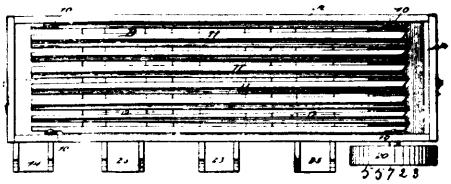
55722

Charles Adam Anderson, Bells, Texas, U.S.A., 27th April, 1897; 6 years. (Filed 1st April, 1897.)

*Claim.*—1st. In a hay baling press, the combination, with the hopper, the baling chamber and the receiving chamber, of a spring controlled plate forming a portion of the top of the receiving and baling chambers and likewise a portion of the hopper, the said plate comprising two members at angles to one another, the member which extends over the receiving and baling chambers, being slightly inclined in direction of the baling chamber, and provided with a rounded surface where it connects with the substantially vertical member, or member forming a portion of the hopper, as and for the purpose set forth. 2nd. In a hay press, the combination, with the body of the press, and a plunger held to reciprocate in the baling chamber, thereof, having extensions from its sides, of needles held to reciprocate at one side of the baling chamber being adapted to pass through the same, twisting devices facing the needles at the opposite side of the baling chamber, having rotary movement and jaws to receive material carried by the needles, means, substantially as described, for moving one jaw to and from the other of each twisting device, and a driving mechanism for the twisting devices, the shifting mechanism thereof and the driving mechanism for the needles all of the said mechanisms being controlled by the extensions from the plunger, as and for the purpose set forth. 3rd. In a hay or baling press, the combination, with the plunger and a pitman rod carried thereby having a cam surface at its head, of a link lever through which the head of the pitman passes, the pitman head being pivotally attached to one end of the said lever at the rear of the cam, the pivot point being removed from the outer surface of the said head, the said lever being fulcrumed near the end opposite that connected with the pitman rod, a wheel held to revolve in the link lever, at its fulcrum and provided with a controlling cushion, a shaft, means for rotating the shaft, and a cross head carried by the shaft, adapted for engagement with the cam surface of the pitman rod and the said cushion controlled wheel, whereby the plunger is given a slow compressing movement and a quick return, as and for the purpose specified. 4th. In a baling press, the combination with a frame, of a compression-chamber, an operated plunger, needles movable through the compression chamber, a crank shaft, a link connected with the needles, a shaft geared with the crank shaft, a ratchet disc on said shaft, a pawl engaging the ratchet and engageable by the plunger, and operated tying mechanism, substantially as described. 5th. In a baling press, the combination with a frame, of a compression chamber, an operated plunger, a frame outrunning from the compression chamber, a carriage moving in the frame and transversely with the compression chamber, needles carried by the carriage, a crank shaft, a link connecting the crank shaft and frame, a shaft geared with the crank shaft, a ratchet wheel on said geared shaft, a pawl capable of transmitting movement to the ratchet disc and movable from motion derived from the plunger, substantially as described. 6th. In a baling press, the combination with a frame, of a compression chamber, an operated plunger, a needle co-operating with the compression chamber, two twisting shafts having relative sliding movement and co-operating with the needle and having each a lip, a fingered wheel, and movement transmitting gearing, substantially as described. 7th. In a baling press, the combination with a frame, of a compressiom chamber, an operated plunger, a needle, two twisting bars each provided with a lip and having relative sliding movement, and movement transmitting gearing, substantially as described. 8th. In a baling press, the combination with a frame, of a compression chamber, an operated plunger, a needle, two twisting bars one of which is longitudinally movable, means for rotating said bars, a lever connected with the longitudinally movable bar, a cam engaging said lever and movement transmitting gearing, substantially as described. 9th. In a baling press, the combination with a frame, of a compression chamber, an operated plunger, a needle, two twisting bars each having a lip, one of said bars being longitudinally movable, means for rotating the twisting bars, a lever connected with the longitudinally movable bar, a cam engaging said lever, a fingered wheel, and movement transmitting mechanism, substantially as described. 10th. In a baling press, the combination with a frame, of a compression chamber, an operated plunger, a needle, two twisting shafts, each having a lip thereon, one of said shafts being longitudinally movable, and movement transmitting mechanism comprising means for rotating the twisting bars and longitudinally moving one twisting bar and rotating both, substantially as described. 11th. In a baling press, the combination with a frame, of a baling chamber, an operated plunger, a needle, two twisting bars having relative sliding movement, and each having a lip thereon, a finger-wheel axially coincident to said bars, and movement transmitting mechanism, substantially as described. 12th. In a baling press the combination with a frame, of a compression chamber, an operated plunger, a needle, two parallel plates, two twisting bars rotatable in said plates, one of said bars being longitudinally movable, a fingered wheel mounted on the bars and between the plates, and movement transmitting mechanism, comprising means for longitudinally moving one of the twisting bars, substantially as described. 13th. In a baling press, the combination with a frame, of a compression chamber, an operated plunger, a needle, tying mechanism, gearing, a shaft connected with the gearing, a ratchet disc on said shaft, a pivoted arm, and a pawl on the arm and engaging the ratchet disc, the arm being capable of receiving movement from the plunger, and by contact therewith, substantially as described. 14th. In a baling press, the combination with a frame, of a compression chamber, an operated plunger, a needle, twisting mechanism, gearing connected with said mechanism, a shaft connected with the gearing, a ratchet disc on the shaft, a mounted pawl for imparting movement to the ratchet disc, a lever, and a

pivoted arm connected with the lever and capable of disengaging the pawl from the ratchet disc, substantially as described. 15th. In a baling press, the combination with a frame, of a compression chamber, an operated plunger, twisting mechanism, means for operating said mechanism, a needle, gearing connected with the needle for driving the same, a shaft connected with the gearing, a ratchet disc on the shaft, and a yoke pivotally mounted on the shaft and comprising a pawl spring pressed into engagement with the ratchet disc, the said pawl being capable of engagement with the plunger, substantially as described. 16th. In a baling press, the combination with a frame, of a compression chamber, a plunger, a pitman, connected to the plunger, a lever pivotally connected at one end to the pitman, and an operated cross head adapted to engage the pitman and one end of the lever, the said end being opposite to the end connected with the pitman, substantially as described. 17th. In a baling press, the combination with a frame, of a compression chamber, a plunger, a pitman connected with the plunger, a lever pivotally connected at one end with the pitman, a spring mounted on the lever, and an operated cross head adapted to successively engage the pitman and the lever and to compress the spring, substantially as described. 18th. In a baling press, the combination with a body portion, of a compression chamber, an operated plunger, two rigid arms arranged on the frame and one on each side of the plunger, a transverse bar connected to said arms, an expansive spring at each end of said bar respectively bearing against the arms, and two pivoted plates adjacent to the bars and respectively pressed by the springs, the said plates being normally disposed at an angle to each other and being adapted to be simultaneously engaged by the plunger and to yield before the same, substantially as described.

**No. 55,723. Sorting Machine.** (*Machine à assortir.*)



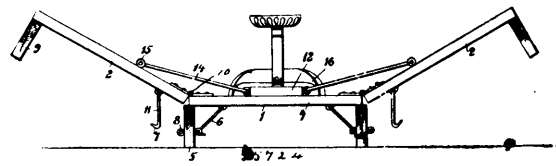
Charles Gurney Poulson, Linwood Station, administrator of the estate of Charles Gurney Poulson, jr., Linwood Station, 27th April, 1897; 6 years. (Filed 1st April, 1897.)

*Claim.*—1st. In a sorting machine, the combination with a casing and an inclined table having a longitudinal reciprocating movement therein, the said table comprising a series of longitudinal bars, the spaces between the bars gradually increasing in width from the head end of the table to the delivery end, of a series of hoppers located beneath the sorting or receiving table and moving therewith, pockets located beneath the hoppers, a pocket at the rear end of the table, the inner vertical wall of the said pocket being arranged beneath the delivery end of the table, a buffer located upon the under surface of the table near the delivery end and normally in engagement with the inner wall of the said end pocket, a rotating body provided with a series of projections adapted for alternate engagement with an extension at the head of the table to move said table in direction ot the head, and means for returning the table when released from the said projections, substantially as shown and described. 2nd. In a sorting machine, the combination with a casing and an inclined table having a longitudinally reciprocating movement therein, the said table consisting of a series of longitudinal slats or bars substantially diamond shaped in cross section, the spaces between the bars being gradually widened from the head in direction of the delivery end of the table, of a series of hoppers carried by the table and secured to its under side, pockets located beneath the hoppers, a pocket at the rear end of the table, a vertical partition forming the inner wall of the said pocket and arranged beneath the delivery end of the table, a buffer located upon the under surface of the table near the delivery end and adapted for engagement with the said partition, a rib or projection on the under surface of the table at the head thereof, a spring secured at its lower end to the head of the casing and bearing at its upper end against the head end of the table exerting tension in direction of its delivery end and a drum mounted to rotate beneath the table near its head end provided with projections adapted for alternate engagement with the said rib or projection at the head of the table, forcing the said table against the power of the said spring, substantially as shown and described.

**No. 55,724. Corn Plant Marker.**
(*Marqueur de plante de blé-d'inde.*)

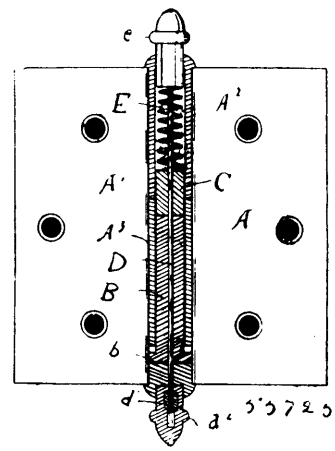
Omer Billingsley, East Cape Girardeau, Illinois, U.S.A., 27th April, 1897; 6 years. (Filed 1st April, 1897.)

*Claim.*—1st. In a corn plant marker, the combination with a main frame having pendant markers secured thereto, of auxiliary frames hinged to said main frame and also provided with pendent markers, the construction and operation being such that the auxiliary frames may be turned up out of operative position at will, substantially as described. 2nd. In a corn plant marker, the combination with a main frame having a plurality of markers pendent



therefrom, of braces connecting said markers with said frame, a draught tongue connected to said main frame, and auxiliary frames hinged to said main frame and each provided with markers, the construction and operation being such that the auxilary frames may he turned up out of operative position at will, substantially as described. 3rd. In a corn plant marker, the combination with a main frame having pendent markers and a draught tongue, of auxiliary frames also provided with markers and hinged to said main frame, and means mounted on said main frame for holding said auxiliary frames in an elevated inoperative position when so desired, substantially as described. 4th. In a corn plant marker, the combination with a main frame having a draught tongue and pendent markers, of auxiliary frames hinged to said main frame and also provided with markers, and pivoted rods connected to the auxiliary frames and adapted to engage eyes upon the markers of the main frame to hold said auxiliary frames down in operative position but permit them to be raised at will, substantially as described. 5th. In a corn plant marker, the combination with a main frame having pendent markers, of auxiliar frames hinged to said main frame and also provided with markers, means for holding said auxiliary frames in their operative positions, devices for holding said auxiliary frames in an elevated inoperative position, and a draught tongue detachably connected to said main frame, substantially as described.

**No. 55,725. Door Hinge.** (*Gonds de porte.*)



Andrew Algier, Grand Rapids, Michigan, U.S.A., 27th April, 1897; 6 years. (Filed 1st April, 1897.)

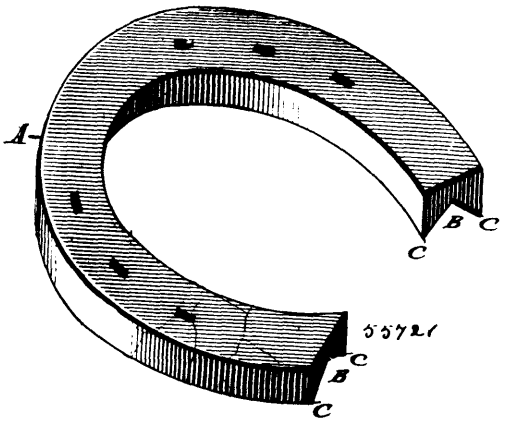
*Claim.*—In a door hinge, wings having cylindrical bearings, a check-pin fitted to slide longitudinally in one of said bearings and having a radially projecting head with a lug on its lower surface, a spline and groove to prevent this check-pin from turning in the bearing, a lug on the upper surface of the lower bearing to engage with the lug on the lower surface of the check-pin, a spring in the upper bearing of the hinge in position to force the check-pin against the lower bearing, and a longitudinally-sliding and revoluble pin fitted close into the bearing and around the pivot-pin between the spring and the check-pin in position to support the pivot-pin and the joint between the bearings $A^2$ and $A^3$, a pivot-pin having a polygonal head that may be made to slide longitudinally in the upper bearing of the hinge, but will prevent the pin from revolving, and a thumb-screw at the lower end of the pivot-pin to adjust the tension of the spring, substantially as and for the purpose set forth.

**No. 55,726. Horse Shoe.** (*Fer à cheval.*)

George Anthony Singerly, Philadelphia, Pennsylvania, U.S.A., 27th April, 1897; 6 years. (Filed 2nd April, 1897.)

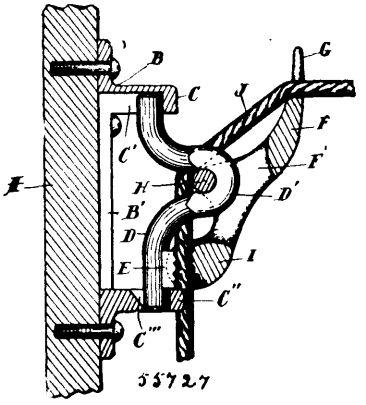
*Claim.*—1st. A shoe having a recess or groove in the tread thereof, the same extending continuously around the shoe, and being opened or unobstructed at the heel ends. 2nd. A horse shoe having a recess or groove in the tread thereof, the same being of flaring form, forming angular and pointed rims. 3rd. A horse shoe having transversely-extending teeth at the heel portions thereof. 4th. A horse

shoe having a longitudinally-extending recess or groove in the tread thereof, and transversely-extending teeth at the heel portions there-




of. 5th. A horse shoe having transversely-extending teeth in the heel portions thereof, and a rim around the sides of said teeth as a guard therefor.

**No. 55,727. Line Holder.** (*Porte-rênes.*)




Henry Petka, Grand Rapids, Michigan, U.S.A., 27th April, 1897; 6 years. (Filed 3rd April, 1897.)

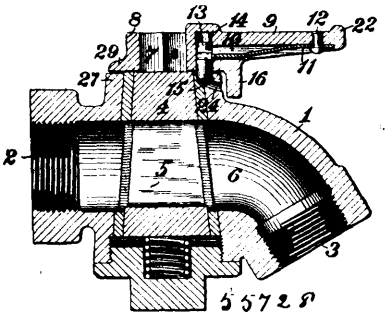
*Claim.*—1st. A line holder, comprising a plate having a longitudinal slot, a bracket arm projecting outward from the upper end of said plate and formed on its under side with a channel extending through a part of its length and communicating with said slot, a bracket arm projecting outward from the lower end of said plate and formed with an opening, a rod bent intermediate its length and journalled at its ends in the channel and slot of said bracket arms, and a clamping lever formed with an opening through which said rod is inserted to place and having a pivot journalled in the bent part of said rod, substantially as described and for the purposes specified. 2nd. The herein described line holder, consisting of a plate having a longitudinal slot, a bracket arm projecting outward from the upper end of said plate and having in its under side a channel extending but a part of its length and communicating with said slot, a bracket arm projecting outward from the lower end of said plate and formed with a slot near its lower end, a rod, journalled at its ends in the channel and slot of the bracket arms and bent between its ends to form a rearwardly open loop, a clamping jaw, supported on the outer end of the lower bracket arm and assisting to hold said rod in place, and a lever, having an opening to permit said rod to be inserted to place and provided with a pivot pin journalled in said loop and formed with lugs having inwardly inclined rear sides, the upper end of said lever extending outward from the pivot and having lugs, and the lower end thereof being formed to provide a clamping jaw opposing that on the lower bracket arm and with rearwardly projecting lugs, substantially as described.

**No. 55,728. Device for Locking or Unlocking Valves.**

(*Appareil pour fermer ou ouvrir les souvapes.*)

Richard William Bayley, Pittsburg, and Francis Ludlow Clark, Stewart Sta., both in Pennsylvania, U.S.A., 27th April, 1897; 6 years. (Filed 2nd April, 1897.)

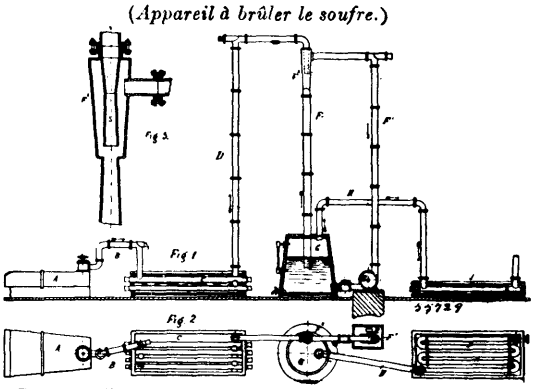
*Claim.*—1st. The combination, with a cock, or valve, and its casing, of an arm secured to the valve, a recess in the arm, a spring in the recess, a locking bolt operatively connected to the spring, a shield for protecting the spring, and a detachable unlocking device for deflecting the spring, which is adapted to be used as a lever, or handle for turning the valve, substantially as set forth. 2nd. The combination, with a cock, or valve, of an arm carrying a locking device, and a detachable unlocking device adapted to fit over the arm, a fulcrum, or bearing on the arm on which the unlocking device may




be tilted in one direction to unlock the valve, and a lateral bearing on the unlocking device for engaging with the arm, whereby the arm may be moved laterally in one direction to move the valve, substantially as set forth. 3rd. The combination, with a cock, or value, of an arm secured to the valve, a spring actuated locking device carried by the arm, a detachable unlocking device adapted to be pivoted on the arm, and a projection on the unlocking device which is adapted to deflect the spring of the locking device when the locking device is turned on its pivot, substantially as set forth. 4th. The combination, with a cock, or valve, and its casing of a spring actuated locking bolt, a socket or recess adapted to receive the bolt and thereby to lock the valve in one position, and a recess which is adapted to receive the locking bolt when the valve is in another position, thereby relieving the spring of compression, while permitting the movement of the valve, substantially as set forth.

**No. 55,729. Sulphur Burning Apparatus.**

(*Appareil à brûler le soufre.*)




Ernst Porak, Kimberg, Bohemia, Austria, 27th April, 1897; 6 years. (Filed 3rd July, 1896.)

*Claim.*—An apparatus for the production of sulphurous acid or other gases used for the purpose of saturating fluids, sucking such sulphurous acid or other gases from the pipe S by a continual and forced jet, the which forms injector in $F^2$, and ejects the gas into the fluid in G, where it is by the same washed and compressed, and can be led to its place of destination by a tube H, or as the case may be, substantially as described and illustrated by the drawing.

**No. 55,730. Process for the Preparation and Extraction of Albuminous Substances.** (*Procédé pour la préparation et extraction de substances albumineuses.*)

Johann Christian Dittmar Finkler, 19 Baumschulen-Allee, Bonn on the Rhine, Germany, 27th April, 1897; 6 years. (Filed 14th July, 1896.)

*Claim.*—The process of extracting albumen from albuminous materials which contain haemoglobin and its derivates, fats, substances which taste and smell, bacteria and other products or any one of these substances, the said process consisting in converting into soluble products or completely decomposing the substances, partly unpleasant and partly injurious to health which the albumen contains, by chemical decomposition (oxidation and reduction) particularly by heating or boiling with hydrogen peroxide without decomposing or dissolving or otherwise acting injuriously on the albumen, and then washing away the soluble products or decomposition.

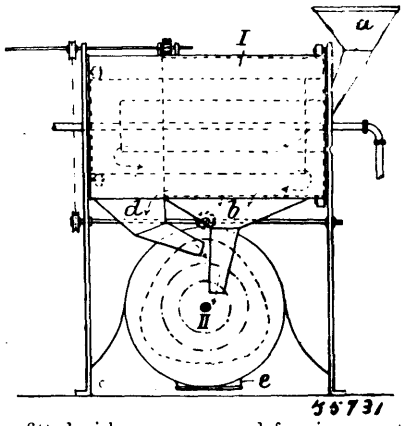
**No. 55,731. Apparatus for the Treatment of Peat.**

(*Appareil pour le traitement de la tourbe.*)

Emmanuel Stauber, Berlin, Germany, 28th April, 1897; 6 years. (Filed 26th August, 1895.)

*Claim.*—Apparatus for the treatment of peat consisting of a primary apparatus comprising a central heating drum fitted with a

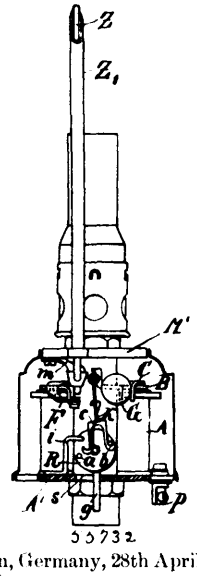
conveyor and a heater, an intermediate perforated drum fitted with a conveyor and connected with the central drum, an outer per-




forated drum fitted with a conveyor and forming a continuation of the intermediate drum, and provided with a fibre outlet, an outer casing provided with a turf outlet, a secondary apparatus comprising a heating drum with conveyor having an inlet connected to the turf outlet of the primary apparatus, a drum fitted with a conveyor and surrounding the heating drum and forming a continuation thereof and having a dried turf outlet, and a tertiary apparatus surrounding or separate from the secondary apparatus and comprising a drum with conveyors and having an inlet connected to fibre outlet of the primary apparatus one or more surrounding perforated drums with conveyors, an outer casing, an outlet from the perforated drums for the fibre and an outlet from the casing for the remaining turf, and a gearing for rotating the outer casings of the three apparatus.

**No. 55,732. Device for Lighting Gas and other Lamps.**

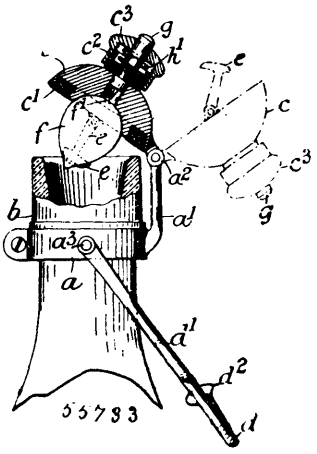
(*Appareil à allumer le gaz, etc.*)




Ernest Schmidt, Berlin, Germany, 28th April, 1897; 6 years. (Filed 3rd August, 1896.)

*Claim.*—1st. An apparatus for automatically igniting gas and other lamps by means of electric current, which consists of an electro-magnet having an armature consisting of two independently movable members, a gas cock operatively connected to one member and an igniting device operatively connected to the other member, and means for sending one and the same current, through the electro-magnet coils and to the spark producing device, substantially as described. 2nd. The combination of an electro-magnet, having an armature consisting of two members, said two members being capable of reciprocatory movement on and round the same pivots, a gas cock operatively connected with one member and an igniting device operatively connected to the other member, and means for operating the armature and the igniting device by one and the same current, substantially as described. 3rd. The combination of an electro-magnet having a double armature as specified and means for connecting one member of said armature to the igniting device, a gas cock and means for operatively connecting the other armature member thereto consisting of a double pawl, suspended from said armature member and adapted to engage alternately pins on the revoluble gas cock, and a spring attached to the gas cock and rotated therewith said spring connected to the double pawl and operating the same, substantially as described. 4th. The combination of an electro-magnet having an armature consisting of two members pivotally supported as specified, one of said members being operatively connected to the gas cock, and the other to an igniting device consisting of a hollow rod extending in proximity to the burner, and a tube insulated therein and capable of substantially vertical movement therein, an insulated spring *m* to press said tube downwards and an extension to said second member to engage the lower end of said inner tube when the magnet is excited and electric connections to the magnet and to the igniting device for the purpose, substantially as described. 5th. The combination of an electro-magnet A, having a double armature B, C, pivotal connections for said armature to the burner tube at $B^1$, a cock $R^1$ in the burner tube consisting of $a^1$ revoluble disc having pins *a* and *b* and recesses *h*, *y*, said disc being pivotally connected to a partition dividing said burner tube, a double pawl K suspended from the member B of the armature, and a spring actuated by the rotation of the cock plug to throw the said double pawl in opposite directions alternately and corresponding to the position of the cock, a conductor $F^1$ fast on a plate of the burner and extending in proximity to the burner head, a spring actuated conductor F, insulated as regards the conductor $F^1$, and adapted to form therewith a spark producing head and means for transmitting the motion of the armature member C to said conductor, substantially as described. 6th. The combination of an electro-magnet having an armature consisting of two members substantially as described, means for operatively connecting the other member to a spark producing device, and a spark producing device consisting of a fixed hollow conductor $F^1$ in connection with one pole of a battery, and a spring actuated conductor F connected to the other pole of the battery, a jet flame orifice at the top of the latter conductor and means for connecting the lower end of same to the burner tube above the gas cock.

**No. 55,733. Apparatus for Closing Vessels and Charging them with Liquid or Compressed Gases.** (*Appareil pour gazéifier et sceller les bouteilles, etc.*)




Emile Sterne, Paris, France, 28th April, 1897; 6 years. (Filed 13th October, 1896.)

*Claim.*—1st. The combination with a bottle or other receiver, of a stopper hinged to a collar secured to said bottle or receiver, a perforator within said stopper, a strap hinged to the interior of said stopper to secure a gas container thereto, and a lever hinged to the collar to force the stopper to its seat and to depress the perforator, substantially as herein shown and described, and for the purpose stated. 2nd. The combination with a bottle or other receiver, of a stopper hinged to said receiver or to a fixture thereon, a perforator within said stopper, rendered tight by an India-rubber ring, a strap hinged to the interior of said stopper to secure a gas container thereto, a lever hinged to the receiver or to a fixture thereon to force the stopper to its seat and to depress the perforator, a safety valve and perforations or escape channels in said stopper, substantially as herein shown and described, and for the purpose stated. 3rd. The apparatus for closing vessels and charging them with liquefied or compressed gases, substantially as herein shown and described.

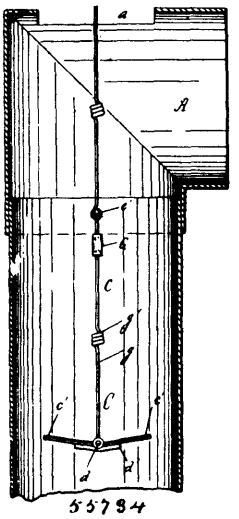
**No. 55,734. Device for Cleaning Stovepipes.**

(*Appareil à nettoyer les tuyaux de poêles.*)

William Felstead, Hamiata, Manitoba, Canada, 28th April, 1897; 6 years. (Filed 3rd April, 1897.)

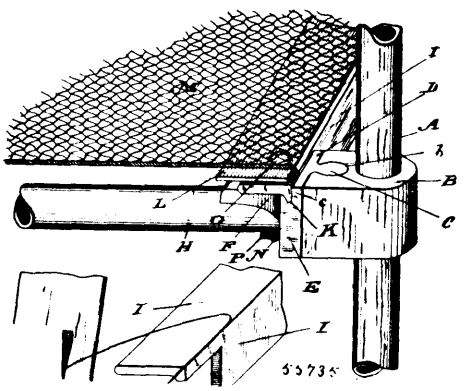
*Claim.*—1st. The combination, with a stovepipe elbow having an opening at one end, of a cover comprising two plates and a bolt for securing the said plates to the stovepipe, the outer of the said plates having a slot permitting it to be slid off the bolt, substantially as set forth. 2nd. A soot rake, comprising a hinge pin, a handle secured to the hinge pin, scraper plates pivoted on the hinge pin and stops carried by the handle and permitting the said plates to

fold upward but preventing them from folding downward, substantially as set forth. 3rd. A soot rake, comprising a handle




formed of pivoted segments, and scraper plates hinged to the bottom segment of the said handle, substantially as set forth. 4th. A soot rake, comprising a handle formed of segments each consisting of two bars looped at their tops, scraper plates hinged to the lowest segment of the said handle, the upper segments of the said handle being provided with eyes pivoted to the said loops, and having projections between the said bars, and bands slidable on the said bars and projections, substantially as set forth.

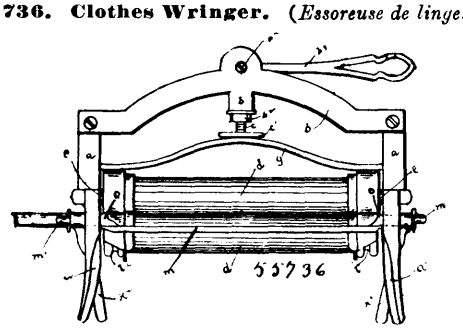
**No. 55,735. Bedstead.** (*Bois de lit.*)




Thomas Calleran, Toronto, Ontario, Canada, 28th April, 1897; 6 years. (Filed 3rd April, 1897.)

*Claim.*—1st. A coupling bracket member for the side and end rails of bedsteads, consisting of a vertical plate, a horizontal plate extending outwardly from the top of one side of the vertical plate, and a horizontal stud extending outwardly from the same side of the vertical plate, substantially as specified. 2nd. A coupling bracket member for the side and end rails of bedsteads, consisting of a vertical plate, a horizontal plate extending outwardly from the top of one side of the vertical plate, a horizontal stud extending outwardly from the same side of the vertical plate, and a channel in the top of the vertical plate, substantially as specified. 3rd. In a coupling bracket member for the end rails of bedsteads, consisting of a vertical plate, a horizontal plate extending outwardly from the top of one side of the vertical plate, a horizontal stud extending outwardly from the same side of the vertical plate, a channel in the top of the vertical plate, and a flange extending upwardly from the top of the opposite side of the vertical plate to the horizontal plate, substantially as specified. 4th. A coupling bracket member for the end rails of bedsteads, consisting of a vertical plate, a horizontal plate extending outwardly from the top of one side of the vertical plate, a horizontal stud extending outwardly from the same side of the vertical plate, a channel in the top of the vertical plate, a flange extending upwardly from the top of the opposite side of the vertical plate to the horizontal plate, and an upwardly extending lug from the top of the horizontal plate, substantially as specified. 5th. A coupling bracket member for the side and end rails of bedsteads, consisting of a vertical plate, a horizontal plate extending outwardly from the top of one side of the vertical plate, a horizontal stud extending outwardly from the same side of the vertical plate, a channel in the top of the vertical plate a flange extending upwardly from the top of the opposite side of the vertical plate to the horizontal plate, an upwardly extending lug from the top of the horizontal plate, in combination with an end rail having a depending flange to enter the channel in the vertical plate, substantially as specified. 6th. A coupling bracket member for the side and end rails of bedsteads, consisting of a vertical plate, a horizontal plate extending outwardly from the top of one side of the vertical plate, a horizontal stud extending outwardly from the same side of the vertical plate, a channel in the top of the vertical plate, a flange extending upwardly from the top of the opposite side of the vertical plate to the horizontal plate, an upwardly extending lug from the top of the horizontal plate, in combination with an end rail having a depending flange to enter the channel in the vertical plate, a clamping bar mounted on the top of and overhanging the end rail, a lug supporting the overhanging part of the clamping bar, an end rail mounted on the horizontal stud, and a locking bolt passing through the clamping bar, the end rail, the horizontal plate, the side rail, and the horizontal stud, substantially as specified. 7th. A coupling bracket member for the side and end rails of bedsteads, consisting of a vertical plate, a horizontal plate extending outwardly from the top of one side of the vertical plate, a horizontal stud extending outwardly from the same side of the vertical plate, a side rail mounted on the horizontal stud, an end rail mounted on the top of the horizontal plate, and a locking bolt passing through the end rail, the horizontal plate, the side rail, and the horizontal stud, substantially as specified. 8th. A coupling bracket member for the side and end rails of bedsteads, consisting of a vertical plate, a horizontal plate extending outwardly from the top of one side of the vertical plate, a horizontal stud extending outwardly from the same side of the vertical plate, a channel in the top of the vertical plate, a side rail mounted on the horizontal stud, an end rail mounted on the top of the horizontal plate, and a locking bolt passing through the end rail, the horizontal plate, the side rail and horizontal stud, substantially as specified. 9th. A coupling bracket member for the side and end rails of bedsteads, consisting of a vertical plate, a horizontal plate extending outwardly from the top of one side of the vertical plate, a horizontal stud extending outwardly from the same side of the vertical plate, a side rail mounted on the horizontal stud, an end rail mounted on the top of the horizontal plate, a clamping bar, and a locking bolt, passing through the end rail, the horizontal plate, the side rail, and the horizontal stud, substantially as specified. 10th. A coupling bracket member for the side and end rails of bedsteads, consisting of a vertical plate, a horizontal plate extending outwardly from the top of one side of the vertical plate, a horizontal stud extending outwardly from the same side of the vertical plate, a channel in the top of the vertical plate, a side rail mounted on the horizontal stud an end rail mounted on the top of the horizontal plate, a clamping bar and a locking bolt passing through the end rail, the horizontal plate, the side rail and horizontal stud, substantially as specified.

**No. 55,736. Clothes Wringer.** (*Essoreuse de linge.*)




Thomas Washington Stone, Columbus, Ohio, U.S.A., 28th April, 1897; 6 years. (Filed 5th April, 1897.)

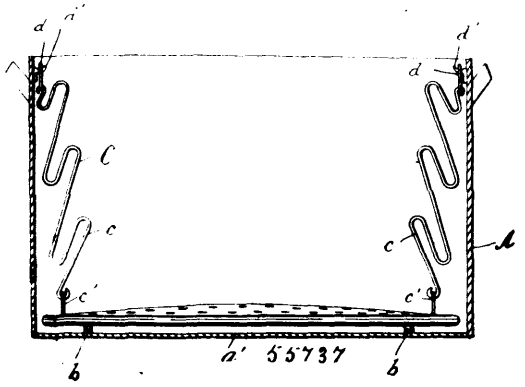
*Claim.*—1st. In a clothes wringer the combination with the end standards $a$ and rolls $d$ and $d^1$ journalled one above the other in said standards, of shields or hoods $h$, a partition $h^2$ in each of said shields, spindle openings $h^3$ $h^4$ in said partitions through which pass the spindles of said rolls, and engaging gear wheels on the opposite sides of said partitions from the roll ends, substantially as and for the purpose specified. 2nd. In a clothes wringer the combination with the wringer frame consisting of the end standards $a$ and cross pieces $b$, upper and lower wringer rolls, bearing blocks vertically movable in the end standards, said blocks each having an upper U-shaped portion and a lower loop, which loops form bearings for the spindles of the upper roll, a compressing spring the ends of which enter the U-shaped portions of the bearing blocks, gears on the spindles of the rolls, and shields each having a vertical partition provided with openings for the spindles of the rolls, said shields inclosing the ends of the rolls at one side of the vertical partition, and the said gears at the other side of the partition, substantially as and for the purpose specified.

**No. 55,737. Wash Boiler.** (*Chaudière de buanderie.*)

Dorila Marcil, Terrebonne, Minnesota, U.S.A., 28th April, 1897; 6 years. (Filed 5th April, 1897.)

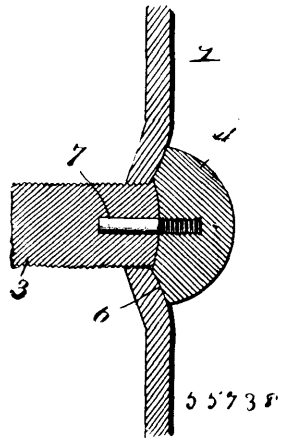
*Claim.*—1st. The combination, with a clothes boiler, of a convex and perforated plate provided with feet supporting it at a little dis-

tance above the bottom of the boiler, substantially as set forth. 2nd. The combination, with a clothes boiler, of a plate provided




with feet resting on the bottom of the boiler, and guard plates pivoted to the said plate and engaging with projections on the ends of the boiler, substantially as set forth. 3rd. The combination, with a clothes boiler, of a plate provided with feet resting on the bottom of the boiler, and guard plates each provided with a series of loops and having their lower end portions pivoted to the said plate, substantially as set forth.

**No. 55,738. Means for Securing and Protecting Stay Bolts.** (*Moyen d'assujétir et protéger les boulons d'entretoises.*)



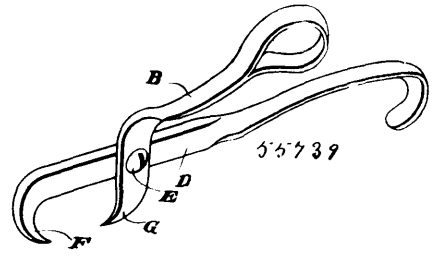

Joseph Cour, Chicago, Illinois, U.S.A., 28th April, 1897; 6 years. (Filed 5th April, 1897.)

*Claim.*—1st. In combination, a boiler furnace sheet provided with stay-bolt openings, flared by being depressed or swaged away from the fire side, and a stay bolt secured in an opening of the sheet and having its inner end remote from the fire side of the said sheet, substantially as and for the purpose set forth. 2nd. In combination, a boiler furnace sheet provided with a stay-bolt opening flared by being depressed or swaged away from the fire side, a stay bolt secured in said opening and having its end portion upset, a knob snugly fitting the flaring portion immediately surrounding the stay-bolt opening, and a dowel connecting the knob with the stay bolt, substantially as set forth. 3rd. The combination with a boiler furnace sheet, having an opening flared by being depressed or swaged away from the fire side, and a stay bolt secured in the said flaring opening, of a protector having a concave depression to receive the inner end of the stay bolt, and a beveled rim portion to fit against the flaring portion of the boiler furnace sheet surrounding the bolt opening, substantially as set forth.

**No. 55,739. Lumber Pull.** (*Tenailless à bois.*)

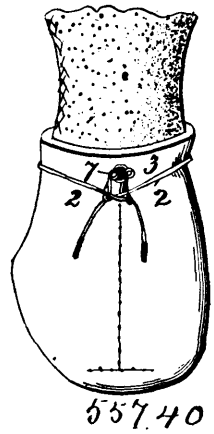
Jerome Blair Pope, Minco, Chickasaw Nation, Indian Territory, U.S.A., 28th April, 1897; 6 years. (Filed 5th April, 1897.)

*Claim.*—1st. A device for handling lumber, consisting of two pivoted levers, one of said levers having a recurved point upon its outer end and being recurved at its rear end to fit the hand, the other lever being of a bell crank shape and having a point projecting from its short end towards the first point, and the rear end of said lever having a loop therein, substantially as described. 2nd. In a device for handling lumber, the combination of a straight lever having upon one end thereof a recurved hook and a recurved hand guard upon the opposite end, both of the same curving towards the same side of the lever, with a bell crank lever pivoted to the said lever and having a sharp point projecting from the short end thereof towards the hook upon the first lever, the short arm of the




bell crank lever being about half the length of the short arm of the straight lever and a loop in the rear end of the bell crank lever, substantially as described.

**No. 55,740. Shoe Lace Clasp.**
(*Agrafe pour lacets de chaussures.*)




Miles Evart Hendrick, Amity, Oregon, U.S.A., 28th April, 1897; 6 years. (Filed 7th April, 1897.)

*Claim.*—1st. A fastener comprising a single piece of wire bent to form an attaching eye and two parallel lace receiving loops, substantially as described. 2nd. A shoe fastener comprising a single piece of wire bent to form an attaching eye and two parallel lace receiving loops having finishing rings at their ends whereby the laces may be instantly passed into said loops, substantially described. 3rd. A shoe fastener comprising a single piece of wire bent to form a double coil or eye and two parallel lace receiving loops having finishing rings at their extreme ends whereby the laces may be instantly inserted into said loops, substantially as described.

**No. 55,741. Hinge.** (*Penture.*)

Albert Slack, Cicero, Indiana, U.S.A., 28th April, 1897; 6 years. (Filed 6th April, 1897.)

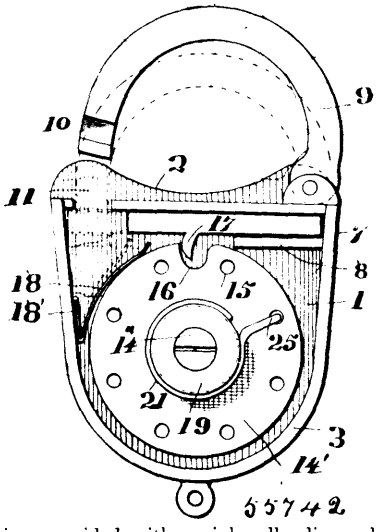
*Cleam.*—A transom hinge consisting of two members, one member having spaced ears, and the other member having an eye-bearing, a pivot or trunnion member interposed between the said members, and a removable pintle connecting said pivot or trunnion member with the member having the spaced ears, substantially as described.

**No. 55,742. Combination Pad Lock.**
(*Cadenas à combinaison.*)

William Frederick Wible, Gettysburg, Pennsylvania, U.S.A., 28th April, 1897; 6 years. (Filed 5th April, 1897.)

*Claim.*—1st. In a padlock, the combination with a locking bolt, of tumbler discs adapted to engage with said bolt when properly aligned, a spindle connected to one of said discs, and means carried by said disc adapted to engage with the other disc. 2nd. In a padlock, the combination with a locking bolt having a locking lug and a spring adapted to retract said bolt, of thumbler discs provided with notches in their peripheries adapted to receive said locking lug a spindle connected to one of said tumbler discs, and means carried by said disc adapted to engage with the other disc. 3rd. In a padlock, the combination with a locking bolt, of thumbler discs adapted to engage with said bolt when properly aligned, means for turning one of said discs, and a member carried by one of said discs which is adapted to engage with the other disc and is capable of being moved or changed in relation to the disc to which it is connected whereby the combination between the discs can be changed. 4th. In a padlock the combination with a locking bolt, of tumbler discs adapted to engage therewith when properly aligned, each disc having a plurality of openings made in the face thereof, a separate catch device for each disc which device is adapted for reception in any opening

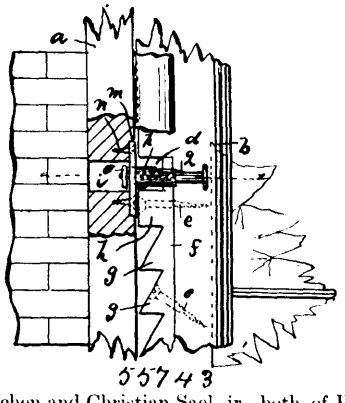
of the disc and to engage with the adjacent disc, and means for turning one of said discs. 5th. The herein described tumbler disc,




the same being provided with peripherally disposed openings or apertures and having a hub and a spring coil around the hub and provided with a bent end which is received in an aperture. 6th. In a padlock, the combination with a base plate and a frame strip connected thereto and provided with a flange, of a locking bolt, means for actuating the same, and a cover plate received under the flange, and having a lug bearing against the locking bolt.

**No. 55,743. Sash Balance and Fastener.**

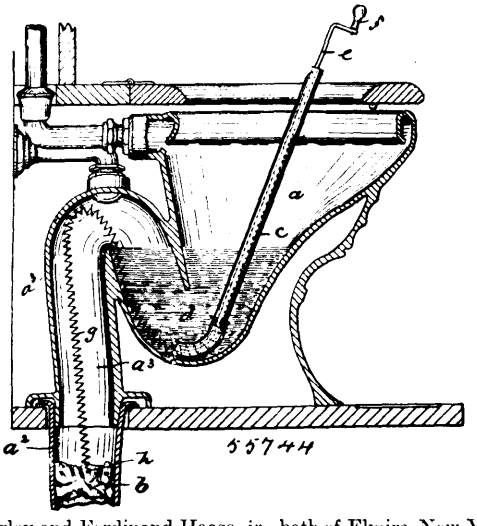
(*Contre-poids et arrête-croisée.*)




Adolph Haenichen and Christian Sael, jr., both of Patterson, New Jersey, U.S.A., 28th April, 1897; 6 years. (Filed 7th April, 1897.)

*Claim.*—1st. The combination, with a window frame provided in one of its side sections with a socket, of a sash in said frame and having an elongated groove arranged in its side, a bar in said groove and provided with a series of teeth, a projection at or near the upper portion of said bar and having its upper surface substantially horizontal, a plate over the socket in the frame, a bolt penetrating said plate and adapted to engage the top surface of the projection on the bar and the teeth thereon respectively, and means for operating said bolt, all said parts, substantially as and for the purposes described. 2nd. The combination, with a window frame provided in one of its side sections with a socket, of a sash in said frame and having in one of its sides an elongated groove, a bar in said groove and provided with a series of triangular shaped teeth, the lower surfaces of said teeth being substantially horizontal, a projection at or near the upper portion of said bar and having its upper surface substantially horizontal, a plate over the socket in the frame, a bolt penetrating said plate, and adapted to engage the top surface of the projection on the bar and the teeth thereon, respectively, and means for operating said bolt, all said parts substantially as and for the purposes described. 3rd. The combination, with a window frame provided in one of its side sections with a socket, of a plate over said socket, a sash in said frame and having an elongated groove arranged in one of its sides, a bar in said groove and provided with a series of teeth, a projection at or near the upper portion of said bar and having its upper surface substantially horizontal, a bolt penetrating said plate and adapted to engage the top surface of the projection on the bar and teeth thereon respectively, a bar or link within said socket and secured to said bolt, and a spring controlled pin penetrating the plate, and secured with its inner end to said bar or link and provided at its outwardly projecting end with a head, all said parts, substansially as and for the purposes described. 4th. The combination, with a window frame provided in one of its side sections with a socket, of a sash in said frame and having in one of its sides an enlongated groove, a bar in said groove and provided with a series of teeth, a projection at or near the upper portion of said bar and having its upper surface substantially horizontal, a plate over the socket in the frame, a bolt penetrating said plate and adapted to engage the top surface of the projection on the bar and the teeth thereon respectively, a sleeve or tube projecting from the plate, a headed pin penetrating said sleeve or tube and plate, and secured with its inner end to said bar or link, and a spiral spring surrounding said pin and adapted to control the same, all said parts, substantially as and for the purposes described.

**No. 55,744. Cleaning Device for Water Closets, Sinks, etc.** (*Appareil à nettoyer les latrines à eau etc.*)

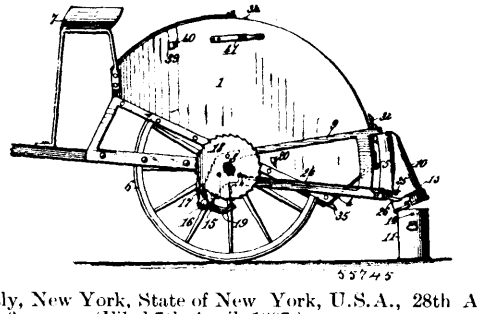



John Wigley and Ferdinand Haase, jr., both of Elmira, New York, U.S.A., 28th April, 1897; 6 years. (Filed 7th April, 1897.)

*Claim.*—1st. A cleaning device for water-closets, sewers and the like, consisting of a straight tube, an elbow-tube removably secured to one end thereof, a rod loosely arranged in the straight tube and provided at its upper end with a crank-handle, a wire coiled at the lower end of said rod and projecting through the elbow tube, and a tool or implement at the free end of said coil, substantially as and for the purposes described. 3nd. A cleaning device for water-closets, sewers and the like, consisting of a straight tube, an elbow-tube on one end thereof, a rod loosely arranged in a straignt tube, a crank-handle on the upper end of said rod, a wire coil arranged at the lower end of said rod and projecting through the elbow-tube, and a tool or implement removably secured to the free end of said coil, substantially as and for the purposes described. 3rd. A cleaning device for water-closets and the like, consisting of a tube, a rod loosely arranged in said tube and provided at one end with a handle, a flexible wire coil arranged at the other end of said rod, and a tool or implement at the free end of said coil, substantially as and for the purposes described.

**No. 55,745. Garbage or Ash Cart.**

(*Voiture pour la cendre ou tripailles.*)

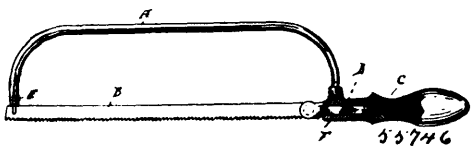



John Healy, New York, State of New York, U.S.A., 28th April, 1897; 6 years. (Filed 7th April, 1897.)

*Claim.*—1st. In a garbage or ash vehicle, the combination with the receiving body thereof, of means for engaging with the receptacle to be emptied as it stands upon the ground, and means for automatically raising the same to the dumping position through the forward movement of the vehicle, substantially as described. 2nd. In a garbage or ash vehicle, the combination with the receiving body,

and the running gear supporting the same, of a device carried by the vehicle and adapted to be engaged with the receptacle to be emptied as the latter stands upon the ground, and mechanism operated by the rotating parts of the vehicle to automatically lift the receptacle holding device into dumping position on top of the vehicle as the latter moves forward, substantially as described. 3rd. In a garbage or ash vehicle, the combination with the receiving body, and the running gear supporting the same, of a device carried by the vehicle and adapted to be engaged with the receptacle to be emptied as the latter stands upon the ground, mechanism operated by the rotating parts of the vehicle to automatically lift the receptacle holding device into dumping position on top of the vehicle as the latter moves forward, and means for automatically disengaging said receptacle holding device from the lifting mechanism as the former reaches the proper dumping position, substantially as described. 4th. In a garbage or ash vehicle, the combination with the receiving body, and the running gear supporting the same, of a device carried by the vehicle and adapted to be engaged with the receptacle to be emptied as the latter stands upon the ground, mechanism operated by the rotating parts of the vehicle to automatically lift the receptacle holding device into dumping position on top of the vehicle as the latter moves forward, means for automatically disengaging said receptacle holding device from the lifting mechanism as the former reaches the proper dumping position, and mechanism for retaining said device in dumping position against accidental displacement, substantially as described. 5th. In a garbage or ash vehicle, the combination with the receiving body, and the running gear supporting the same, of a device carried by the vehicle and adapted to be engaged with the receptacle to be emptied as the latter stands upon the ground, mechanism operated by the rotating parts of the vehicle to automatically lift the receptacle holding device into dumping position on top of the vehicle as the latter moves forward, means for automatically disengaging said receptacle holding device from the lifting mechanism as the former reaches the proper dumping position, and means for manually retaining the lifting mechanism disengaged to bring the receptacle lifting device down again to the receiving position, substantially as described. 6th. In a garbage or ash vehicle, the combination with a normally closed receiving body, and the running gear supporting the same, of a device carried by the vehicle and adapted to be engaged with the receptacle to be emptied as the latter stands upon the ground, mechanism operated by the rotating parts of the vehicle to automaticaliy lift the receptacle from the ground into dumping position on top of the vehicle as the latter moves forward, and means for automatically uncovering a receiving aperture in the top of the vehicle body as the receptacle comes into dumping position in respect thereto, substantially as described. 7th. In a garbage or ash vehicle, the combination with a normally closed receiving body, means for automatically lifting a receptacle to be emptied into dumping position on top of the vehicle, and means for automatically uncovering an aperture in the vehicle top as the receptacle arrives in dumping position and for closing the same as said receptacle leaves the dumping position, substantially as described. 8th. In a garbage or ash vehicle, the combination with a receiving body, and the running gear supporting the same, of a yoke rotatably mounted upon the axle of the vehicle at each side and extending transversely across the body of the vehicle, a chute centrally carried by said yoke and adapted to be detachably engaged with a receptacle to be emptied as the latter stands upon the ground, and mechanism connecting said yoke with the rotating parts of the vehicle whereby said yoke and receptacle may be automatically raised to dumping position on top of the vehicle as the latter moves forward, substantially as described. 9th. In a garbage or ash vehicle, the combination with a receiving body, and the running gear supporting the same, of a yoke rotatably mounted upon the axle of the vehicle at each side and extending transversely across the body of the vehicle, a rearwardly inclined chute centrally carried by said yoke and adapted to be detachably engaged with a receptacle to be emptied as the latter stands upon the ground, and mechanism connecting the said yoke with the rotating parts of the vehicle whereby said yoke and receptacle may be automatically raised to dumping position on top of the vehicle as the latter moves forward, substantially as described. 10th. In a garbage or ash vehicle, the combination with a receiving body, and the running gear supporting the same, of a yoke rotatably mounted upon the axle thereof at each side and extending transversely across the body of the vehicle and adapted to be detachably engaged with a receptacle to be emptied as the latter stands upon the ground, mechanism connecting said yoke with the rotating parts of the vehicle whereby said yoke and receptacle may be automatically raised to dumping position on top of the vehicle as the latter moves forward, and means for automatically disengaging said yoke from said lifting mechanism as the former reaches the proper dumping position, substantially as described. 11th. In a garbage or ash vehicle, the combination with a receiving body, the running gear supporting the same, a yoke rotatably mounted upon the axle thereof at each side and extending transversely across the body of the vehicle, and a chute formed centrally on said yoke and adapted to be detachably engaged with a garbage can as the latter stands upon the ground, of ratchet-wheels mounted on the axle and rotated by the movement of the vehicle, pawls mounted on the yokes and adapted to normally engage the teeth of said ratchet-wheels, a transverse rock-shaft connecting said pawls, dogs mounted on said shaft, and projections on the sides of the vehicle against which said dogs contact as the yoke is rotated, thus rocking said shaft and disengaging the pawls from the ratchet-wheels, substantially as described. 12th. In a garbage or ash vehicle, the combination with a receiving body, the running gear supporting the same, a yoke rotatably mounted upon the axle thereof at each side and extending transversely across the body of the vehicle, and a chute formed centrally on said yoke and adapted to be detachably engaged with a garbage can as the latter stands upon the ground, of ratchet-wheels mounted on the axle and rotated by the movement of the vehicle, pawls mounted on the yoke and adapted to normally engage the teeth of said ratchet-wheels, a transverse rock-shaft connecting said pawls, dogs mounted on said shaft, projections on the sides of the vehicle against which said dogs contact as the yoke is rotated, thus rocking said shaft and disengaging the pawls from the ratchet-wheels, stops on the sides of the vehicle to limit the forward movement of the yoke, and spring arms to retain said yokes in position against said stops, substantially as described. 13th. In a garbage or ash vehicle, the combination with a receiving body, the running gear supporting the same, a yoke rotatably mounted upon the axle thereof at each side and extending transversely across the body of the vehicle, and a chute formed centrally on said yoke and adapted to be detachably engaged with a garbage can as the latter stands upon the ground, of ratchet-wheels mounted on the axle and rotated by the movement of the vehicle, pawls mounted on the yoke and adapted to normally engage the teeth of said ratchet-wheels, a transverse rock-shaft connecting said pawls, dogs mounted on said shaft, a bell-crank lever mounted on the yoke and having one of its arms engaged with one of said dogs, a hand lever pivoted to the outer end of the yoke, and a pull rod connecting said lever with the other arm of the bell-crank lever whereby the rock-shaft may be rocked manually and the pawls disengaged from the ratchet-wheels, substantially as described. 14th. In a garbage or ash vehicle, the combination with the receiving body having an aperture in the top thereof, and a sliding lid normally closing the same, of a can lifting yoke pivoted on the vehicle axle and adapted in its forward movement to abut against said lid and slide the same forward to uncover the aperture, and means on the yoke for detachably engaging with said lid to draw the same to its closed position again as the yoke returns to its lowermost position, substantially as described. 15th. In a garbage or ash vehicle, the combination with the receiving body having an aperture in the top thereof, and a sliding lid normally closing the same, of a can lifting yoke pivoted on the vehicle axle and adapted in its forward movement to abut against said lid and slide the same forward to uncover the aperture, a catch pivoted intermediate its length in the front of the yoke and adapted to engage with the lid as the two come together, and a projection on the vehicle top for tripping said catch to disengage the same from the lid when the latter reaches its closed position, substantially as described.

**No. 55,746. Hack Saw.** (*Scie à couper les chevilles.*)




George T. Culver, New Haven, Connecticut, U.S.A., 28th April, 1897; 6 years. (Filed 7th April, 1897.)

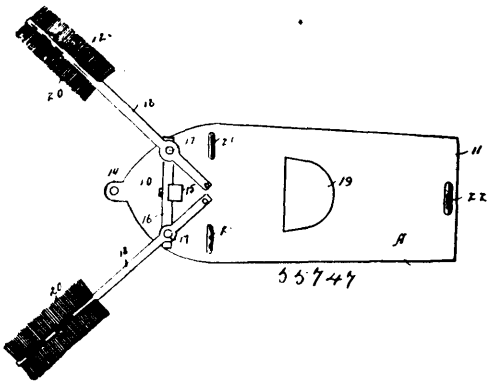
*Claim.*—1st. In a hack-saw, the combination with a frame having at its front end the recesses and shoulders *b* and *c* and the lug *e* as described, of a substantially-U-shaped clamping-hook having one end thereof passing loosely through a hole in said frame near said front end, a blade having at its front end a hole to receive the opposite leg of said hook, and means for securing the rear end of said blade to said frame and for producing tension thereon longitudinally, substantially as described. 2nd. In a hack-saw, the combination with the frame A provided with the sacket-block F at its rear end and having the recesses and shoulders *b* and *c* and the lug *e* at its front end as described, of the clamping-hook E shaped as described, and provided with notches or grooves *a*, *a*$^1$, blade B, eyebolt D, and handle C, arranged and operating substantially as set forth.

**No. 55,747. Potato Insect Destroying Machine.**
(*Machine à détruire les mouches à patates.*)

Washington Keeder, Lake City, Michigan, U.S.A., 28th April, 1897; 6 years. (Filed 7th April, 1897.)

*Claim.*—1st. In a machine for exterminating bugs, a body adapted to be drawn along the ground, oar-like arms pivotally supported on the said body, brushes secured to the outer ends of the said arms, and keepers adapted for engagement with the handle ends of the oar-like arms when said arms are not being manipulated, as and for the purpose specified. 2nd. In a machine for exterminating bugs, the same consisting of a body pointed at the front and provided with a keel extending from the front, being deepest at that point and diminishing at the rear, a mast secured upon the body near its forward end, a cross-bar attached to the mast, oar-like arms pivoted on said cross-bar, brushes carried by the outer ends of the said arms, and keepers adapted for engagement with the handle

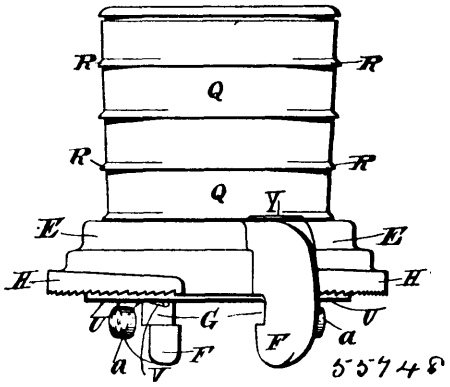
ends of the arms, as and for the purpose specified. 3rd. A device for destroying bugs, comprising a body adapted to be drawn along




between the hills, arms pivoted at their central portions to the said body with their ends arranged to project beyond the sides of the same in position to engage the vines and having their inner ends adjacent to each other and in position to be operated by the hands of the attendant, and brushes on the projecting ends of said arms, substantially as set forth.

**No. 55,748. Fire Hose Coupling, etc.**

(*Joint de boyaux, etc.*)

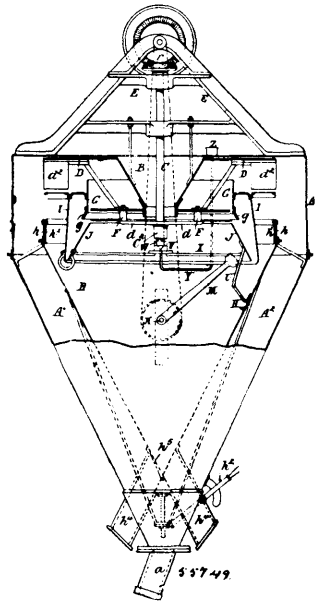



Alfred E. Stove, London, England, 28th April, 1897; 6 years. (Filed 7th April, 1897.)

*Claim.*—1st. Constructing interchangeable half couplings for flexible hose in separate parts and then locating them by any suitable means as hereinbefore described and as represented in the drawings. 2nd. Constructing interchangeable half couplings for flexible hose with a cone neck, and applying thereon a cone sleeve grounded to fit as described and shown at figures 3 and 4 of the annexed drawings. 3rd. Constructing interchangeable half couplings for flexible hose with parallel exterior and parallel interior sleeve ground to fit, the ends of both neck and sleeve being cone shaped and ground to fit to prevent escape of water. 4th. Providing the lugs of interchangeable half couplings used with flexible hose with a spring catch and a serrated face on the inclined rib, said catch being controlled for release by a transverse bolt in the lug, as and for the purposes explained.

**No. 55,749. Separator for Granular Material.**

(*Séparateur pour matières granulées.*)




J. U. Askham, Yorkshire, York, England, 28th April, 1897; 6 years. (Filed 5th November, 1896.)

*Claim.*—1st. In apparatus for separating substances of different sizes or specific gravities a fan in proximity to contracted spaces and inclosed in a casing so that the fan creates air circulation within the casing for separating and separately depositing the grades of material in combination with a striker or strikers caused to intermittently strike the apparatus so as to impart to it a vibratory or tremulous motion to prevent the particles from adhering to the internal surfaces of the apparatus, substantially as hereinbefore described. 2nd. In apparatus for separating substances of different sizes or specific gravities, the combination of the inclosing casing with central feeding hopper, a rotating fan within the casing and suitable driving gear therefor, a rotating disc beneath the hopper outlet, inner and outer hoods or guards encircling said hopper outlet, a skirt or deflector adjacent to said guards, inner and outer chutes with suitable outlets and with or without the telescopic casing *h*, all substantially as shown and described. 3rd. In apparatus for separating substances of different sizes or specific gravities a striker or strikers mounted on a spindle provided with arms and a moving band having tappets to engage said arms whereby the striker is caused to intermittently strike the apparatus so as to impart to it a vibratory or tremulous motion to prevent the particles from adhering to the internal surface of the apparatus, substantially as hereinbefore described.

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

4684. JAMES HENRY MITCHELL, 2nd term of Patent No. 38,651, from the 5th April, 1897. Diaphragm Die for Plastic Moulding, 1st April, 1895.

4685. JAMES T. SANDS, 2nd term of No. 45,974, from the 8th May, 1900. Device for Bleaching Smoke, 1st April, 1897.

4686. JACOB NEFF BARR, 2nd term of No. 38,633, from the 4th April, 1897. Machine for Trueing Circular Bodies, 2nd April, 1897.

4687. JOHN A. SYMMES, 2nd term of No. 26,400, from the 5th April, 1897. Hay and Grain Cock Weather Shield, 3rd April, 1897.

4688. HUGH JOHNSTON (assignee), 3rd term of No. 26,414, from the 6th April, 1897. Pump, 5th April, 1897.

4689. GEORGE D. HAWKINS, 2nd term of No. 38,800, from the 25th April, 1897. Dress Stay, 5th April, 1897.

4690. CHARLES A. GOULD, 2nd term of No. 38,769, from the 20th April, 1897. Car Coupler, 7th April, 1897.

4691. MICHAEL JOSEPH DINNEEN AND JOHN HENRY HAGERTY, 2nd term of No. 38,721, from the 12th April, 1897. Circular Knitting Machine, 7th April, 1897.

4692. MARY ELIZABETH LLOYD (administratrix), 2nd term of No. 38,730, from the 12th April, 1897. Water Heater, 8th April, 1897.

4693. CHARLES RUEA NELSON, 3rd term of No. 26,420, from the 9th April, 1897. Bead Fastener for Window Frames, 9th April, 1897.

4694. ANNE GURLEY CHADBOURNE, 2nd term of No. 38,688, from the 9th April, 1897. Water Closet, 9th April, 1896.

4695. JOHN A. BRILL, 2nd term of No. 38,873, from the 7th May, 1897. Pivotal Car Truck, 10th April, 1897.

4696. JOHN A. BRILL, 2nd term of No. 38,876, from the 9th May, 1897. Railway Car, 10th April, 1897.

4697. JOHN A. BRILL, 2nd term of No. 38,878, from the 9th May, 1897. Street Car, 10th April, 1897.

4698. MARK ANTHONY, 2nd term of No. 38,940, from the 13th May, 1897. Faucet for Barrels, 14th April, 1897.

4699. JAMES FREDERICK GILLILAND, 2nd term of No. 38,755, from the 20th April, 1897. Box Making Machines, 17th April, 1897.

4700. HERBERT ACKROYD STUART, 2nd term of No. 38,933, from the 12th day May, 1897. Gas Engine, 17th April, 1897.

4701. HERBERT ACKROYD STUART, 2nd term of No. 38,934, from the 12th May, 1897. Gas Engine, 17th April, 1897.

4702. DAVID RUDD, 2nd term of No. 38,950, from the 14th May, 1897. Cutter Bar, 17th April, 1897.

4703. THE ELECTRIC HEAT ALARM COMPANY (assignee), 2nd term of No. 38,777, from the 21st April, 1897. Electric Heat Alarm, 20th April, 1897.

4704. JOHN J. R. HUMES, 3rd term of No. 29,278, from the 2nd June, 1898. Hydrocarbon Engine, 20th April, 1897.

4705. JOHN J. R. HUMES, 3rd term of No. 30,127, from the 5th November, 1898. Hydrocarboretted Air Engine, 20th April, 1897.

4706. WILLIAM DENT PRIESTMAN AND SAMUEL PRIESTMAN, 3rd term of No. 31,599, from the 17th June, 1897. Vapour Engine, 20th April, 1897.

4707. ISABELLA F. HEENEY, 2nd term of No. 38,787, from the 22nd April, 1897. Inscription and Motto Plates, 20th April, 1897.

4708. WILLIAM RONALD GRAVELY, 2nd term of No. 38,889, from the 9th May, 1897. Thread Separator for Ring Spinning Frames, 21st April, 1897.

4709. JOHN WOODWARD, 3rd term of No. 26,515, from the 23rd April, 1897. Pump, 21st April, 1897.

4710. HOWELL E. EVANS, 2nd term of No. 38,774, from the 21st April, 1897. Bridle Bit, 21st April, 1897.

4711. CHARLES BOECKH, 2nd term of No. 38,819, from the 27th April, 1897. Bridle for Paint Brushes, 23rd April, 1897.

4722. JOHN H. KING, FAYETTE B. DURANT, AND CHARLES J. WILLIAMS, 2nd term of No. 38,835, from the 2nd May, 1897. Trap for Waste Water Pipes, 26th April, 1897.

4713. FLEISHMANN & COMPANY (assignee), 2nd term of No. 38,838, from the 2nd May, 1897. Method of and Apparatus for Separating Yeast, 26th April, 1897.

4714. FLEISCHMANN & COMPANY (assignee), 2nd term of No. 38,900, from the 9th May, 1897. Method of and Apparatus for Producing Clear Wort, 26th April, 1897.

4715. FRANK HARVEY AND JOHN KANE, 2nd term of No. 38,820, from the 27th April, 1897. Car Coupler, 27th April, 1897.

4716. JAMES THOMPSON WILSON, 2nd term of No. 38,821, from the 28th April, 1897. Electric Motor, 28th April, 1897.

4717. JAMES GRANT KERR, 2nd term of No. 38,829, from the 30th April, 1897. Water Motor, 28th April, 1897.

4718. THE TORONTO RADIATOR MANUFACTURING COMPANY (assignee), 2nd term of No. 38,832, from the 2nd May, 1897. Moulding Machine, 28th April, 1897.

4719. THE CONSOLIDATED CAR HEATING CO., (assignee), 3rd term of No. 26,601, from the 4th May, 1897. Hose Coupling, 29th April, 1897.

4720. THE CONSOLIDATED CAR HEATING CO., (assignee), 3rd term of No. 26,696, from the 11th May, 1897. Car Heating Apparatus, 29th April, 1897.

4721. THE CONSOLIDATED CAR HEATING CO., (assignee), 3rd term of No. 26,697, from the 11th May, 1897. Car Heating Apparatus, 29th April, 1897.

# TRADE-MARKS

## Registered during the month of April, 1897, at the Department of Agriculture—Copyright and Trade-Mark Branch.

5973. JAMES BUCHANAN, trading as DONALD MACPHERSON AND COMPANY, 20 Bucklersbury, London, England, also Glasgow and Leith, Scotland. Scotch Whiskey, 2nd April, 1897.

5974. JAMES HENRY MACKENZIE AND SIMON SNYDER, Toronto and Waterloo, respectively, Ont. Chewing Gum, 5th April, 1897.

5975. THE COWAN COMPANY, LIMITED, Toronto, Ont. Cocoas and Chocolates, 6th April, 1897.

5976. ROBERT BRYSON OSBORNE, East Orange, New Jersey, U.S.A. Business device for a Mercantile Reporting Agency, 6th April, 1897.

5977.<br>5978.<br>5979.<br>5980.<br>5981.<br>5982. KELLY AXE MANUFACTURING COMPANY, Alexandria, Indiana, U.S.A. Axes, 6th April, 1897.

5983. BAGLEY AND WRIGHT, Oldham, Lancashire, England. Sewing and Crochet Cotton and threads of all kinds, 7th April, 1897.

5984. HUTCHINSON AND PETERSON, Toronto, Ont. Flavoring Extracts for Beverages, 7th April, 1897.

5985. WILLIAM REED-LEWIS, London, England. A Substitute for Lithographic Stone, 8th April, 1897.

5986. THE GOLD MEDAL FURNITURE MANUFACTURING COMPANY, Toronto, Ont. Bed bottoms, woven wire bed bottoms, woven wire mattresses and spring mattresses, 8th April, 1897.

5987. ROBERT A. McCREADY, Toronto, Ont. Bicycles and other foot propelled vehicles, 8th April, 1897.

5988. L. C. BLISS AND COMPANY, Boston, Massachusetts, U.S.A. Boots and Shoes and accessories thereof, 8th April, 1897.

5989.<br>5990. MAGNOLIA METAL COMPANY, New York, N.Y., U.S.A. Anti-friction Metals and Alloys and Journal Bearings, 8th April, 1897.

5991. S. DAVIS AND SONS, Montreal, Que. Cigars, Tobaccos and Cigarettes, 9th April, 1897.

5992. THE GEO. E. TUCKETT AND SON COMPANY, LIMITED, Hamilton, Ont. Tobacco, 14th April, 1897.

5993. PILGRIM BROTHERS AND COMPANY, Hamilton, Ont. Mineral and Aerated Waters, 15th April, 1897.

5994. ELIZA McLEAN, Hamilton, Ont. McLean Stamp Book, 15th April, 1897.

5995. WILLIAM JOSEPH PENDRAY, Victoria, B.C. Soap, 15th April, 1897.

5996. H. SHOREY AND COMPANY, Montreal, Que. Waterproof material, waterproofing solutions, and articles treated thereby, and textile fabrics such as awnings, tents and sails, 15th April, 1897.

5997. CYONA COMPANY LIMITED, London, England. Chemical Substances, Fluids, Preparations or Compounds, 15th April, 1897.

5998. THE COLLINGWOOD MEAT COMPANY, LIMITED, Collingwood, Ont. Lard, 17th April, 1897.

5999. THE DOMINION BREWERY COMPANY, LIMITED, Toronto, Ont. Ale, 17th April, 1897.

6000. GEORGE DOUGHTY, Waterford, Ont. Salve, 20th April, 1897.

6001. GEORGE VICKERS, London, England. Inks, 20th April, 1897.

6002.<br>6003. THE CROWN CORK AND SEAL COMPANY, Baltimore, Maryland, U.S.A. Bottle Stoppers, 22nd April, 1897.

6004. CHRISTY AND COMPANY, LIMITED, London, England. Hats, Caps and Helmets, 26th April, 1897.

6005. ROBERT McNISH AND COMPANY, Glasgow, Scotland. Scotch Whiskey, 26th April, 1897.

6006. ANTIKAMNIA CHEMICAL COMPANY, St. Louis, Missouri, U.S.A. A Medical Preparation for Human Use, 26th April, 1897.

6007. HODGSON BROTHERS, Liverpool, England, and ABRAHAM HODGSON AND SONS, New York, N.Y., U.S.A. Farm produce, such as Butter, Cheese and Bacon, 27th April, 1897.

6008. WALLACE AND COMPANY, New York, N.Y., U.S.A. Jujubes or Lozenges, 27th April, 1897.

6009. J. AND P. COATS, LIMITED, Paisley, Scotland. Sewing and Crochet Cotton and Threads of all kinds, 27th April, 1897.

6010. 6011. 6012. 6013. 6014. 6015. 6016. THE E. B. EDDY COMPANY, LIMITED, Hull, Que. Matches, 27th April, 1897.

6017. 6018. 6019. 6020. 6021. 6022. THE GUTTA PERCHA AND RUBBER MANUFACTURING COMPANY OF TORONTO, LIMITED, Toronto, Ont. Certain named articles in which India Rubber or Gutta Percha is a component part, 28th April, 1897.

6023. THE DREVET MANUFACTURING COMPANY, New York, N.Y., U.S.A. Remedy for the Destruction of Bacteria, Microbes and Germs in the Human System, 28th April, 1897.

6024. THE DREVET MANUFACTURING COMPANY, New York, N.Y., U.S.A. Remedy for Dyspepsia, Catarrh of the Stomach, Ulcers and other Microbian Diseases, 28th April, 1897.

6025. THE DREVET MANUFACTURING COMPANY, New York, N.Y., U.S.A. Peroxide of Hydrogen, 28th April, 1897.

6026. HODGSON BROTHERS, Liverpool, England, and ABRAHAM HODGSON AND SONS, New York, N.Y., U.S.A. Butter, 29th April, 1897.

6027. THE CANADA MILK CONDENSING COMPANY, LIMITED, Antigonish, N.S. Condensed Milk, 29th April, 1897.

6028. 6029. L. CHAPUT, FILS & COMPAGNIE, Montreal, Que. Japan Tea, 30th April, 1897.

6030. FRANÇOIS THÉRIEN ET ÉLI HARVEY, Montréal, Qué. Peinture, 30 avril 1897.

6031. BRIGHT'S CHEMICAL COMPANY, Little Falls, N.Y., U.S.A. Remedies for diseases of the blood, liver and kidneys, 30th April, 1897.

# COPYRIGHTS

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9113. MEMORY LESSONS FOR CHRISTIAN WORKERS. Published in "The Faithful Witness and Notes for Bible Study," Toronto, Ont. (Temporary Copyright.) Arbuthnot Bros. & Co., Toronto, Ont., 1st April, 1897.

9114. AUXILIARY MILK EXTRACTORS. (Pamphlet.) J. P. Armstrong, Township of Clarendon, Que., 1st April, 1897.

9115. THE WESTMINSTER. (A Paper for the Home. Vol II. No. 4. April, 1897.) The Westminster Co., Toronto, Ont., 2nd April, 1897.

9116. WHEN YOU BID YOUR MOTHER GOOD-BYE. Words by John F. Palmer. Music by Al. J. Patton. Whaley, Royce & Co., Toronto, Ont., 2nd April, 1897.

9117. HUGHES' SAVINGS BANK INTEREST. (3 p. c.) Chas. M. C. Hughes, Montreal, Que., 2nd April, 1897.

9118. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 3RD APRIL, 1897. The Mail Printing Co., Toronto, Ont., 3rd April, 1897.

9119. MRS. KEITH HAMILTON, M.B. By Annie S. Swan. Wm. Briggs (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 3rd April, 1897.

9120. POCKET MANUAL OF MINING. By J. H. Chewett and C. M. Canniff. The Copp, Clark Co. (Ltd.), Toronto, Ont., 3rd April, 1897.

9121. MASSEY'S MAGAZINE. (April, 1897.) The Massey Press, Toronto, Ont., 3rd April, 1897.

9122. THE DIRECTORATE MARCH. By John Philip Sousa. The John Church Co., Cincinnati, Ohio, U.S.A., 3rd April, 1897.

9123. KING COTTON MARCH. By John Philip Sousa. The John Church Co., Cincinnati, Ohio, U.S.A., 3rd April, 1897.

9124. EL CAPITAN MARCH. By John Philip Sousa. The John Church Co., Cincinnati, Ohio, U.S.A., 3rd April, 1897.

9125. PAUL: A HERALD OF THE CROSS. By Florence Morse Kingsley. William Briggs (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 5th April, 1897.

9126. THE PRACTICAL MENTAL ARITHMETIC. By C. E. Lund, Sackville, N.B., 5th April, 1897.

9127. MINIATURE BUST OF HER MAJESTY THE QUEEN, entitled JUBILEE. James Humphrey, Toronto, Ont., 5th April, 1897.

9128. SKETCH MAP OF THE SLOCAN LAKE DISTRICT. (Showing all Claims Located up to date, West Kootenay, B.C.) Compiled by Wm. Thomlinson. Thomson Stationery Co. (Limited), Vancouver, B.C., 6th April, 1897.

9129. PHOTOGRAPHIE DE SON EXCELLENCE MGR. MERRY DEL VAL. (A.) M. A. Montminy & Cie., Québec, Qué., 7 avril 1897.

9130. PHOTOGRAPHIE DE SON EXCELLENCE MGR. MERRY DEL VAL. (B.) M. A. Montminy & Cie., Québec, Qué., 7 avril 1897.

9131. PHOTOGRAPHIE DE SON EXCELLENCE MGR. MERRY DEL VAL. (C.) M. A. Montminy & Cie., Québec, Qué., 7 avril 1897.

9132. HOW TO READ THE BIBLE THROUGH IN A YEAR. Wm. A. Rodwell, Toronto, Ont., 7th April, 1897.

9133. A CHRONOLOGICAL CHART OF THE CHRISTIAN ERA. By Geo. W. McCready, M.B.C.A., Moncton, N.B., 7th April, 1897.

9134. THE DIAMOND JUBILEE RULE BRITANNIA. (Song.) James D. Ross, Truro, N.S., 7th April, 1897.

9135. THE S. CARSLEY COMPANY (LIMITED), SPRING AND SUMMER PRICE LIST, No. 10, 1897. The S. Carsley Co. (Ltd.), Montreal, Que., 8th April, 1897.

9136. PHOTOGRAPHIE DE SON EXCELLENCE MGR. MERRY DEL VAL. (D.) M. A. Montminy & Cie., Québec, Qué., 8 avril 1897.

9137. THE ROYAL HOUSES OF GREAT BRITAIN, A.D. 494, A.D. 1897. (Notes on a Genealogical Chart issued in Commemoration of the Sixtieth Year of Her Majesty's Reign.) By J. K. Bathurst. The Comparative Synoptical Chart Co. (Ltd.), Victoria, B.C., 9th April, 1897.

9138. OH, PROMISE ME ! (Song.) By Violet Roberts. Whaley, Royce & Co., Toronto, Ont., 9th April, 1897.

9139. UNITED EMPIRE. (March.) Arranged by A. W. Hughes. Whaley, Royce & Co., Toronto, Ont., 9th April, 1897.

9140. DON'T YOU GIVE US AWAY. Words by David Battle. Music by J. Norris Hillman. David Battle, Thorold, Ont., 9th April, 1897.

9141. THE SAFEGUARD BILL BOOK. Thomas Martin, Toronto, Ont., 9th April, 1897.

9142. THE SAFEGUARD CUSTOMERS AND PURCHASE LEDGER. Thomas Martin, Toronto, Ont., 9th April, 1897.

9143. THE SAFEGUARD GENERAL LEDGER AND TRIAL BALANCE. Thomas Martin, Toronto, Ont., 9th April, 1897.

9144. PHOTOGRAPH OF MGR. MERRY DEL VAL, PAPAL ABLEGATE. G. C. Arless & Co., Montreal, Que., 9th April, 1897.

9145. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 10TH APRIL, 1897. The Mail Printing Co., Toronto, Ont., 10th April, 1897.

9146. AT MINAS BASIN AND OTHER POEMS. By Theodore H. Rand, D.C.L., Toronto, Ont., 10th April, 1897.

9147. THE DELINEATOR. (A Journal of Fashion, Culture and Fine Arts.) (May, 1897.) The Butterick Publishing Co. (Ltd.), New York, N.Y., U.S.A., 12th April, 1897.

9148. THE GLASS OF FASHION UP TO DATE. (May, 1897.) The Butterick Publishing Co. (Ltd.), New York, N.Y., U.S.A., 12th April, 1897.

9149. GAME OF CANADIAN HISTORY. (Cards.) Robert Fredk. Wilton, Toronto, Ont., 12th April, 1897.

9150. LOVELL'S IMPROVED TIME-BOOK. Robert James Lovell, Toronto, Ont., 12th April, 1897.

9151. THE VICTORIAN ERA: THE QUEEN'S PARLIAMENT, 1837-1897. By Justin McCarthy, M.P. Published in "The Chronicle," Halifax, N.S., "The Globe," Toronto, Ont., "The Citizen," Ottawa, Ont., and "The Free Press," Winnipeg, Man. (Temporary Copyright.) National Press Agency (Ltd.), Whitefriars Street, London, England, 12th April, 1897.

9152. THE VICTORIAN ERA: WOMEN IN THE VICTORIAN ERA. By Lady Henry Somerset. Published in "The Chronicle," Halifax, N.S., "The Globe," Toronto, Ont., "The Citizen," Ottawa, Ont., and "The Free Press," Winnipeg, Man. (Temporary Copyright.) National Press Agency (Ltd.), Whitefriars Street, London, England, 12th April, 1897.

9153. THE VICTORIAN ERA: LITERATURE OF THE QUEEN'S REIGN. By Mr. Richard Le Gallienne. Published in "The Chronicle," Halifax, N.S., "The Globe," Toronto, Ont., "The Citizen," Ottawa, Ont., and "The Free Press," Winnipeg, Man. (Temporary Copyright.) National Press Agency (Ltd.), Whitefriars Street, London, England, 12th April, 1897.

9154. THE VICTORIAN ERA: THE QUEEN'S ARMY. By Gen. Sir Evelyn Wood, V.C. Published in "The Chronicle," Halifax, N.S., "The Globe," Toronto, Ont., "The Citizen," Ottawa, Ont., and "The Free Press," Winnipeg, Man. (Temporary Copyright.) National Press Agency (Ltd.), Whitefriars Street, London, England, 12th April, 1897.

9155. THE VICTORIAN ERA: THE NEWSPAPER PRESS. By Sir Edward Russell. Published in "The Chronicle," Halifax, N.S., "The Globe," Toronto, Ont., "The Citizen," Ottawa, Ont., and "The Free Press," Winnipeg, Man. (Temporary Copyright.) National Press Agency (Ltd.), Whitefriars Street, London, England, 12th April, 1897.

9156. THE VICTORIAN ERA: SIXTY YEARS OF ASTRONOMICAL RESEARCH. By Sir Robert S. Ball, LL.D., F.R.S. Published in "The Chronicle," Halifax, N.S., "The Globe," Toronto, Ont., "The Citizen," Ottawa, Ont., and "The Free Press," Winnipeg, Man. (Temporary Copyright.) National Press Agency (Ltd.), Whitefriars Street, London, England, 12th April, 1897.

9157. THE VICTORIAN ERA: CHILD LIFE IN ENGLAND, 1837-1897. By Rev. Benjamin Waugh. Published in "The Chronicle," Halifax, N.S., "The Globe," Toronto, Ont., "The Citizen," Ottawa, Ont., and "The Free Press," Winnipeg, Man. (Temporary Copyright.) National Press Agency (Ltd.), Whitefriars Street, London, England, 12th April, 1897.

9158. THE VICTORIAN ERA: SIXTY YEARS' SPORTS AND PASTIMES. By The Rt. Hon. H. J. Gladstone, M.P. Published in "The Chronicle," Halifax, N.S., "The Globe," Toronto, Ont., "The Citizen," Ottawa, Ont., and "The Free Press," Winnipeg, Man. (Temporary Copyright.) National Press Agency (Ltd.), Whitefriars Street, London, England, 12th April, 1897.

9159. THE VICTORIAN ERA: THE QUEEN'S NAVY. By Mr. Archibald S. Hurd. Published in "The Chronicle," Halifax, N.S., "The Globe," Toronto, Ont., "The Citizen," Ottawa, Ont., and "The Free Press," Winnipeg, Man. (Temporary Copyright.) National Press Agency (Ltd.), Whitefriars Street, London, England, 12th April, 1897.

9160. THE VICTORIAN ERA: THE BRITISH EMPIRE. By H. O. Arnold-Forster, M.P. Published in "The Chronicle," Halifax, N.S., "The Globe," Toronto, Ont., "The Citizen," Ottawa, Ont., and "The Free Press," Winnipeg, Man. (Temporary Copyright.) National Press Agency (Ltd.), Whitefriars Street, London, England, 12th April, 1897.

9161. LIARS ALL! (Topical Song.) Words and Music by Jules Norman, Montreal, Que., 12th April, 1897.

9162. CHIP IN! (Motto Song.) Words and Music by Jules Norman, Montreal, Que., 12th April, 1897.

9163. TEACH THE LITTLE ONES A PRAYER. (Song and Refrain.) Words and Music by Jules Norman, Montreal, Que., 12th April, 1897.

9164. THE DIAMOND JUBILEE WALTZES. Composed by Jules Norman, Montreal, Que., 12th April, 1897.

9165. MY CANADIAN HOME. Words and Music by James C. Le Touzel. Geo. W. Thomson, Goderich, Ont., 13th April, 1897.

9166. EXERCISES IN COMPOSITION. (No. 4.) For Senior Classes. By S. E. Lang, B.A. The Copp, Clark Co. (Ltd.), Toronto, Ont., 13th April, 1897.

9167. W. B. BAYLEY AND COMPANY'S WEEKLY LIMIT CARD. (Business Card.) William B. Bayley, Toronto, Ont., 14th April, 1897.

9168. FOR HE SHALL GIVE HIS ANGELS CHARGE OVER THEE. (Sacred Aria for Baritone. 91st Psalm.) Music by T. C. Jeffers, Mus. Bac. Whaley, Royce & Co., Toronto, Ont., 15th April, 1897.

9169. MACPHERSON'S COMBINED CASH BOOK AND VOUCHER REGISTER. (As applicable to Public Libraries.) F. H. Macpherson, Windsor, Ont., 17th April, 1897.

9170. THE TRAMP ON PARADE MARCH. By J. P. Sousa. (Piano Arrangement.) Whaley, Royce & Co., Toronto, Ont., 17th April, 1897.

9171. GUARD OF HONOUR. (March and Two-Step for Piano.) By Paul Kruger. W. H. Billing, Toronto, Ont., 17th April, 1897.

9172. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 17TH APRIL, 1897. The Mail Printing Co., Toronto, Ont., 17th April, 1897.

9173. MORNING SONGS IN THE NIGHT. Poems by Walter A. Ratcliffe. Wm. Briggs (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 20th April, 1897.

9174. THE CABOT CELEBRATION: SEBASTIAN CABOT—HIS LIFE AND TIMES. Six Commemorative Articles by Herbert Russell. Published in "The Herald," Hamilton, Ont., "The Times," Victoria, B.C., "The Globe," Toronto, Ont., "The Citizen," Ottawa, Ont., and "The Chronicle," Halifax, N.S. (Temporary Copyright.) National Press Agency (Ltd.), Whitefriars Street, London, England, 20th April, 1897.

9175. THE BELL TELEPHONE COMPANY OF CANADA, LIMITED, LONDON EXCHANGE, SUBSCRIBERS' DIRECTORY, ONTARIO DEPARTMENT, APRIL, 1897. The Bell Telephone Company of Canada (Ltd.), Montreal, Quebec, 20th April, 1897.

9176. LOVE IN DREAMS. Words by Frank L. Stanton. Music by L. O. Vincent. Whaley, Royce & Co., Toronto, Ont., 21st April, 1897.

9177. WE ARE WAITING FOR YOU AT HOME. Words and Music by Chas. Graham. Whaley, Royce & Co., Toronto, Ont., 21st April, 1897.

9178. BILL BOOK. (Bills Receivable and Bills Payable.) E. D. Croden, London, Ont., 21st April, 1897.

9179. THE DIAMOND JUBILEE RULE BRITANNIA. Words by James D. Ross. Music by Dr. W. Karl E. Vincent. James D. Ross, Truro, N.S., 23rd April, 1897.

9180. THE PROVINCE MINING MAP OF BRITISH COLUMBIA. The Province Publishing Co. (Ltd.), Victoria, B.C., 23rd April, 1897.

9181. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 24TH APRIL, 1897. The Mail Printing Co., Toronto, Ont., 24th April, 1897.

9182. MAP OF THE CITY OF TORONTO. The Might Directory Company of Toronto (Ltd.), Toronto, Ont., 24th April, 1897.

9183. THE EASTERN LEAGUE OF PROFESSIONAL BASE BALL CLUBS SCHEDULE BOOK, 1897. Ed. Mack & Theodore W. Gregory, Toronto, Ont., 24th April, 1897.

9184. LA CONSTRUCTION DES NAVIRES À QUÉBEC ET SES ENVIRONS. GRÈVES ET NAUFRAGES. Par Narcisse Rosa, St-Roch de Québec, Qué., 24 avril 1897.

9185. PHOTOGRAPHIE DE SON EXCELLENCE MONSEIGNEUR MERRY DEL VAL. Laprés et Lavergne, Montréal, Qué., 26 avril 1897.

9186. GROUPE PHOTOGRAPHIQUE REPRÉSENTANT SON EXCELLENCE MONSEIGNEUR MERRY DEL VAL, AVEC MONSEIGNEUR JOSEPH MEDARD ÉMARD, ÉVÊQUE DE VALLEYFIELD, AINSI QUE PLUSIEURS PRÊTRES. Laprés et Lavergne, Montréal, Qué., 26 avril 1897.

9187. ALBANI CAPRICE POLKA. (For Piano and Violin.) By Max Bachmann, Montreal, Que., 26th April, 1897.

9188. THE BELL TELEPHONE COMPANY OF CANADA, LIMITED, NORTHERN QUEBEC DISTRICT, SUBSCRIBERS' DIRECTORY, MARCH, 1897. The Bell Telephone Company of Canada (Ltd.), Montreal, Que., 26th April, 1897.

9189. THE MONTREAL MASONIC DIRECTORY, 1897. William H. Whyte, Montreal, Que., 27th April, 1897.

9190. ATHLETIC LIFE. VOL. I. No. 1. JANUARY, 1895. C. Greville Harston, Toronto, Ont., 28th April, 1897.

9191. LIBERAL-CONSERVATIVE GRAND MARCH. By Max Bachmann, Montreal, Que., 29th April, 1897.

9192. TORONTO MUNICIPAL AND COUNTY BUILDINGS. (Chromo-lithograph intended for use in Connection with a Calendar.) The Toronto Radiator Manufacturing Company (Ltd.), Toronto, Ont., 29th April, 1897.

9193. THE MITRE. VOL. IV. No. 6. APRIL, 1897. F. G. Vial, Lennoxville, Que., 29th April, 1897.

9194. REMINISCENCES OF CHARLES DURAND, OF TORONTO, BARRISTER. Charles Durand, Toronto, Ont., 29th April, 1897.

9195. TORONTO POCKET STREET GUIDE. ILLUSTRATED. Stewart Malcomson, Toronto, Ont., 30th April, 1897.

9196. THE BELLE OF THE SEASON. (March and Two-Step.) By J. W. Bratton. Whaley, Royce & Co., Toronto, Ont., 30th April, 1897.

9197. GAY CONEY ISLAND. (March and Two-Step.) By Maurice Levi. Whaley, Royce & Co., Toronto, Ont., 30th April, 1897.

9198. LA CARMELA. (Mexican Waltzes.) By Frank M. Witmark. Whaley, Royce & Co., Toronto, Ont., 30th April, 1897.