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# The Canadian Patent Office

## RECORD





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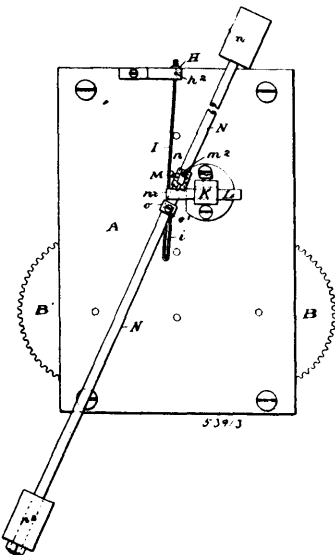
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### INVENTIONS PATENTED.

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**No. 53,913. Clock Movement. (Mouvement d'horlogerie.)**



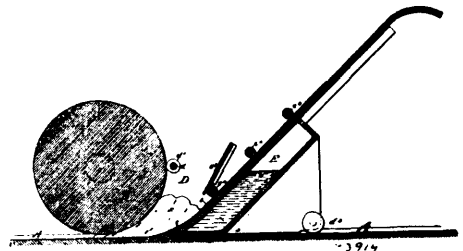
Charles Monroe Rhodes, Westfield, Massachusetts, U.S.A., 2nd November, 1896; 6 years. (Filed 5th September, 1896.)

*Claim.*—1st. The combination with the oscillating escapement and its actuating mechanism, of an arm fixed to swing with the rocking escapement and a normally vertical balance bar mounted near its centre of gravity to vibrate and engaged with the said swinging arm to receive an impulse in each direction of the vibratory movement, substantially as set forth. 2nd. In combination, an oscillating escapement, means for actuating it, a spindle on which the escapement is fixed, an arm fixed to the spindle and extending laterally therefrom, a normally vertical balance bar supported near its centre of gravity to vibrate, and a connection between the said arm and the vibrating bar at a point distant from its support, whereby the arm exerts pressure upon the balance bar alternately in opposite directions as the escapement

oscillates, substantially as set forth. 3rd. In combination, a normally vertical balance bar provided with suspension bearings upon its opposite sides, adjustable bearings for receiving the suspension bearings to support the balance bar, an escapement, means for oscillating it, an arm fixed to oscillate with the escapement and a pin fixed to the bar and engaged with the arm for transmitting the motion of the arm to the bar, substantially as set forth. 4th. The combination with the balance bar and its suspension, pointed bearings, of the supporting bearings one provided with a part spherical-shaped recess and the other with a part cylindrical-shaped recess for the reception of the suspension points, substantially as set forth.

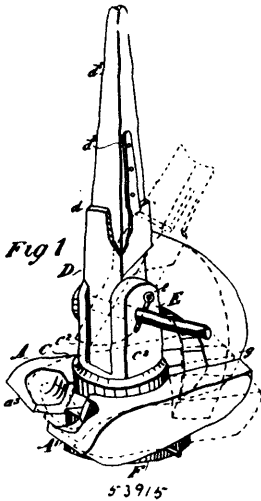
**No. 53,914. Machine for Making Wire Glass.**

(Machine pour faire du fil de verre.)



Frank Shuman, Tacony, Pennsylvania, U.S.A., 2nd November, 1896; 6 years. (Filed 9th September, 1896.)

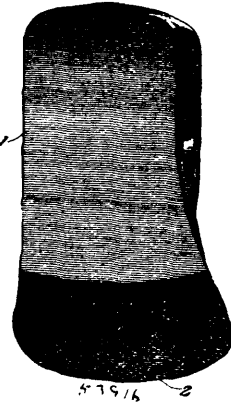
*Claim.*—1st. The combination in a machine for embedding wire in glass, of a table, a roller, a hopper having an inclined side forming a chute for the wire, the roller and hopper forming one element and the table another element, one element longitudinally movable in respect to the other, substantially as described. 2nd. The combination of a bed, a roller for rolling the glass upon the bed, a hopper in front of said roller, a chute having a rib or ribs or other projections for the wire, for traversing the roller and hopper over the bed, substantially as described. 3rd. The combination in a machine for rolling wire glass, a bed, a roller for rolling out the glass, a hopper formed of two sides and an inclined chute, ribs on said chute, with a water jacket back of the chute, substantially as described. 4th. The combination of a bed, a roller for rolling the glass upon the bed, an inclined chute in front of the roller forming with the roller a hopper, ribs on said chute, said chute terminating in advance of the pressing point of the roller so that the glass will enter the meshes of the wire by its own weight while the wire is on the chute, substantially as described. 5th. The combination of a bed, a roller for rolling the glass upon the bed, an inclined ribbed chute for the wire, side plates forming with the chute and roller a hopper for the glass, with guides for the wire as it passes over the ribbed chute, substantially as described. 6th. The combination of a bed, a roller, an inclined ribbed chute, a water jacket at the back of the chute, said chute being independent of the roll and pushed forward by it, substantially as described. 7th. The combination of a bed, a roller for rolling out the glass, a chute having ribs at its lower end to support the wire, a water jacket back of the ribbed portion of the chute, rollers for supporting the outer end of the chute, and anti-friction rollers against which the pressure roller bears to move the chute forward, substantially as described. 8th. The combination of a bed, a roller, a chute for the wire, with a hopper for the glass situated between the chute and the roller, substantially as described.

**No. 53,915. Spike Extractor.***(Machine pour extraire les chevilletes.)*

Artemus Welsh, Lawrence, Kansas, U.S.A., 2nd November, 1896; 6 years. (Filed 11th September, 1896.)

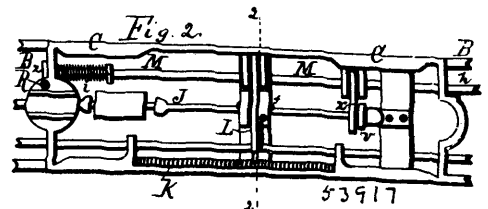
*Claim.*—1st. A spike extractor, composed of oscillating, spike-grasping jaws hinged together, a vertical fulcrum post, a pivot upon which the jaws oscillate, and an operating lever pivotally connected with the fulcrum post, and a rib having a downwardly-extended, oppositely-inclined portion or wedge at its lower extremity adapted to engage with the opposing sides of the rear ends of said jaws, as and for the purpose described. 2nd. A spike extractor, composed of oscillating, spike-grasping rocking jaws, said jaws having an intermediate hinged connection, a fulcrum post, a lever having its lower end pivotally connected with said fulcrum post, and a wedge at the extremity of the lower end of said lever, and a laterally-extended bar on the said fulcrum post, as and for the purpose described. 3rd. The combination with the opposing jaws having rocker-bearing surfaces, and provided with intermediate hinged portions of a fulcrum post having a pin which passes through said portions and forms a common pivot for both jaws, and a lever journaled on the fulcrum post having a downwardly and rearwardly-extended wedge-shaped portion adapted to enter between the rear ends of said jaws. 4th. In a spike extractor, composed of oscillating, spike-grasping jaws, an intermediate hinged connection consisting of an intermediate vertical pivot, a cap plate upon the upper end of said pivot and a nut upon the lower end, and journaled circular grooves and flanges upon the upper and lower surfaces of said jaws and the under surface of said cap and nut respectively. 5th. A spike extractor, composed of oscillating, spike-grasping jaws, and an intermediate pivot, a cap upon the upper end of said pivot and a nut on the lower end, a fulcrum post on said cap and an operating lever pivotally connected with said fulcrum post, a rib on said lever having a wedge at its extremity extending between the rear ends of said oscillating jaws, and jointed circular grooves and flanges on the upper and lower surfaces of the said jaws and the respective inner surfaces of said cap and nut, as and for the purpose described. 6th. In a spike extractor, the combination with the oscillating, spike-grasping jaws having grooves in the upper and lower surfaces of said jaws in the arc of a circle, an intermediate vertical pivot concentric with said grooves, a cap plate upon the upper end of said pivot and a nut on the lower end, and a fulcrum post on said cap, and an operating lever having its lower end extending to the upper surface of said cap and its rear edge inclined rearwardly and upwardly and a rib on the said lever extending in the direction of and between the rear ends of said jaws, having oppositely-inclined sides, annular flanges on the under side of said cap plate and the upper side of said nut extending within the grooves in the upper surfaces of the respective jaws and nut, as and for the purpose described. 7th. In a spike extractor, the combination with the oscillating, spike-grasping jaws, having downwardly and rearwardly-inclined bearing surfaces at their forward ends and an intermediate vertical pivot, a cap plate upon the upper end of said pivot, a fulcrum post upon said cap plate, an operating lever pivotally connected with said fulcrum post, a rib connected with the lower end of said lever and extending between the rear ends of said jaws, having circular grooves in the under surfaces and a bearing for said jaws connected with the lower end of said pivot, and an annular upwardly-extended flange on the upper side of said bearing extending within the circular grooves in the respective jaws, as and for the purpose described. 8th. In a spike extractor, the combination with the oscillating, spike-grasping jaws of an intermediate hinged connection and a spring for throwing the forward ends together, as

described. 9th. The combination in a spike extractor with the oscillating hinged jaws, of the vertical fulcrum post, and operating lever pivotally connected with the upper end of said fulcrum post, and having a downwardly extended rib and a wedge at the lower extremity of said rib, lugs on the outer side and rear end of one of said jaws and a spring plate connected at one end with the pivot on said fulcrum post, and the lower end extending between said lugs on said jaw, as and for the purpose described.

**No. 53,916. Edge Tool. (Outil tranchant.)**

Joseph R. Mann, Lewiston, Pennsylvania, U.S.A., 2nd November, 1896; 6 years. (Filed 12th September, 1896.)

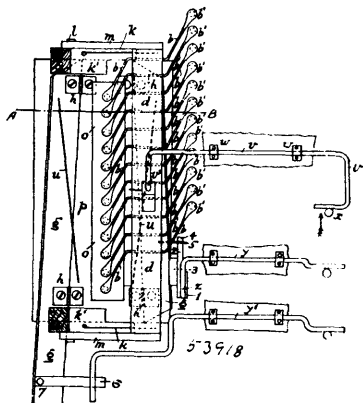
*Claim.*—1st. As a new article of manufacture, an edge tool composed of a plurality of metals or grades of metal, reduced to a smooth surface, and in which the true temper colour of each metal, having been developed by heat, is exhibited in regular uniformity upon the entire surface of each metal wherever exposed. 2nd. As a new article of manufacture, an edge tool composed of a plurality of metals, or grades of metal, reduced to a smooth surface, and in which true temper colour of each metal, having been developed by heat, is exhibited in regular uniformity upon the entire surface of each metal wherever exposed, the smooth and coloured article being provided with a coat of varnish.

**No. 53,917. Weighing Scale. (Balance à bascule.)**

Alpha Reeve Beal, East Bloomfield, New York, U.S.A., 2nd November, 1896; 6 years. (Filed 14th September, 1896.)

*Claim.*—1st. In a weighing scale, the combination of a bed plate B, a carriage C movable forward and back thereon, a scale beam E attached to the carriage and provided with a scale, a poise H through which the scale beam slides, a rack K whose teeth are wedge-shaped and spaced to accord with the divisions of the scale on the beam, a pawl L engaging with the rack, and means for operating the pawl, the whole so arranged, as described, that the engagement of the pawl with the teeth of the rack will move the carriage and adjust the divisions of the scale accurately with the poise, as specified. 2nd. In a weighing scale, the combination of a bed plate B, a carriage C movable forward and back thereon, a scale beam E provided with a scale attached to the carriage, a poise H through which the scale beam slides, a rack K whose teeth are wedge-shaped and spaced to accord with the divisions of the scale on the beam, a pawl L engaging with the rack, a cam and shaft for operating the pawl, a locking attachment connected with the poise, and means for operating the locking attachment, the whole so arranged, as described, that the engagement of the pawl with the rack will move the carriage and adjust the divisions of the scale accurately with the poise, and the poise will then be locked to the scale beam, as specified. 3rd. In a weighing scale, the combination of a movable carriage C, a scale beam E pivoted thereto so as to move with the carriage, a poise H through which the scale beam slides, a gib N connected with the poise, provided with slotted pins, slides with wedge-shaped ends entering the slots of the pins, a clamp operating on the slides and means for actuating the clamp, as specified.

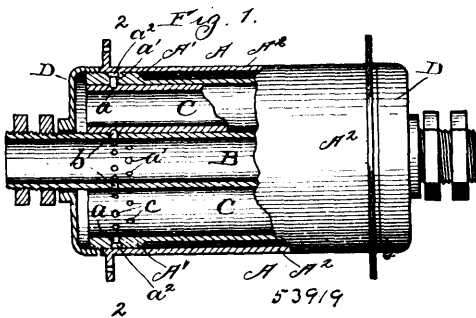
**No. 53,918. Reed Organ. (Orgue.)**



Samuel Jenkinson, 45 Hampstead Road, England, 2nd November, 1896; 6 years. (Filed 14th September, 1896.)

*Claim.*—1st. A reed organ provided with an extra set of reeds, in tone one octave higher than the highest octave represented on the key-board, and connected at will to the keys of the said octave, substantially as described. 2nd. A reed organ provided with an extra set of reeds, in tone one octave lower than the lowest octave represented on the key-board, and connected at will to the keys of the said octave, substantially as described. 3rd. A reed organ provided with an extra set of reeds, in tone one octave higher than the highest octave represented on the key-board, placed between the front of the reed board and the ordinary plunger rods under the front part of the keys and connected at will to the keys of the said octave, substantially as described.

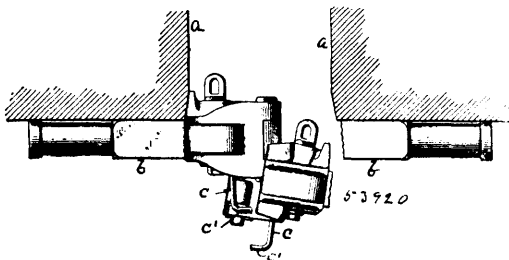
**No. 53,919. Roller Bearing. (Coussinet anti-frottant.)**



Lee Oliver Gilliland, Chicago, Illinois, U.S.A., 2nd November, 1896; 6 years. (Filed 7th October, 1896.)

*Claim.*—In a roller bearing, the combination of a box, journal and rollers having cylindrical bearing surfaces and a series of projections and depressions placed in separate rows and arranged upon a spiral or twist, said several projections and depressions being in coincident radial position upon the several bearing surfaces, as specified.

**No. 53,920. Car Coupler. (Attelage de chars.)**



Charles H. Taylor, South Orange, New Jersey, U.S.A., 2nd November, 1896; 6 years. (Filed 8th October, 1896.)

*Claim.*—1st. A car coupling of the vertical plane type, provided with the hook-shape catch *c* pivotally secured on its under side with its free end extending in a rearwardly movable position in line with the opening or space between the knuckle and draw-head, substantially as described and for the purpose set forth. 2nd. A car coupling of the vertical plane type, provided with a movable

hook or catch on its under side, extending into a position in line with the opening or space between the knuckle and draw-head, and means for movably holding said hook or catch in its normal position, substantially as described, and for the purpose set forth.

**No. 53,921. Heating Apparatus. (Appareil de chauffage.)**



William Henry Page, Basic City, Virginia, U.S.A., 2nd November, 1896; 6 years. (Filed 8th October, 1896.)

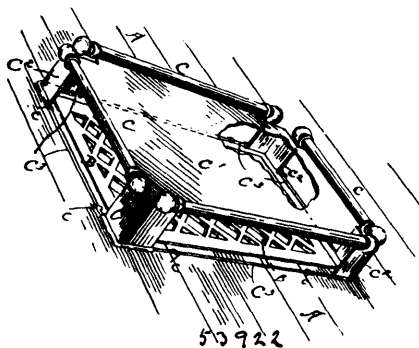
*Claim.*—1st. The combination with a drum, caps and means for uniting said drum to a stove pipe, of an interior partition wall defining an interior air chamber having spiral heating passages, and exterior separate spiral smoke flues arranged alternately with the air heating passages, substantially as specified. 2nd. The combination, with a drum and caps having central circular apertures, of an interior partition wall bent to define an interior air chamber having spiral air passages and exterior separate spiral smoke flues, communication through the apertures in the caps with the smoke flues and air chamber being established and prevented, respectively, and air tubes passing through the cap around the circular aperture, communicating respectively with the opposite ends of the air passages, substantially as specified. 3rd. The combination, with a drum and caps, of an interior partition wall, and exterior fluted envelope defining an interior air chamber having spiral air passages, exterior spiral air flues arranged adjacent to the spaces between the air passages, of the interior air chamber, intermediate separate spiral smoke flues co-adjacent to the exterior air flues, and arranged alternately with the air passages of the interior air chamber, substantially as specified. 4th. The combination, with a drum and projecting caps, of an envelope confined between the projecting perimeters of said caps, and having flutings projecting beyond the edges of the caps and opening into the atmosphere, substantially as specified. 5th. A heating drum provided with a plurality of separate longitudinal smoke flues defining a diametrical air flue, substantially as specified. 6th. A cylindrical heating drum having a plurality of longitudinal smoke flues defining a plurality of diametrical air flues extending the entire length of the smoke flue, substantially as specified. 7th. The combination, with a drum having a plurality of smoke flues defining a diametrical air flue, of an envelope surrounding said drum and communicating with the atmosphere and with the air flue through the drum, substantially as specified. 8th. The combination, with a drum having a plurality of longitudinal smoke flues defining a plurality of air flues extending entirely through the drum, and projecting caps from the opposite ends of the drum, and an envelope confined between the perimeters of said caps, and having flutings projecting beyond the edges of the caps opening into the atmosphere, and communicating with the air flues, through the drum, substantially as specified. 9th. In a heating drum, the combination with terminal collars, and brace rods secured at their opposite ends to their collars, and smoke flues composed of a plurality of plates secured to said brace rods, substantially as specified. 10th. In a heating drum, the combination with the collars, top and bottom frames and smoke flues, of means for clamping the smoke flues securely against the top and bottom frames to form a close joint, substantially as specified. 11th. A heating drum having a plurality of air flues provided with detachable exterior plates, substantially as specified.

**No. 53,922. Heat Deflector. (Déflecteur de chaleur.)**

Sarah P. Hanson, Fremont, Ohio, U.S.A., 2nd November, 1896; 6 years. (Filed 9th October, 1896.)

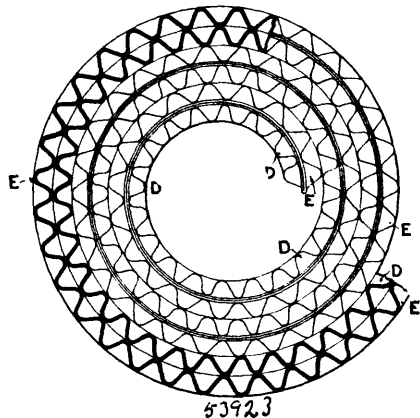
*Claim.*—The combination with a hot-air register, of a hood or casing *C*, consisting of a deflector-plate *C*<sup>1</sup>, legs or supports *C*<sup>2</sup>, stays or braces *C*<sup>3</sup>, connecting and bracing the lower ends of said legs or supports *C*<sup>2</sup>, and suitable openings between said legs or supports, and hooks *c* secured to the floor so that the hooked end there-

of can be turned over and upon the stays or braces C<sup>3</sup> to securely hold the said hood in position over the register, and adapted to be



turned away from and out of engagement with the said stays or braces C<sup>3</sup> for the purpose of detaching the said hood from the register, as and for the purpose described.

**No. 53,923. Steam Generator and Condenser.**  
(Générateur et condenseur à vapeur.)

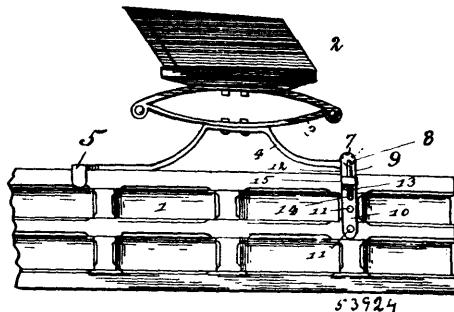


Fredrik Ljungstrom, Stockholm, Sweden, 2nd November, 1896; 6 years. (Filed 8th October, 1896.)

*Claim.*—1st. Constructing steam generators, heaters and condensers having a chamber or chambers with corrugated walls, the corrugations of one wall being in diverse direction to the corrugations of the opposed wall, and the apices being in contact at the crossing points of the corrugations, such chamber or chambers being bent or curved so that the exterior surfaces of the corrugations have their apices also in contact at the crossing points where the corrugations meet in diverse directions thereby forming similar alternate and adjacent chambers for the interchange of heat between the heating or cooling gases or medium occupying the same, substantially as set forth. 2nd. Constructing within an enclosing and surrounding casing, steam generators, heaters and condensers having a series of chambers with corrugated walls, the corrugations of one wall being in diverse direction to the corrugations of the opposed wall, and the apices being in contact at the crossing points of the corrugations, each chamber of the series having the necessary inlet and outlet passages and being arranged in contact with the next adjacent chamber at the crossing points of the respective corrugations thereby forming similar alternate and adjacent chambers for the interchange of heat between the heating or cooling gases or medium occupying the same, substantially as set forth. 3rd. Constructing steam generators, heaters or condensers with a chamber formed with diversely corrugated walls as hereinbefore described, and wherein the apices of the corrugations of one wall cross and touch at such points the apices of the corrugations of the other wall, such a chamber being coiled spirally so that the apices of the corrugations of the exterior surface are brought into contact at points and extend in diverse directions and having an enclosing or surrounding casing for such coil, and tubes for inlet and outlet or to or from the interior of the coiled chamber, as and for the purposes set forth. 4th. Constructing steam generators, heaters or condensers, with a chamber formed with diversely corrugated walls as hereinbefore described, and wherein the apices of the corrugations of one wall cross and touch at such points the apices of the corrugations of the other wall, such a chamber being folded in equal lengths and alternate directions so that the apices of the corrugations of the exterior surface of one fold come in contact at points and cross the apices of the corrugations of the exterior surface of the next fold

the chamber (between the walls) being composed of spaces intercommunicating throughout the several folds, while similar spaces are formed exterior of the chamber between the folds for the heating or cooling products, as and for the purposes set forth. 5th. Constructing steam generators, heaters or condensers, with a chamber formed with diversely corrugated walls as hereinbefore described, and wherein the apices of the corrugations of one wall cross and touch at such points the apices of the corrugations of the other wall, such a chamber being folded in equal lengths and alternate directions so that the apices of the corrugations of the exterior surface of one fold come in contact at points and cross the apices of the corrugations of the exterior surface of the next fold, the chamber (between the walls) being composed of spaces intercommunicating throughout the several folds while similar spaces are formed exterior of the chamber between the folds for the heating or cooling gases or medium, together with an enclosing or surrounding casing, and inlet and outlet tubes for such folded chamber as set forth. 6th. Constructing steam generators, heaters or condensers, with two or more chambers, each formed between two corrugated walls, the corrugations of one wall being in a diverse direction to the corrugations of the opposed wall, and so that the apices of the corrugations of one wall are in contact at the crossing points with the apices of the corrugations of the other wall, these chambers being laid in contact with each other, and the whole, coiled or rolled spirally together, so that the apices of the corrugations of the exterior surfaces of the said chambers are brought into contact, the opposed exterior corrugations extending in diverse directions thereby forming adjacent similar and alternate communicating passages for the interchange of heat between the heating or cooling gases or medium together with an enclosing exterior casing and inlet and outlet tubes for such coiled chambers, as and for the purposes set forth.

**No. 53,924. Wagon Seat Lock.** (Serrure de siège de wagon.)



Joseph G. Romensko, Potsdam, Minnesota, U.S.A., 2nd November, 1896; 6 years. (Filed 9th October, 1896.)

*Claim.*—1st. In a seat-lock for wagons and similar vehicles, the combination with the box-body, of a seat-portion provided with side-bars, having eyes in their forward ends, lugs having holes coinciding with the eyes, a removable pin adapted to pass through the holes and eyes to hold the bars in place, a handle on said pin, and a spring-clasp adapted to receive and hold the handle in closed position, all arranged and adapted to operate in the manner and for the purpose set forth. 2nd. In a seat-lock for wagons and similar vehicles, the combination with the box-body, of a seat provided with a forwardly-extending bar having an eye, a lug on the box-body and provided with a hole adapted to coincide with the eye, a detachable pin arranged to pass through the eye and lug, an arm on the pin, and a clasp for holding the arm, substantially as described. 3rd. In a seat-lock for wagons and similar vehicles, the combination with the seat-portion, of an arm-pin joined to the box-body by a detachable pin having a handle, and a spring clasp for retaining the handle in place, substantially as described. 4th. In a seat-lock, the combination with the box-body, of a seat-portion provided with side-bars having eyes in their forward ends, lugs provided with holes coinciding with the eyes, and being attached to the upper edges of the sides of the box-body, a detachable pin adapted to pass through the eyes and holes, an outwardly and downwardly extending handle on the pin, and a spring-clasp for holding the arm removably in place, all arranged and adapted to operate in the manner and for the purpose substantially as described. 5th. The herein-described seat-lock for wagons, consisting of a side-bar for either end of the seat, said bar having a pair of downwardly extending prongs separated so as to pass astride the upper edge of the sides of the wagon-body, and having its front end joined thereto against longitudinal movement, in the manner and for the purpose set forth.

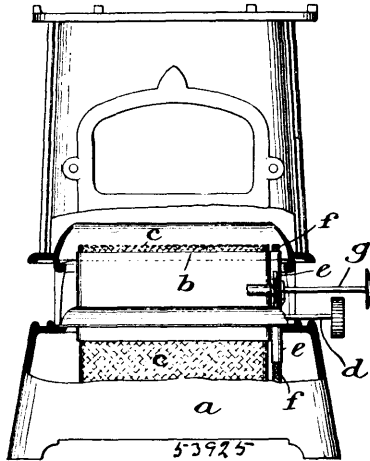
**No. 53,925. Oil and Spirit Lamp.**

(Lampe à huile et à esprit-de-vin.)

Charles Loxton Jackson, Warf Foundry, Bolton, England, 2nd November, 1896; 6 years. (Filed 15th October, 1896.)

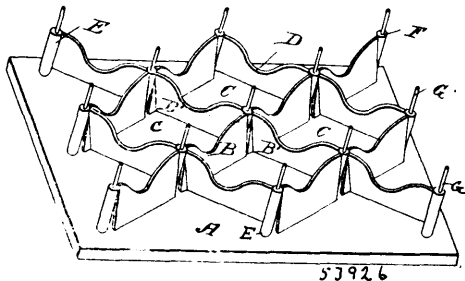
*Claim.*—1st. The combination with the main burner or burners of an oil or similar lamp or stove, of an auxiliary burner or burners

for the purpose of re-kindling the main wick or wicks when required substantially as herein set forth. 2nd. The several com-



binations with the main burners *b*, of the auxiliary burners *e*, substantially as and for the purposes herein described with reference to the accompanying drawings.

**No. 53,926. Tufting Machine.** (*Machine à garnir.*)

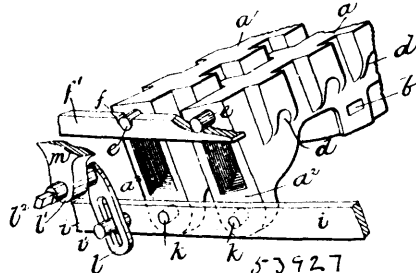


Edward Albert Potter, Toronto, Ont., Canada, 2nd November, 1896; 6 years. (Filed 16th October, 1896.)

*Claim.*—1st. A tufting machine, consisting of a series of successive dies, each comprised of a series of pleat formers arranged to form the pleats, and a series of tuft formers to form the indentations for the buttons, substantially as specified. 2nd. A tufting machine, consisting of a base, a series of successive dies mounted on the base, each die comprised of a series of pleat formers arranged to form the requisite shape and set at an inclination to the base, a tuft former set at each corner of each die to form an indentation for the button, and a series of pins adapted to be inserted into the tops of the tuft formers, substantially as specified. 3rd. A tufting machine, consisting of a base, a series of successive dies mounted on the base, each die comprised of a series of pleat formers arranged to form the requisite shape and set at an inclination to the base, a tuft former set at each corner of each die to form an indentation for the button, a series of pins adapted to be inserted into the tops of the tuft formers, and a presser plate adapted to be supported by the tuft former, substantially as specified.

**No. 53,927. Rocking Fire Bar for Furnaces.**

(*Grille à bascule pour fournaies.*)



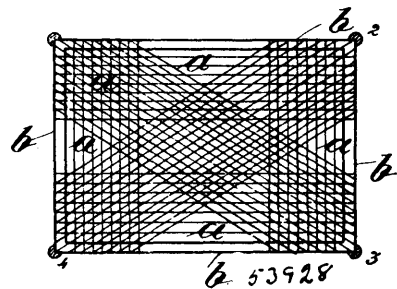
Andrew Pillatt, Nottingham, England, 2nd November, 1896; 6 years. (Filed 16th October, 1896.)

*Claim.*—1st. A rocking furnace grate, having hollow bars formed with lateral air inlets in their web or rib and with hollow teeth or projections also serving as air inlets, these bars having depending mouths and serving to discharge heated air through and behind the

fire bridge, where it meets and mingles with the products of combustion from the fuel, substantially as described. 2nd. In a rocking furnace grate of the kind specified, the arrangement for supporting and rocking the bars, comprising the solid or tubular pivot pins on the said bars resting upon transverse bearer bars, the pins on the downwardly depending mouths, the connecting rod engaging these latter pins, and the slotted lever adapted to receive a removable handle for operating the connecting rod and so rocking the bars, substantially as described. 3rd. In a rocking furnace grate, the combination with the hollow fire bars having lateral air inlets and hollow teeth, of a fire bridge having an opening through which the hot air from said bars can pass, a dust guard arranged at the rear of such bridge above the opening, and a damper also at the rear of the bridge, substantially as described. 4th. The improved construction of hollow rocking fire bars, substantially as described. 5th. My improvements in furnaces and in rocking fire bars therefor, substantially as hereinbefore described with reference to the accompanying drawings.

**No. 53,928. Method of Constructing Walls, etc.**

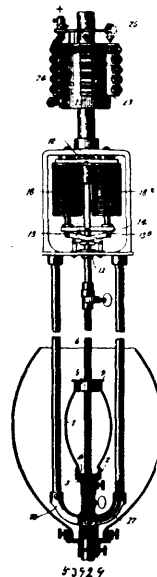
(*Méthode de construire des murs, etc.*)



Alexander Matrai, Budapest, Hungary, 2nd November, 1896; 6 years. (Filed 19th October, 1896.)

*Claim.*—In walls, floors, roofs, or other surfaces, flat, concave or convex, having great bearing strength, the combination of a frame, supported at suitable points, and having one or more series of wires attached at their ends to points on said frame in proximity to the points of support, said wires conforming to the shape of the bearing surface to be attained, and a plastic mass to inclose the said wires and attach to the bearing frames, substantially as described.

**No. 53,929. Electric Arc Lamp.** (*Lampe électrique à arc.*)

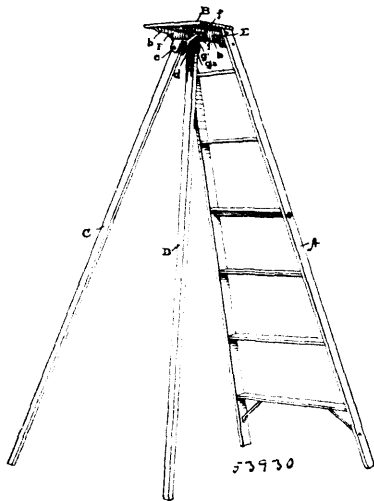


Louis B. Marks, New York, State of New York, U.S.A., 2nd November, 1896; 6 years. (Filed 17th April, 1896.)

*Claim.*—1st. An arc lamp having a transparent or translucent envelope around the arc provided with a contracted opening through which the positive electrode may feed, and a small auxiliary resistance in series with the arc, the arc and idle resistance respectively, bearing such a relation that the ratio of their voltage drops will exceed unity. 2nd. An arc lamp having a transparent or translucent envelope around the arc provided with a contracted opening through which the positive electrode may feed, a gas-check to obstruct

ingress of air while permitting egress of the gaseous products of the arc, an arc-regulating device, and a small auxiliary resistance in series with the arc, for the purpose described. 3rd. An arc lamp having a transparent or translucent envelope around the arc provided with a contracted opening through which the positive electrode may feed, a gas-check to obstruct ingress of air while permitting egress of the gaseous products of the arc, an arc regulating device in series with the arc, and an auxiliary resistance so proportioned to the arc resistance that the latter will absorb the larger part of the drop. 4th. An arc lamp having its arc surrounded by a closed envelope having a contracted opening through which the positive electrode feeds, and a dead-air chamber around the carbon where it passes through said opening. 5th. An arc lamp having its arc surrounded by a closed envelope having a contracted opening through which the positive electrode feeds, a dead-air chamber surrounding the carbon where it passes through said opening, and openings formed in the wall of said chamber next the carbon. 6th. An arc lamp having a transparent or translucent envelope around the arc flanged at the bottom and provided with a clamp embracing the flange and detachably secured to the envelope support. 7th. An arc lamp having a transparent or translucent envelope around the arc flanged at the bottom and provided with a clamp embracing the flange and adapted to screw over a support for the envelope, the clamp being movable upon the envelope but inseparable therefrom. 8th. An arc lamp having a transparent or translucent envelope around the arc flanged at the bottom, a washer of heat resisting packing material in the support, and a clamp for firmly securing the envelope to the support, to make a gas-tight joint.

**No. 53,930. Step-Ladder. (Echelle à marches.)**



Frank White, Pomona, California, U.S.A., 2nd November, 1896; 6 years. (Filed 7th May, 1896.)

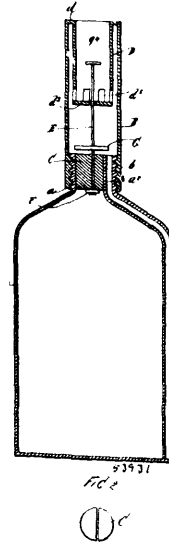
*Claim.*—1st. A step-ladder having independently movable legs C and D, connected at their upper ends to the ladder, one behind the other, in the central transverse plane of the ladder, substantially as and for the purpose hereinbefore set forth. 2nd. A step-ladder having legs C and D, the upper ends of which lie one behind the other in the central transverse plane of the ladder, and a connection for said upper ends with the ladder, whereby the legs are independently and freely movable in all directions, substantially as and for the purpose hereinbefore set forth. 3rd. A step-ladder having legs C and D, the upper ends of which lie one behind the other in the central transverse plane of the ladder, and a connection for said upper ends with the ladder, whereby the legs are independently and freely movable in all directions, consisting of the horizontal cross shaft E, and the head-plate F, and G, having eyes pivoted upon said horizontal cross-shaft, and depending sockets in which the upper ends of the legs are pivoted by horizontal bolts c, d, and sockets lying one behind the other in the central transverse plane of the ladder, substantially as and for the purpose hereinbefore set forth.

**No. 53,931. Bottle. (Bouteille.)**

Elizabeth Ann Saunders, James Store, Virginia, U.S.A., 2nd November, 1896; 6 years. (Filed 15th May, 1896.)

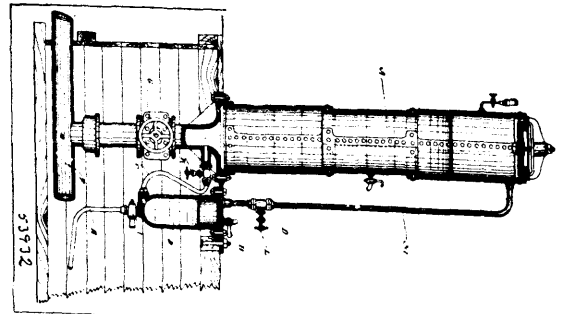
*Claim.*—1st. A bottle or other vessel, provided with a neck and a passage or chamber formed in the side wall thereof, which extends upwardly through one side of the neck, said neck adapted to be closed by a plug or stopper, and a tubular attachment secured thereto, and provided at its upper end with a supplemental tube which is arranged therein, and connected therewith, at the upper end, said supplemental tube being closed at its lower end and perforated, and a rod which is adapted to be passed through the bottom of the supplemental tube and connected with the plug or stopper,

substantially as described. 2nd. A bottle or other vessel, provided with a neck and a passage or chamber formed in the side wall



thereof, which extends upwardly through one side of the neck, said neck being adapted to be closed by a plug or stopper, and a tubular attachment secured thereto, and provided at its upper end with a supplemental tube which is arranged therein, and connected therewith, at the upper end, said supplemental tube being closed at its lower end and perforated, and a rod which passes through the bottom of the supplemental tube and through said plug or stopper, and on which is mounted a disc or plate, substantially as shown and described. 3rd. A bottle or other vessel, provided with a neck, and a passage or chamber formed in the side wall thereof which extends upwardly through one side of the neck, said neck being adapted to be closed by a plug or stopper, and a tubular attachment secured thereto and provided at its end with a supplemental tube which is arranged therein, and connected therewith, at the upper end, said supplemental tube being closed at its lower end and perforated, and a rod which passes through the bottoms of the supplemental tube and through said plug or stopper, and on which is mounted a disc or plate, and said plug or stopper being divided vertically, substantially as shown and described. 4th. A bottle or other vessel provided with a neck, and a passage or vertical chamber formed in one of the sides thereof, which opens upwardly through one side of the neck, said neck being adapted to be closed by a plug or stopper, substantially as shown and described.

**No. 53,932. Device for Charging Air-Chambers. (Appareil pour charger les chambres à air.)**



Marie Joseph Etienne Ludovic de La Vallée Poussin, Montreal, Quebec, Canada, 3rd November, 1896; 6 years. (Filed 1st August, 1896.)

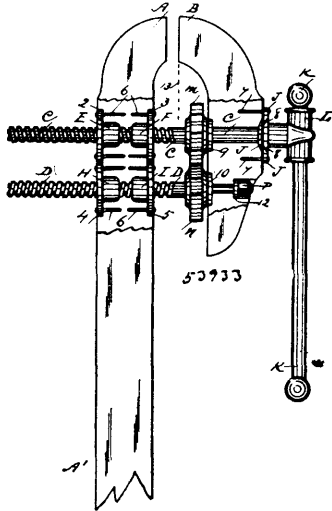
*Claim.*—In an air charging device for air-chambers composed of an auxiliary vessel B which has both its top and bottom in communication with the same parts of the air-chamber, means for closing these communications, means for putting the auxiliary chamber in communication with the atmosphere, means for draining this auxiliary chamber, and means for closing off the air-chamber, substantially as described and for the purpose set forth.

**No. 53,933. Vice. (Etau.)**

Alfred Richmond, Hamilton, Ontario, Canada, 3rd November, 1896; 6 years. (Filed 19th August, 1896.)

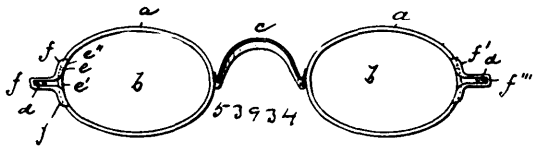
*Claim.*—1st. In a vice a rigid rear jaw provided with upper and lower flanged nuts inserted and secured therein and a movable front

jaw both in vertical line, provided with an upper right hand threaded spindle which passes through said jaws and engages with



said nuts, said spindle provided with a spur wheel located adjacent to the inner curved line of moveable jaw in combination with the lower and parallel left hand threaded spindle engaging with inserted nuts in rigid jaw and provided with spur wheel to engage with said upper wheel the washers 9 and 10, the rigid flange J, and inserted nut P, with washers 12, at outer end of lower spindle and the handle of the front end of upper spindles substantially as described and set forth. 2nd. The combination in a vice of the upper and lower parallel spindles threaded and capable of exerting force on the moveable vice jaw, by means of an applied spur gear wheel on each said spindle, said wheels located in close proximity to the inner part of said jaw and the handle H, in sockets L, of the front end of upper spindle, substantially as described and set forth.

**No. 53,934. Eye-glass, etc. (Pince-nez, etc.)**



George Whitfield Meigs, Newark, New Jersey, U.S.A., 3rd November, 1896; 6 years. (Filed 2nd September, 1896.)

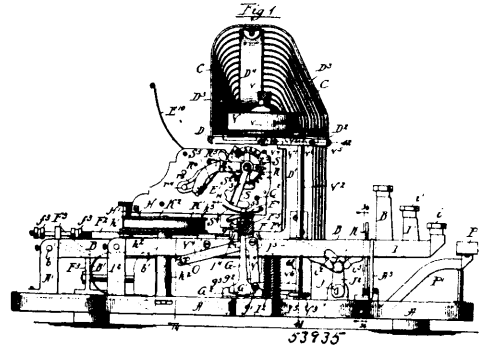
*Claim.*—1st. The combination with the cut or opening wire of an eye-glass or spectacles, of a bow, the feet of which are fastened on opposite sides of the cut or opening, one of said feet being concave and being fixed to one of the ends of the wire and loosely covering and concealing the end to which the other foot is fixed, substantially as set forth. 2nd. In spectacles or eye-glasses, the combination with the cut or open eye wire and the nose piece, of connected limbs one of which has a foot fastened upon said eye wire and covering the cut or opening therein, and the limb connection serving as a seat for the nose piece c, and said nose piece seated on said connection, substantially as set forth. 3rd. In spectacles or eye-glasses, the combination with the open eye wire, of connected limbs having concave or grooved feet, one of which covers the opening in the eye wire and is attached to the eye wire end opposite that to which the other foot is attached, the connection of said limbs providing bearings for attachments of said eye wire such as the nose pieces or temples, substantially as set forth. 4th. The combination with the open eye wire, of integrally connected limbs having longitudinally concave or grooved oppositely extending feet fastened on opposite sides of the opening, one of which feet covers the opening and prevents lateral movements of the eye wire and lying loose therein, said limbs being perforated at their outer extensions and temples hinged in said perforations, substantially as set forth.

**No. 53,935. Typewriting Machine. (Clavigraphic.)**

Thomas Oliver, Woodstock, Illinois, U.S.A., 3rd November, 1896; 6 years. (Filed 11th September, 1896.)

*Claim.*—1st. In a typewriter, looped or U-shaped type bars of varying lengths, carrying type heads on their closed or looped ends, which type heads are heavier on the shorter than on the longer bars, and are graduated in weight according to the lengths of the type bars. 2nd. The combination with a carriage and a shifting frame for supporting the same, of rocking standards for supporting said frame, said standards having curved end bearing surfaces provided with longitudinal grooves and flat sheet metal shoes, the edges

of which engage said grooves, said shoes having at their ends projecting parts which engage the opposite ends of the bearing surfaces

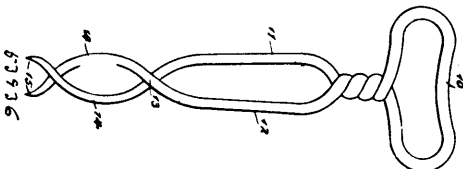


to hold the standards from shifting on the shoes. 3rd. The combination with a paper carriage, of a spacing mechanism comprising a rack on the carriage, a revolving shaft carrying a pinion which engages the rack, and an escape mechanism embracing an escape wheel which is mounted on the shaft at a point remote from the pinion, the end of said shaft which carries the pinion being movable toward and from the rack about an axis of oscillation adjacent to the escape wheel, a spring acting on the shaft to throw the pinion toward the rack and a releasing bar arranged to act on the shaft to release the pinion from the rack. 4th. The combination with a paper carriage, of a spacing mechanism comprising a rack on the carriage, a revolving shaft carrying a pinion which engages said rack and an escape mechanism which embraces an escape wheel which is mounted on the shaft at a point remote from the pinion, the end of the shaft which carries said pinion being movable toward and from the rack about an axis of oscillation adjacent to the escape wheel, a releasing bar on the carriage arranged to act on the shaft to hold the pinion free from the rack and an actuating device for said releasing bar, comprising an endwise sliding trip rod mounted on the carriage, and a bell crank lever mounted on the carriage for transmitting motion from the trip rod to the releasing bar. 5th. The combination with a paper carriage, of a horizontally movable shifting frame for supporting said carriage, and a spacing mechanism comprising a rack on the carriage, an upright shaft on the shifting frame provided with a pinion at its upper end adapted to engage said rack, said upper end of the shaft being movable toward and from the rack, an escape wheel on the lower end of the shaft, an escapement lever mounted on the shifting frame so as to swing in a vertical plane and provided with stiff and limber pawls which engage the escape wheel, and a vertically-movable spacing bar having connection with the said escapement lever, permitting the escapement lever to retain its operative connection with the spacing bar when moved with the shifting frame. 6th. The combination with a platen, a ratchet wheel, and a holding pawl engaging the ratchet wheel, of a frictional connection between the ratchet wheel and platen and a locking detent adapted to engage said pawl for holding it positively in engagement with the ratchet wheel, whereby the latter is held from turning. 7th. The combination with an endwise-movable carriage and a revolving platen thereon, of automatic line-spacing mechanism, comprising a ratchet wheel on the platen shaft, a sliding cam on the carriage, an oscillating feeding arm mounted on the carriage, and a feed pawl pivoted to the arm and adapted to engage the ratchet wheel and also to engage the said sliding cam. 8th. The combination with an endwise-movable paper carriage and a revolving platen thereon, of automatic line-spacing mechanism, comprising a ratchet wheel on the platen shaft, a sliding cam on the carriage, an oscillating feeding arm which is actuated by the sliding cam and carries a pawl which engages the ratchet wheel, a stationary pawl stop on the carriage giving a maximum line space, and a pivoted gravity actuated stop for giving a less extent of line feed. 9th. The combination with an endwise-movable paper carriage and a guide bar for the same, of an automatic line-spacing device, a sliding rod on the carriage for actuating the same, and a stop for actuating said rod, comprising an adjustable slide on the guide bar, and a movable stop plate on said slide, adapted to actuate the sliding rod. 10th. The combination with a carriage guide bar, of a margin stop comprising a slide and a block pivoted to the slide and provided with a holding pin adapted to engage one of a series of holes in the guide bar, said pin being located in the block at a distance from the pivotal point of the same, so that it may be engaged with and disengaged from the said guide bar by the swing of said block on its pivot. 11th. The combination with an endwise-movable carriage and a revolving platen thereon, of automatic line-spacing mechanism comprising a ratchet wheel attached to the platen, a sliding cam on the carriage, an oscillating feeding arm which is actuated by the sliding cam, a spring actuating the cam, a stop on the carriage movable into and out of position for engagement with the said cam, and a cam plate on the carriage adapted to actuate said stop for releasing the cam plate after the same has been actuated to turn the platen. 12th. The combination with a paper carriage and a platen movable upon the carriage into and out of its



operative position, of a feed roller the shaft of which extends at its ends past the end plates of the carriage frame, yielding arms affording bearing for the feed roller shaft, a gear wheel on the platen shaft outside of the carriage frame, and a pinion on the feed-roller shaft adapted to intermesh with said gear wheel, the ends of said feed-roller shaft being adapted for contact with the carriage end plates so as to limit the inward movement of the feed roller. 13th. The combination with the platen and space bars of a typewriting machine, of pivotal supports above the platen, ribbon guides carried by said supports and arranged to swing between the axis thereof and the centre of the platen and connections between the pivotal supports and space bars constructed and operating to move the ribbon guides into alignment with and between the axial centres of the platen and pivotal supports upon operation of said space bars. 14th. A ribbon feeding mechanism comprising a spool, a gear wheel connected with the same and a driving shaft provided with a pinion adapted to intermesh with said gear wheel, and having lateral movement at its end and which carries the pinion about an axis of oscillation located at a distance from said pinion, a bearing for the end of the shaft adjacent to said gear wheel, provided with two open bearing notches or recesses at different distances from the gear wheel, in either of which recesses the movable end of said shaft may be placed, and a spring-actuated strip or bar for holding the shaft in either of the said recesses. 15th. A ribbon spool for typewriters consisting of two heads and a sheet metal barrel attached thereto and formed of a flat strip of metal provided at one end with a notch and its opposite end with a projection, said strip being bent into cylindrical form with the projection on one end of the strip occupying the notch in the other end thereof to form a ribbon-holding device.

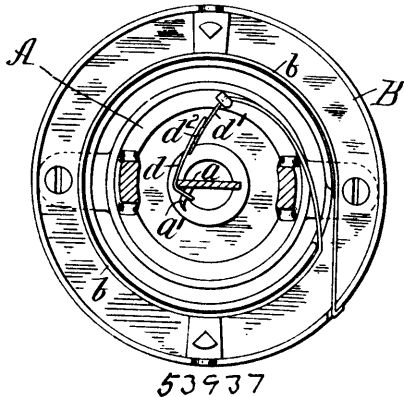
**No. 53,936. Weed Puller. (Sarcleur.)**



Frederick William Read, Marquette, Michigan, U.S.A., 3rd November, 1896; 6 years. (Filed 8th October, 1896.)

Claim.—A weed puller, the same consisting of a rod or bar bent at the centre and twisted to form a handle at the upper end, the material extending from the twisted portion in the form of twin shanks, the shanks being substantially parallel for part of their length and being then given a spiral twist in opposite directions, whereby one shank will cross the other, the termination of the shanks being made to approach one another in a spiral direction, as and for the purpose specified.

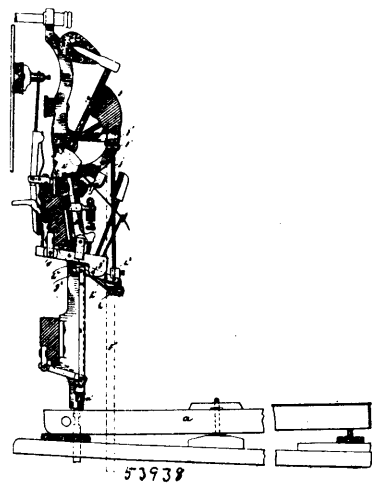
**No. 53,937. Circuit-Closer and Sprinkler. (Arrosoir.)**



George Augustus Wall, Providence, Rhode Island, U.S.A., 3rd November, 1896; 6 years. (Filed 11th September, 1896.)

Claim.—1st. In combination an automatic sprinkler whose moving member is held by fusible solder, a thermostat whose moving member is held by fusible solder out of contact with the metal of the sprinkler, and a mechanical connection secured at its inner end to the moving member of the sprinkler, and carrying at its outer end the solder of the thermostat, whereby the solder of the thermostat is freed from the causes which tend to prevent the rise of temperature of the solder of the sprinkler. 2nd. In combination an automatic sprinkler whose moving member is held by fusible solder, a thermostat whose moving member is a spring under tension, and a strip connected at its inner end to the moving member of the sprinkler, and at its outer end by fusible solder to the spring of the thermostat, to place the solder of the thermostat out of contact with the metal of the sprinkler, and free the solder which controls the thermostat from the causes which tend to prevent the rise of temperature of the solder which controls the sprinkler.

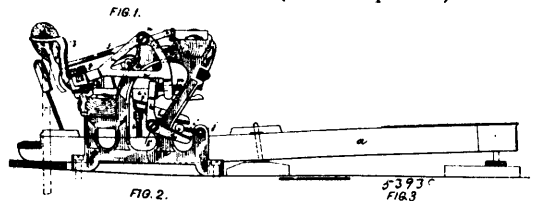
**No. 53,938. Action for Pianos. (Action de pianos.)**



Adam Nickel, New York, State of New York, U.S.A., 3rd November, 1896; 6 years. (Filed 12th September, 1896.)

Claim.—1st. In an upright piano action, the combination, with a hammer, a movable hammer rail, and a key, of a wippen, a vertical thrust rod arranged to be raised by said key, and to raise said wippen, a lever the rear end of which is arranged to be actuated by said thrust rod, and a bar movable with the hammer rail, forming when raised a fulcrum for the front end of the lever, said lever being so arranged that a point intermediate of said fulcrum and thrust rod will engage said wippen to raise the same when said lever is raised by said thrust rod, substantially as described. 2nd. In an upright piano action, the combination, with a hammer, a movable hammer rail, and a key, of a wippen, a vertical thrust rod arranged to be raised by said key and to raise said wippen, a lever, the rear end of which is arranged to be actuated by said thrust rod, a bar movable with the hammer rail, forming when raised a fulcrum for the front end of the lever, said lever being so arranged that a point intermediate of said fulcrum and thrust rod will engage said wippen to raise the same when said lever is raised by said thrust rod, and a hanger connecting said rail with said bar, substantially as described. 3rd. In an upright piano action, the combination, with a hammer, a movable hammer rail, and a key, of a wippen, a vertical thrust rod arranged to be raised by said key and to raise said wippen, a lever, the rear end of which is arranged to be actuated by said thrust rod, a bar movable with the hammer rail, forming when raised a fulcrum for the front end of the lever said lever being so arranged that a point intermediate of said fulcrum and thrust rod will engage said wippen to raise the same when said lever is raised by said thrust rod, a hanger depending from the hammer rail, and a clamp for adjustably connecting said hanger to the bar, substantially as described.

**No. 53,939. Piano Action. (Action de pianos.)**



Adam Nickel, New York, State of New York, U.S.A., 3rd November, 1896; 6 years. (Filed 12th September, 1896.)

Claim.—1st. In an action for grand pianos, the combination of a wippen with a lever pivoted thereto, a key for actuating one arm thereof, a rod engaging the other arm, a hammer rail, a lifter for actuating the same, a lever for supporting the hammer rail, and a second lever engaged thereby and adapted to actuate the rod, substantially as specified. 2nd. In an action for grand pianos, the combination of a wippen with a lever pivoted thereto, a key for actuating one arm thereof, a rod engaging the other arm, a hammer rail, a lifter for actuating the same, a lever for supporting the hammer rail, a second lever for actuating the rod, and a set screw interposed between the levers, substantially as specified.

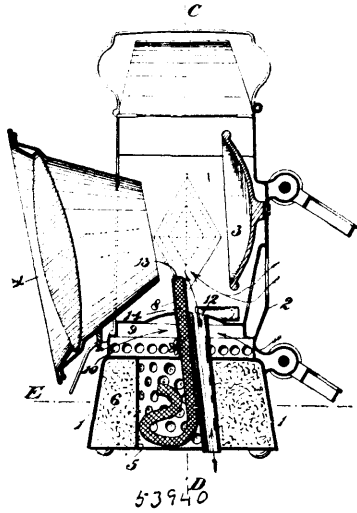
**No. 53,940. Hydrocarbon Lamp.**

(Lampe à hydro-carbones.)

Joseph Henry Iredale, Liverpool, England, 3rd November, 1896; 6 years. (Filed 14th September, 1896.)

Claim.—1st. In a lamp for burning light hydrocarbons such as benzoline, the combination with a lantern hood or casing having a

reflector at the back and a lens at the front, of a reservoir located at the base of the said hood or casing, a wick well formed within said



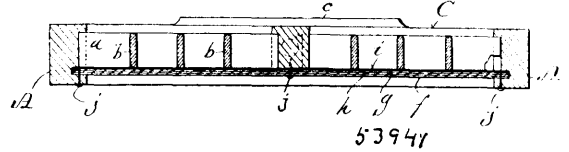
reservoir by a perforated or reticulated wall, and absorbent material contained in said reservoir and surrounding said wall, substantially as described. 2nd. In a lamp for burning light hydrocarbons such as benzoline, the combination with the lamp hood or casing of a reservoir located at the bottom thereof, a wick well formed within said reservoir by a perforated or reticulated wall, and absorbent material contained in the said reservoir and surrounding said wall, a perforated hollow cover secured on the top of said reservoir and provided with holes whereby air can flow from the external atmosphere over the top of the reservoir and thence into the lamp hood or casing, substantially as herein described for the purpose set forth. 3rd. In a lamp for burning light hydrocarbons such as benzoline, the combination with a lantern hood or casing having a reflector at the back and a lens at the front, of a reservoir located at the base of said hood or casing, a wick well formed within said reservoir by a perforated or reticulated wall, and absorbent material contained in said reservoir and surrounding said wall, a wick tube extending from said wick well, and an air supply tube extending through said reservoir in proximity to said tube but terminating below the top thereof, substantially as herein described for the purpose specified. 4th. In a lamp for burning light hydrocarbon such as benzoline, the combination with the lamp hood or casing of a reservoir located at the bottom thereof, a wick well formed within said reservoir by a perforated or reticulated wall, and absorbent material contained in said reservoir and surrounding said wall, a perforated hollow cover secured on the top of said reservoir and provided with holes whereby air can flow from the external atmosphere over the top of the reservoir and thence into the lamp hood or casing, and an air-supply tube passing upwardly through the said reservoir and said cover and opening at one end to the external atmosphere and at the other to the interior of the lamp hood or casing, substantially as herein described. 5th. In a lamp for burning hydrocarbons such as benzoline, the combination with the lamp or casing, of a reservoir located at the bottom thereof, a wick well formed within said reservoir by a perforated or reticulated wall, and absorbent material contained in said reservoir and surrounding said wall, a perforated hollow cover secured on the top of said reservoir and provided with holes whereby air can flow from the external atmosphere over the top of the reservoir and thence into the lamp hood or casing, a wick tube leading from the interior of the said wick well to the interior of said lamp hood or casing, an air-supply pipe passing upwardly through said reservoir and said cover and along and in contact with said wick tube, and opening at one end to the external atmosphere and at the other to the interior of said lamp body, substantially as herein described. 6th. The improved lamp for burning light hydrocarbon such as benzoline, comprising a lamp hood or casing with reflector at the back and lens at the front, the reservoir 1, with perforated wall 5, and absorbent material 6, the cover 9, with perforations 10 and 11, and the air and wick tubes 12 and 8, all arranged substantially as described and shown for the purpose specified.

**No. 53,941. Printer's Case. (Case d'imprimeur.)**

James Edward Hamilton, Two Rivers, Wisconsin, U.S.A., 3rd November, 1896; 6 years. (Filed 14th September, 1896.)

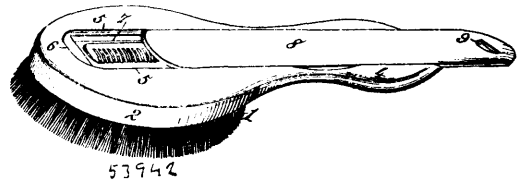
*Claim.*—1st. In a printer's case, the combination of a frame formed of end pieces and a lower side piece of a uniform height, provided with longitudinal grooves on their inner faces adjacent to, and parallel with, their under surfaces, and shallower vertical grooves communicating with said longitudinal grooves, and an upper side piece, of a less depth, terminating at the base on a line flush with the upper wall of the said longitudinal grooves in the

other pieces and provided with corresponding vertical grooves, transversely-crossed partition-strips whose ends are fitted within



said vertical grooves, and a bottom piece whose lower side, and end edges are slipped and secured within the described longitudinal grooves in the lower side, and end pieces, substantially as set forth. 2nd. In a printer's case, the combination of the lower side, and end pieces of the frame, having longitudinal grooves in the inner surfaces thereof, adjacent to and parallel with the bottom surfaces of said pieces, and an upper side piece of less depth than, but rising to the same height as, the other pieces of the frame, with a thin bottom piece formed of composite layers of wood veneer, and an upper layer of paper, all pressed and cemented together, slipped into and secured within said longitudinal grooves in the lower side and end pieces of the frame, substantially as set forth.

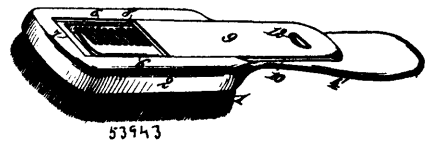
**No. 53,942. Toilet Case. (Nécessaire de toilette.)**



George William Glover, New York, State of New York, U.S.A., 3rd November, 1896; 6 years. (Filed 16th September, 1896.)

*Claim.*—1st. A toilet case, consisting of a hair-brush having a back formed with a handle, dove-tailed shoulders extending longitudinally along the handle and back, a comb receptacle located below the dove-tailed shoulders and formed partly in the handle and partly in the back, and a slide formed of the same material as the brush-back and handle, engaging the dove-tailed shoulders flush with the outer surface of the handle and back and slidable longitudinally along the said handle and back to cover and uncover the comb receptacle, substantially as shown and described. 2nd. A toilet case, consisting of a hair-brush having a back formed with a handle, dove-tailed shoulders formed in and located below the plane of said back and handle and extending longitudinally along the same, a comb-receptacle depressed below the dove-tailed shoulders partly in the back and partly in the handle and having its bottom wall composed of a mirror, and a slide engaging the dove-tailed shoulders flush with the back and handle and slidable longitudinally to uncover the comb-receptacle.

**No. 53,943. Toilet Case. (Nécessaire de toilette.)**



George William Glover, New York, State of New York, U.S.A., 3rd November, 1896; 6 years. (Filed 16th September, 1896.)

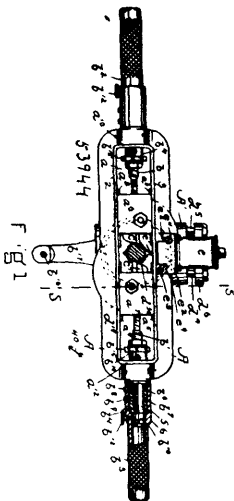
*Claim.*—1st. A toilet case, consisting of a hair-brush having a handle and a back elevated above the outer surface or plane of the handle, longitudinal dove-tailed shoulders formed in and located below the plane of the brush-back, a comb-receptacle depressed below the dove-tailed shoulders, and a longitudinally movable slide engaging the dove-tailed shoulders, supported above the plane of the back surface of the handle and sliding longitudinally over said handle to uncover the comb-receptacle, substantially as described. 2nd. A toilet case, consisting of a hair-brush having a handle and a back elevated above the outer surface or plane of the handle, longitudinal dove-tailed shoulders formed in and located below the plane of the brush-back, a comb-receptacle depressed below the dove-tailed shoulders and having its bottom wall composed of a mirror, and a longitudinally movable slide engaging the dove-tailed shoulders, supported above the plane of the back of the handle and sliding longitudinally over said handle to uncover the comb-receptacle, substantially as described.

**No. 53,944. Die Stock, etc. (Filière brisée.)**

Albert Willard Bartholomew, Boston, Massachusetts, U.S.A., 3rd November, 1896; 6 years. (Filed 17th September, 1896.)

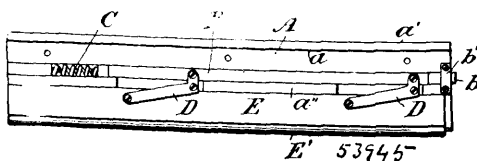
*Claim.*—1st. In a cutting-off and die-stock machine, the combination of the following instrumentalities, viz.:—a stock provided with

a substantially oblong opening, cutter-carriers movable longitudinally in said opening, threaded rods connected to said cutter-carriers



and having smooth extensions 5 projecting through the end walls of the said opening, stationary sleeves carried by the said end walls and through which the smooth extensions 5 project, handles fitted over the said sleeves and secured thereto against longitudinal movement but capable of rotary movement thereon, and means to connect the said handles with the extensions of the threaded rods, to effect rotation of the said rods by a rotary movement of the handles on the said sleeves, substantially as described. 2nd. In a cutting-off and die-stock machine, the combination of the following instrumentalities, viz.:—a stock provided with a substantially oblong opening, cutter-carriers movable longitudinally in said opening, threaded rods connected to said cutter-carriers and extended through the end walls of the said opening, toothed wheels or discs fast on the said threaded rods, handles attached to said stock to rotate the same, means to connect the said handles to the threaded rods and to permit the same to be disconnected therefrom, a chuck to which the stock is secured to revolve thereon, and a projection carried by the chuck to engage the toothed wheels or discs and rotate the threaded rods independent of the handles when the latter are disconnected from the said rods, substantially as described. 3rd. In a cutting-off and die-stock machine, the combination of the following instrumentalities, viz.:—a work-holding chuck, a tool-carrying stock revolvable thereon, an oil receptacle carried by said stock, and means on the chuck to engage the oil receptacle in the revolution of the stock to eject oil from the said receptacle, for the purpose specified. 4th. In a cutting-off and die-stock machine, the combination of the following instrumentalities, viz.:—a work-holding chuck, a tool-carrying stock revolvable thereon, an oil receptacle detachably carried by said stock, and means on the chuck to engage the oil receptacle in the revolution of the stock to eject oil from the said receptacle, for the purpose specified. 5th. In a cutting-off and die-stock machine, the combination of the following instrumentalities, viz.:—a stock provided with a substantially oblong opening  $a^1$ , cutter-carriers movable longitudinally in said opening, threaded rods connected to the said carriers and extended through the end walls of said opening, handles attached to the said rods, and an oil can or receptacle detachably secured to one side of the stock and provided with a nozzle projecting into the opening  $a^1$  substantially at right angles to the length of the opening and to the handles, substantially as described. 6th. In a cutting-off and die-stock machine, the combination of the following instrumentalities, viz.:—the stock  $A$  provided with the substantially oblong slot or opening  $a^1$  having its side walls provided with guiding ribs or ledges of less length than said opening, cutter-carriers inserted in said opening and mounted to slide on said guiding ribs, threaded rods  $b, b^1$ , connected to the said cutter-carriers and having extensions 5 projecting through the end walls of the said openings, stationary sleeves carried by the stock through which the said extensions project, handles fitted over the said sleeves and secured thereto against longitudinal movement but capable of rotary movement thereon, and means to connect the said handles with the extensions of the threaded rods, substantially as described. 7th. In a cutting-off and die-stock machine, the combination of the following instrumentalities, viz.:—a stock, cutter-carriers movable in an opening in said stock, threaded rods connected to said carriers to move the same, toothed-wheels or discs on said threaded rods within the openings in the stock, and handles attached to the stock, and means to connect the handles to the threaded rod and which permit the said handles to be disconnected from the threaded rods while remaining attached to the stock, substantially as described.

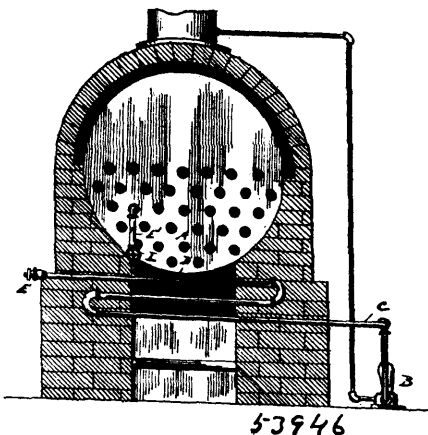
**No. 53,945. Weather Strip. (Bourrelet de porte.)**



Horace Walter Chamberlin, Ottawa, Ontario, Canada, 3rd November, 1896; 6 years. (Filed 14th October, 1896.)

*Claim.*—1st. In a weather strip, the combination with a rail, of a longitudinal recess stopped at one end and adapted to receive a bar slidingly, a sliding bar within said recess having a bevelled end projecting at one end, a spring between the end of said bar and the stopped end of the recess, a groove in the bottom edge of said rail separated from said recess by a rigid ridge or strip, a tongue or drop bar within said groove having a flexible insertion in its lower edge and bell-crank levers pivoted to said separating strip as a fulcrum and to the sliding bar and drop bar respectively, substantially as set forth. 2nd. In a weather strip, the combination of a bar or batten checked out on its flat side to receive a cover plate to fit within said check, a groove or longitudinal recess under said cover stopped at one end, a sliding bar in said groove having a bevelled end, a spring in said groove tending to project said bar, a rabbet below said groove and separated therefrom by a ridge or strip, a drop bar in said lower rabbet or recess with flexible insertion in its lower edge and bell-crank levers fulcrumed to said ridge or strip and pivoted to said sliding bar and drop bar, substantially as set forth. 3rd. In a weather strip, the combination of a strip or bar adapted to be secured and made stationary within a suitable recess, a sliding bar on top of said stationary strip or bar and having a bevelled projecting end, a spring at one end of said bar, tending to project the bevelled end of the sliding bar, a drop bar under said stationary bar having a flexible insertion in its lower edge and bell-crank levers fulcrumed to said stationary bar and pivoted to said slide bar and drop bar, substantially as set forth.

**No. 53,946. Feed Water Heater. (Réchauffeur d'eau d'alimentation)**



Thomas McDonnell, jr., Cockeysville, Maryland, U.S.A., 3rd November, 1896; 6 years. (Filed 15th October, 1896.)

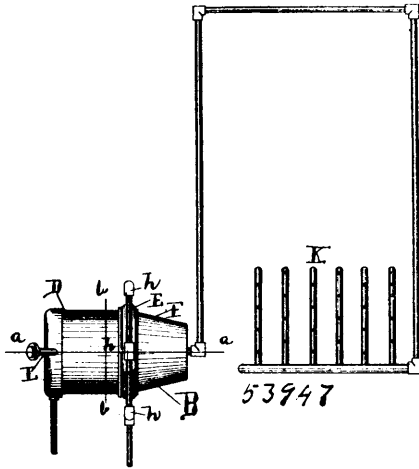
*Claim.*—In a feed water heater, the combination with a furnace, of a feed-water supply pipe leading from a pump, and coiled back and forth directly over the grate and directly in front of the boiler, the other end of said furnace pipe projecting outside the boiler wall and provided with a plug or cap affording adjustable means for attaching a blower, and an upwardly-extending pipe leading from the upper member of the coil and provided with a valve, and projecting into the front of the boiler, and thence through one of the furnace walls with a short downwardly inclined pipe which connects with a horizontal pipe, one end of which projects into the lowest point of the boiler, and the opposite end being opened and closed by a valve which is used only when it is necessary to cleanse the pipes.

**No. 53,947. Mechanical Air and Vapour Distributor. (Distributeur mécanique d'air et de vapeur.)**

William Sutton, Toronto, Canada, 3rd November, 1896; 6 years. (Filed 16th October, 1896.)

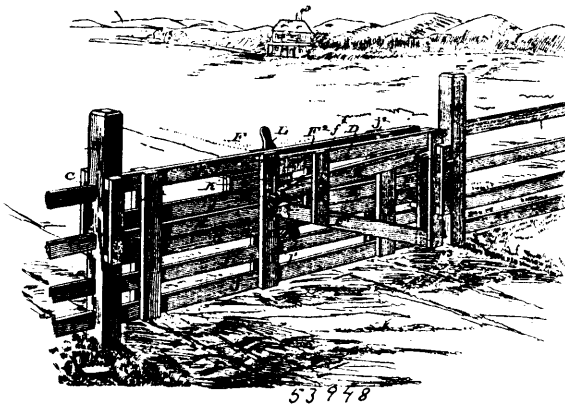
*Claim.*—1st. A mechanical air and vapour distributor, consisting of an intake pipe, a nozzle, and a perforated tubular ring interposed between the intake pipe and nozzle, substantially as specified.

2nd. A mechanical air and vapour distributor, consisting of an intake pipe, an internal annular jacket for the intake pipe, an inlet



for the said jacket, and means for connecting the jacket with a steam pipe, a nozzle, a perforated tubular ring interposed between the intake pipe and nozzle, and a means for connecting the tubular ring with the steam space of the boiler, substantially as specified. 3rd. A mechanical air and vapour distributor, consisting of an intake pipe, an internal annular jacket for the intake pipe, an inlet for the said jacket, and a means for connecting the jacket with a steam pipe, a nozzle, a perforated tubular ring interposed between the intake pipe and nozzle, a means for connecting the tubular ring with the steam space of the boiler, a spray, and a pipe for connecting the spray with the said jacket, substantially as specified.

**No. 53,948. Gate. (Barrière)**

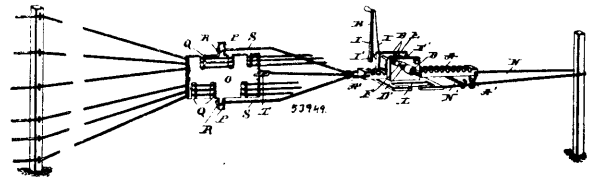


Albert Davison, Belvidere, Illinois, U.S.A., 19th November, 1896 6 years. (Filed 19th October, 1896.)

*Claim.*—1st. The combination of the crane, having a vertically elongated bolt seat, the gate movable vertically upon the crane and the bolt movable longitudinally along the gate and into and out of the vertically elongated bolt seat of the crane, substantially as set forth. 2nd. The combination of the crane, having the vertically elongated bolt seats on opposite sides, the latch post having the opposite vertically elongated bolt seats, the gate hinged to and movable vertically upon the crane, the oppositely movable bolts seating in the bolt seats of the hinge post and crane, the lever for operating the bolts and the lever by which to lift the gate, substantially as set forth. 3rd. The combination of the crane, a vertically elongated bolt seat closed at both ends at or near the hinged end of said crane, the gate jointed to the swinging end of said crane and the bolt movable longitudinally along the gate and into and out of the bolt seat upon the crane, substantially as shown and described. 4th. The combination of the crane, having upper and lower beams, the gate having a bearing sliding vertically between said beams and the lever arranged between said upper and lower beams of the crane and engaging the bearing of the gate, substantially as set forth. 5th. The combination of the crane, having upper and lower beams, a guide rod connecting said beams near their swinging ends, the gate having an eye sliding on the said guide rod and the lever pivoted to and between said battens and between the upper and lower beams, and engaged with the eye on the gate, all substantially as shown and described. 6th. The combination of the latch post and crane, having latch seats, the gate jointed to said crane and having reversely-operating, longitudinally-movable latches movable

into and out of the latch seats of the crane and latch post, the lever by which to throw said latches into and out of latched position, and a button by which the said lever may be locked in position to hold the latches in their seats, substantially as shown and described.

**No. 53,949. Wire Stretcher. (Tendeur de fil de fer.)**

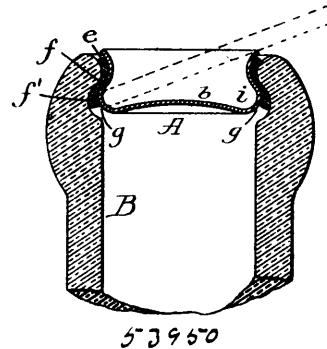


David H. Folk, Brewer, Texas, U.S.A., 3rd November, 1896; 6 years. (Filed 19th October, 1896.)

*Claim.*—1st. The combination of the shaft, the crank having the eye to embrace the shaft, the elongated springs arranged longitudinally of the crank and at one end secured thereto, and the inwardly projecting pins at the front ends of the springs extended through the pin openings in the eye and held normally in engagement with the shaft by the springs, substantially as shown and described. 2nd. The combination of a slotted base C, the wire stretching mechanism carried by the base, and the anchor loop having the hooked ends for engaging the slots of the base, substantially as shown and described. 3rd. The combination of the base formed with an internal elongated slot, the wire stretching mechanism carried by the base, the anchor loop hooked at its ends to engage the slots of the base, and the tie-rods for the anchor loop, for the purpose substantially as shown and described. 4th. The combination of the base C, uprights B having reduced lower ends to form bolts, which are projected through the base, nuts on the projected lower ends of the uprights, the shaft journaled transversely in the uprights, the pinion carried thereby between the uprights, the wire stretching rack-bar movable longitudinally by the pinion, and the dogs for holding the shaft in the desired adjustment, substantially as shown and described. 5th. The combination of the grip, handles projected oppositely therefrom, a stretching mechanism, and a connection between the same and the oppositely arranged grip handles, substantially as shown and described. 6th. The combination of the shaft, the crank having an eye to embrace the shaft, the spring plates secured to the crank and projecting in a line with the eye, said plates being turned backward upon themselves, and the pins formed of the rounded extremities of said plates, said pins projecting laterally from the plates and adapted to pass through the eye wall and normally engage the shaft to hold the crank thereon, substantially as shown and described. 7th. The combination of the grip, handles projected from opposite sides thereof, a stretching mechanism and a loop hook at its ends to engage the grip handles and connect the grip with the stretching mechanism, substantially as shown and described. 8th. The combination of a grip formed with the wire receiving slots or notches on its opposite edges, the handles projected from the grip, said handles being recessed at points adjacent to the grip, a stretching mechanism and a loop leading from said mechanism and adapted at its extremity to engage the recess of the handle, substantially as shown and described.

**No. 53,950. Bottle Sealing Device.**

(Appareil à sceller les bouteilles.)

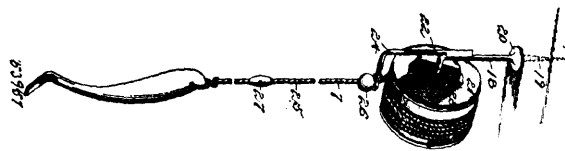


Aluminum Stopper Company, assignee of Robert Alson Hall, both of Baltimore, Maryland, U.S.A., 4th November, 1896; 6 years. (Filed 15th June, 1896.)

*Claim.*—1st. The combination substantially as hereinbefore described, of a suitable bottle having a throat affording a sealing contact surface, a hollow ductile metallic plug having a portion of its periphery expanded within the throat of the bottle, and having an accessible shoulder for engagement by a bottle opener, and a sealing medium, which is in contact with said sealing contact surface and is securely maintained in its sealing position by said plug. 2nd.

The combination substantially as hereinbefore described, of a suitable bottle, a hollow ductile metallic plug which has a portion of its periphery expanded within the throat of the bottle and has an accessible shoulder for engagement by a bottle opener, and a gasket which is interposed between the metallic plug and the bottle, and is composed and maintained in its sealing position by said plug. 3rd. A bottle sealing device embodying in combination, a hollow plug composed of strong but ductile metal, and an annular gasket mounted peripherally on the plug, substantially as described, the whole being adapted to freely enter the throat of a suitable bottle, and to be secured therein with sealing function, by peripherally expanding the portion of the plug which is adjacent to the sealing gasket, and the latter enabling the metal to be indented and strongly engaged by a bottle opener. 4th. The combination substantially as hereinbefore described, of a bottle having in its throat an annular shoulder, an annular packing or gasket, and a hollow ductile metallic plug, peripherally expanded as described adjacent to said gasket and shoulder, and thereby not only compressing the gasket into sealing contact between the plug and bottle, but also securing the plug and gasket against displacement under internal pressure, and also affording within the plug an accessible shoulder for engagement by a bottle opener.

**No. 53,951. Device for Suspending Stove-Lifters.**  
(Appareil à suspendre les poignées des ronds de poêles.)



James L. Kerstetter, Bradford, Pennsylvania, U.S.A., 4th November, 1896; 6 years. (Filed 19th October, 1896.)

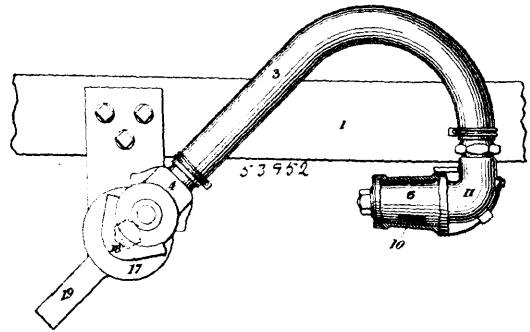
*Claim.*—In a suspending device for the purpose specified, the combination of a bracket provided at one end with means of attachment to a support, and having its other end portion formed into a spindle, a drum mounted upon the spindle, a spring operatively connecting the drum with the spindle, a cord secured at one end to the drum and adapted when unwinding therefrom to wind the spring, and vice versa, a button on the cord to limit the winding thereof upon the drum, and an arm attached to the bracket and having its free end portion bent to extend over the drum and terminating in an eye through which passes the said cord and which engages with the button thereof to limit the winding of the cord upon the drum, substantially as set forth. 2nd. In a device of the character set forth, the combination of a bracket having a spindle, a barrel mounted upon the spindle, a spring placed within the barrel and having one end connected therewith and its opposite end attached to the spindle, a drum mounted upon the barrel, an arm attached to the bracket and having an eye at its free end opposite the middle-portion of the drum, a cord secured at one end to the drum, passing through the eye of the said arm, and having the article to be suspended attached thereto, a button secured to the cord to limit the winding thereof upon the drum by engagement with the eye, and a weight applied to that portion of the cord exterior to the button at a point between the latter and the article to be suspended, substantially as and for the purpose set forth. 3rd. The herein shown and described suspending device, comprising a bracket formed of a length of wire having a loop at one end, a spindle at the opposite end, and an intermediate portion throwing the spindle and loop in different planes, a barrel mounted upon the spindle and provided with a drum, a spring enclosed within the barrel and secured to the latter and the spindle, an arm secured to the intermediate portion of the bracket and having its free end bent to project across the path of the drum and terminating in a guide eye, and a cord having connection with the drum and passing through the said guide eye, and provided with a button and a weight, and adapted to have the article to be suspended applied thereto, substantially as set forth.

**No. 53,952. Air-Brake Train-Pipe Coupling Mechanism.**  
(Mécánisme de joint pour tuyaux de frein à air.)

Charles Goodwin Emery, New York, assignee of Edward G. Short, Carthage, both in the State of New York, U.S.A., 4th November, 1896; 6 years. (Filed 8th October, 1896.)

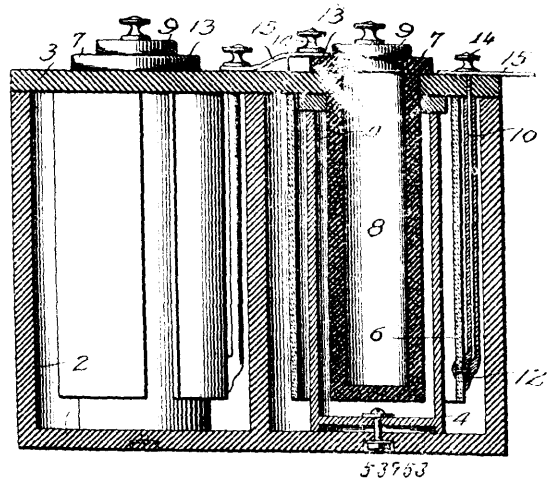
*Claim.*—1st. The combination of an automatic air-brake train-pipe section adapted to be rigidly supported as on a car, a valve mechanism one of the relatively movable parts of which is fixed to said rigid section, a coupling pipe attached to and for operating the other part of said valve mechanism and adapted to connect the same to another train-pipe section, said valve being operated by said valve being operated by said coupling pipe to hold the train-pipe open to the coupling-pipe when the coupling end of the latter is coupled to another car train-pipe, and when said coupling end is uncoupled and in hanging or unsupported position, and also to hold the train-pipe closed when said coupling end is uncoupled and held supported. 2nd. The combination of a rigid car train-pipe section of an automatic air-brake mechanism, a valve mechanism one of the relatively movable parts of which is fixed to said rigid section, a

coupling pipe attached to and for operating the other part of said valve mechanism and for connecting the same to another train-pipe



section, said coupling pipe operating said valve to hold the train-pipe open to the coupling pipe when the coupling end of the latter is coupled to another car section and when said coupling end is uncoupled and in hanging or unsupported position, and also to hold the train-pipe closed when said coupling end is uncoupled and hung up, and a hook or dummy coupling for holding the coupling-pipe in hung up position. 3rd. In combination with an air-brake train-pipe section, a coupling and coupling pipe attached to the train-pipe by a valve mechanism controlling the train-pipe passage, a pivotally supported hanger or dummy coupling operable to engage the coupling of the coupling pipe and to hold the same closed, and a handle or weight attached to said hanger and acting by gravity to hold said hanger in engagement with the coupling. 4th. In combination with a rigid air-brake train-pipe section and its coupling pipe, a valve mechanism connecting the pipes and controlling the train-pipe passage and operated by the coupling pipe, and a valve-retaining device acting upon the movable part of said valve to hold the same and the coupling pipe temporarily in on-lap or closed position, for the purpose set forth.

**No. 53,953. Primary Electric Battery.** (Pile électrique.)



Samuel Newton Smith and Edward Sabine Baring (Gould), both of Minneapolis, Minnesota, U.S.A., 4th November, 1896; 6 years. (Filed 20th March, 1896.)

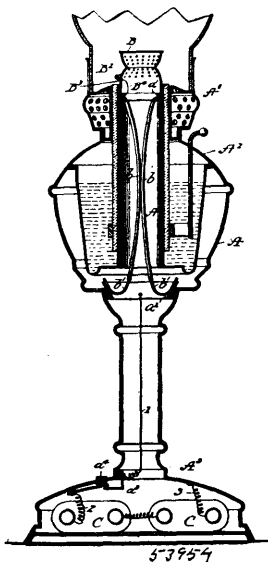
*Claim.*—The combination, in an electric primary battery, of the cell with the porous cup of clay provided therein and fastened to the bottom thereof, a cover, a cylindrical zinc element suspended from said cover and extending into the said cell outside of said porous cup, a porous cup of carbon also suspended from said cover and extending down into said cup of clay, a washer or packing provided between the cover and the top of said porous cup of clay for the purpose specified, electrical connections provided upon said cover with said zinc and carbon parts which parts are removable provided in said carbon cup, and a solution of common salt provided in the cell outside the cup of clay, substantially as described.

**No. 53,954. Electric Lighting Mechanism for Oil Lamps.**  
(Mécánisme électrique pour allumer les lampes à huile.)

The Empire Self-Lighting Oil Lamp Company, Jersey City, New Jersey, assignee of Svend Martin Meyer, Brooklyn, both in the U.S.A., 4th November, 1896; 6 years. (Filed 9th May, 1896.)

*Claim.*—1st. The combination, with a central draft oil lamp, of a high resistance electrical conductor located adjacent to the upper

end of the wick tube and attached to and supported by the air distributor. 2nd. The combination, with a central draft oil lamp,



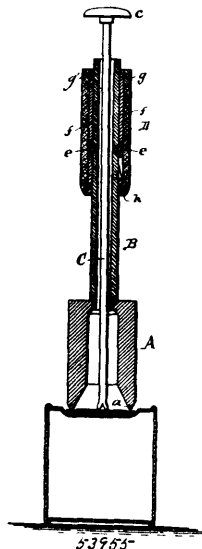
of a high resistance electrical conductor located adjacent to the upper end of the wick tube, one end of such electrical conductor being electrically connected to the air distributor, and the other end passing through the insulating material into the interior of the air distributor and connected with an electrical lead insulated from the said thimble. 3rd. The combination, with a central draft oil lamp, of an electrical conductor located adjacent to the upper end of the wick tube and attached to and supported by the air distributor and removable therewith from the lamp. 4th. The combination, with a central draft oil lamp, of an electrical conductor located adjacent to the upper end of the wick tube and supported by the air distributor, one end of such conductor being in electrical connection with such air distributor and the other insulated therefrom, an electrical conductor extending up through the inner wick tube of the lamp and means for automatically making the connection between the insulated end of such electrical conductor and the conductor in the inner wick tube when the air distributor is placed in position in the lamp. 5th. The combination, with a central draft oil lamp, of an electrical conductor located adjacent to the upper end of the wick tube, one end of such conductor being electrically in connection with the air distributor located at the upper end of the wick tube and the other end passing through the interior of the inner wick tube and electrically connected to one pole of the battery, the other pole of which is electrically connected to the body of the lamp. 6th. In a central draft lamp having a removable front, the combination with an electric battery of an electrical conductor supported upon the burner of said lamp adjacent to the top of the wick tube, with an electrical lead or leads extending therefrom through the interior of the wick tube to said battery. 7th. The combination, with an oil lamp having a removable front, of an electric lighting attachment supported upon the burner of the lamp and located adjacent to the upper end of the wick and means for automatically making electrical connection between the same and the conductor attached to the body of the lamp and connected with a battery carried by the said lamp when said front is placed in its proper position in the lamp body. 8th. In a central draft oil lamp, the combination of a high resistance electrical conductor located adjacent to the upper end of the wick tube, one end of which is electrically in contact with the air distributor and the other end of which passes through insulating material inserted in the air distributor, and a metal band securely fastened to the said air distributor but insulated therefrom, and spring fingers which automatically complete the electrical connection between the said ring and the insulated ring in the body of the lamp when the front of the lamp is placed in position in the lamp.

**No. 53,955. Soldering Iron. (Fer à souder.)**

The Sprague Manufacturing Company, assignee of John C. McIntyre, both of Farnham, New York, U.S.A., 4th November, 1896; 6 years. (Filed 16th September, 1896.)

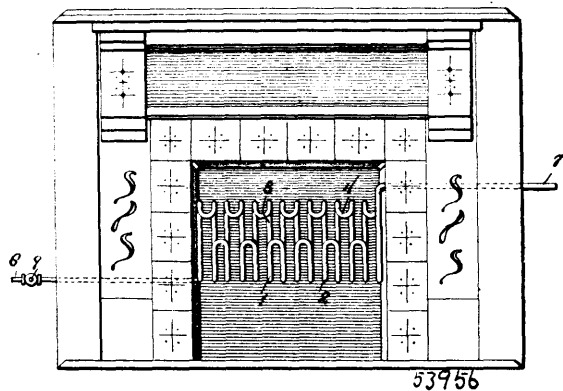
*Claim.* 1st. The combination with the rotary soldering block having a stem provided with a pin or projection, of a reciprocating handle sliding on said stem and provided with a spiral groove engaging with said pin or projection, substantially as set forth. 2nd. The combination with a hollow rotary soldering block and a hollow stem secured thereto and having a pin or projection, of a central rod passing loosely through said hollow block and stem, and a reciprocating handle sliding on said stem and having a spiral groove which engages with the pin or projection of the stem, sub-

stantially as set forth. 3rd. The combination with a rotary soldering block having a stem provided with a pin or projection, of an



actuating handle or sleeve capable of reciprocating on said stem and provided in its bore with raised spiral ribs separated by a space forming a spiral groove, said groove engaging with the pin or projection of said stem, substantially as set forth. 4th. The combination with a rotary soldering block having a stem provided with a pin or projection, of an actuating handle or sleeve capable of reciprocating on said stem and provided in its bore with raised spiral ribs separated by a space forming a spiral groove, said groove engaging with the pin or projection of said stem, and filling pieces or stops arranged between the end portions of said spiral ribs, substantially as set forth. 5th. The combination with a rotary soldering block having a stem provided with a pin or projection, of an actuating sleeve capable of reciprocating on said stem and composed of upper and lower rings, spiral ribs secured at their ends to said rings and forming a spiral groove which engages with the pin or projection of said stem, and a handle surrounding said spiral ribs and confined between said rings, substantially as set forth.

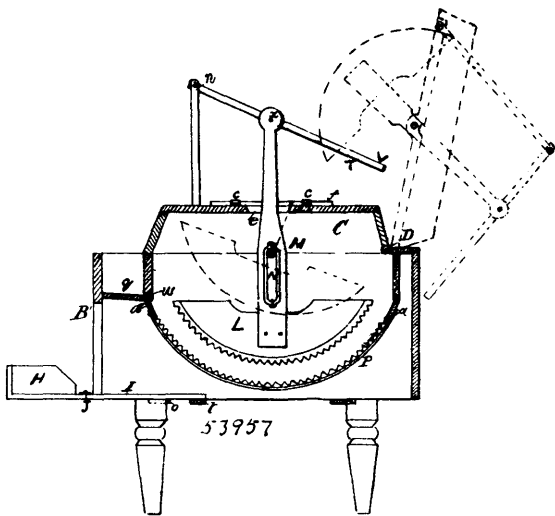
**No. 53,956. Grate. (Grille.)**



William Henry Page, Basic City, Virginia, U.S.A., 4th November, 1896; 6 years. (Filed 13th October, 1896.)

*Claim.*—1st. A grate consisting of a continuous tube constituting a series of bars, each of said bars communicating at one extremity with the bar preceding and at its other extremity with the bar next succeeding, said bars being bent to form the front, bottom, back and hood of the grate whereby the circulating medium is provided a continuous passage from one side of the fire place to the other, substantially as specified. 2nd. A grate consisting of a single continuous tube forming the front, bottom, back and hood of the grate, the front and back bars being vertically disposed, and the inlet and outlet pipes being located at the opposite ends of the front of the grate and in different planes, substantially as specified. 3rd. A grate consisting of a single continuous tube, the front, bottom, back and hood bars arranged as continuations of each other in the same vertical plane, the adjacent parallel bars being connected by bends located alternately at the top of the front bars and at the forward extremity of the hood bars, the inlet pipe communicating with the grate at the bottom of the front thereof, and the outlet pipe communicating with the front of the grate at a point above the hood, substantially as specified.

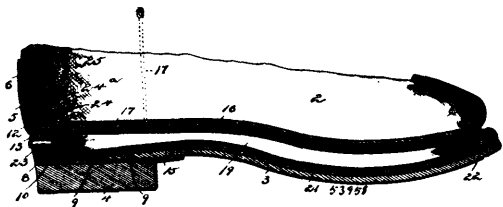
No. 53,957. Washing Machine. (Machine à laver)



Asa Leroy Burke, Hamilton, Ontario, Canada, 4th November, 1896; 6 years. (Filed 13th October, 1896.)

*Claim.*—1st. The combination in a washing machine, as described, of the cover C, hinged to the rear end of the suds box at D, to open up and extend back and rest on the end of the suds box, carrying with it the pedestals K, with the rocker L, and the levers S and T, as set forth. 2nd. The combination in a washing machine, as described, of the flexible bottom d, adapted to be taken out of the suds box and replaced, as and for the purpose set forth. 3rd. The combination in a washing machine, as described, of the hinged cover C, having slots e at each side for the pedestals k to work in. said slots having sliding covers f moving with the pedestals, and bands to hold them on the cover, as set forth. 4th. The combination in a washing machine, as described, of the side levers S, pivoted at their lower ends on the metal bands E, their upper ends pivoted at n to the inner ends of the side levers T, which branch out and extend backwards working in slots in the heads of the pedestals k, on screw pivots z, the extreme ends of said levers having the handle V for working the roller L fitted between them m, as set forth. 5th. The combination in a washing machine, as described, of the sliding folding tray H, in the end B<sup>1</sup>, of the suds box hinged at J, to the sliding part I, and adapted to slide on cross-bars at bottom of the said box, with the check bar as shown, and folding up flush with the end B<sup>1</sup> of the suds box, as set forth.

No. 53,958. Boot and Shoe. (Chaussure.)

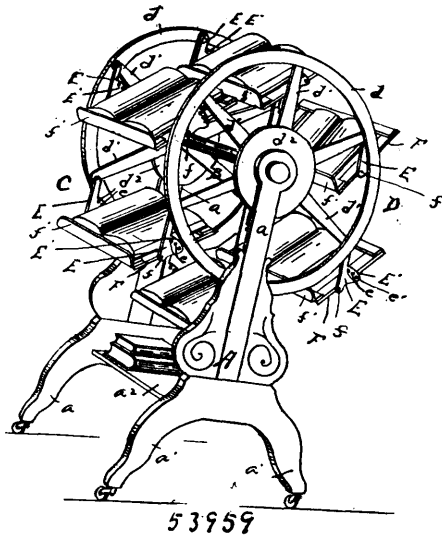


Ernest Moberley, Canton, Ohio, U.S.A., 4th November, 1896; 6 years. (Filed 13th October, 1896.)

*Claim.*—1st. In a boot or shoe, the sole and insole spaced apart to form an intervening air chamber, and an inflatable sack removably fitted in said chamber, the rear portion of the insole being left loose and constituting a flap which may be raised for giving access to the space underneath the same, substantially as described. 2nd. In a boot or shoe, the sole and insole spaced apart to form an intervening air chamber, in combination with an inflatable sack removably inserted in said chamber, the rear portion of the insole being loose and constituting a flap which may be raised for giving access to the space beneath the insole, and a catch for engaging and holding said flap depressed, substantially as described. 3rd. In a boot or shoe, a combined half heel and counter stiffener having an inwardly projecting ledge for the support of the insole and comprising a space below the plane of said ledge for the reception of an inflatable sack, substantially as described. 4th. In a boot or shoe, a combined half heel and counter stiffener having an inwardly projecting ledge for the support of the insole and comprising below the plane of said ledge, a space for the reception of an inflatable sack, and a bail-shaped wire having the rear portion of the insole attached thereto and having its extremities bent outward and inserted in openings in the counter stiffener, substantially as and for the purpose described. 5th. In a boot or shoe, a combined half heel and counter stiffener having an inwardly projecting ledge for the support of the insole and comprising thereunder a space for a pad or cushion, said device

also comprising a base plate for the attachment of the lower portion of the heel, and a forwardly projecting flap adapted to be secured to the bottom of the sole, substantially as described. 6th. In a boot or shoe, the sole and insole spaced apart to form an intervening air chamber, in combination with an inflatable sack interposed between the sole and insole, a protection leather extending around and enclosing said sack, and a reinforcement inserted between the edge of the inflatable sack and said protection leather, substantially as and for the purpose described.

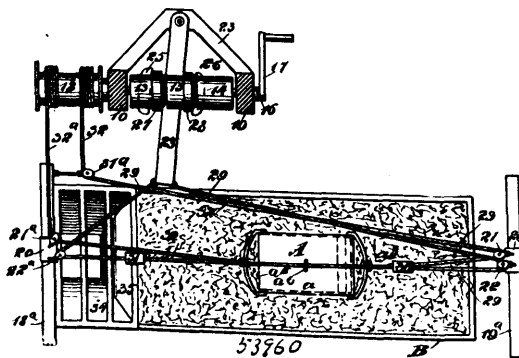
No. 53,959. Book Holder. (Porte-livre.)



James R. Gilman, Moriah, New York, U.S.A., 4th November, 1896; 6 years. (Filed 17th October, 1896.)

*Claim.*—1st. In a book holder, the combination of a supporting frame and a revolving rack carrying a series of pendent shelves, substantially as shown and described. 2nd. In a book holder comprising a supporting frame, a revolving rack carrying a series of pendent shelves, each shelf being adjustable, substantially as shown and described. 3rd. In a book holder, the combination of a supporting frame, of the revolving heads, and the pendent shelves arranged between said heads, substantially as shown and described. 4th. In a book holder, the combination with the supporting frame, the revolving heads, the pendent shelves and the locking or brake mechanism for holding the revolving rack in place, substantially as shown and described. 5th. In a book holder, the combination with the supporting frame, the revolving heads, the pendent arms attached to said heads, and the shelves adjustably mounted between said arms, substantially as shown and described. 6th. In a book holder, the combination of the main frame, the revolving heads, the pendent arms having supplemental arm portions provided with perforations, the shelves pivotally arranged between said arms, and the adjusting pins for holding the said shelves in their adjusted position, substantially as shown and described. 7th. The combination with the supporting frame and the revolving book rack, of a friction disc and tension washer or plate arranged between the member of the supporting frame and the friction disc, substantially as shown and described.

No. 53,960. Unloading Scraper. (Grattoir à bascule.)

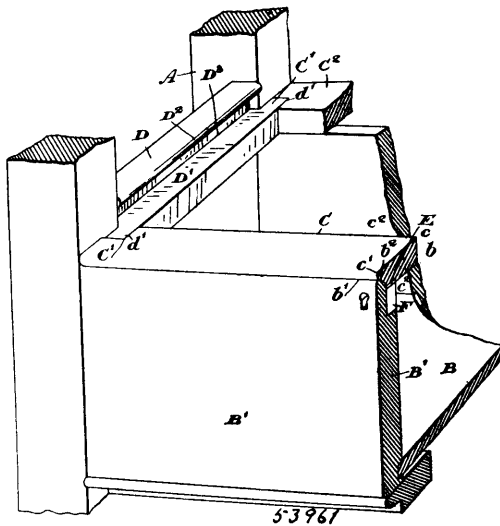


George Thomas Dixon, South Butte, Montana, U.S.A., 4th November, 1896; 6 years. (Filed 21st October, 1896.)

*Claim.*—1st. A scraper for unloading material from a car, the same consisting of a body portion open at the ends, a gate pivoted

within the rear end of the body portion, a stop for limiting the outward movement of the gate, a bail at each end of the scraper, cables attached to said bails for drawing the scraper lengthwise over a car, mechanism for operating the cables, and a shifting mechanism operated by the scraper, substantially as shown and described. 2nd. In an unloading device, the combination with a driving pulley, idlers located at each side of the driving pulley, a drive shaft, a straight belt and a crossed belt passed from the drive shaft to the idlers, the said belts being adapted to travel alternately upon the driving pulley, and a shifting lever operating the said belts, of a cable attached to the shifting lever and passed through guides substantially oppositely disposed, the said shifting cable being provided with stops, a scraper substantially inverted U-shape in cross section, having a bail at each end and a pivoted gate at its rear end, together with a stop limiting the movement of the gate in one direction, cables oppositely wound on the shaft to which the driving pulley is secured, the said cables being attached one to each bail, being likewise passed over guides, and a guide located on the scraper through which the shifting cable passes, the said guide being located upon that portion of the shifting cable between the stops, as and for the purpose specified. 3rd. In an unloading device, a power shaft, a driving shaft driven therefrom, two belts—a straight and a crossed belt—connecting the power shaft with the driven shaft through the medium of fast and loose pulleys, a drum carried by the said driven shaft, a scraper, a shifting lever operating the said belts, a shifting cable connected with the shifting lever and provided with stops, cables secured to the drum, being wound thereon in opposite directions and attached to opposite ends of the scraper, and a guide carried by the scraper, through which the shifting cable passes, as and for the purposes specified.

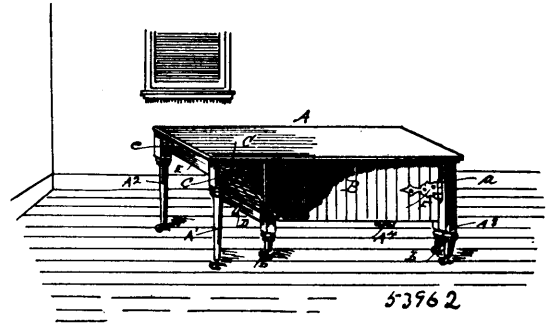
**No. 53,961. Bureau Drawer, etc. (Bureau-tiroir, etc.)**



Oliver Gabel Anderson, Woodstock, Ontario, Canada, 4th November, 1896; 6 years. (Filed 22nd October, 1896.)

*Claim.*—1st. The combination with the frame and parting strip, and longitudinal arc-shaped recess in the bottom of the parting strip at the front, of the drawer and drawer-front having the back of the top edge of the front level longitudinally and crosswise and a longitudinal lip formed at the front of the top edge of the drawer front and having the inner side of the lip arc-shaped correspondingly to the arc-shaped recess at the lower edge of the bead of the parting strip, the parts being arranged to abut when the drawer is closed and form a close joint and prevent binding of the drawer front, as and for the purpose specified. 2nd. In combination the drawer, the parting strips, the guide D pivotally swung in the frame at each side of the drawer, having edges against which the drawer abuts and means for limiting the lateral vertical swing of such parting strips, as and for the purpose specified. 3rd. In combination of the drawer, the parting strips, the guide D pivotally swung in the frame at each side of the drawer, the abutting and resting edges D<sup>2</sup> and D<sup>1</sup>, and groove D<sup>3</sup>, and means for limiting the lateral vertical swing of such parting strips, as and for the purpose specified. 4th. In combination the drawer, the parting strips, rectangular recesses formed at their ends next the posts, the guide D and rectangular projection D<sup>1</sup> formed in the end of the guides and extending into rectangular recesses C<sup>1</sup>, as and for the purpose specified. 5th. In combination the drawer, the parting strips, the guides, the posts A provided with holes in proximity to their inner edge, the pins extending outwardly from the ends of the guides and means for limiting the swinging movement of the guides, as and for the purpose specified.

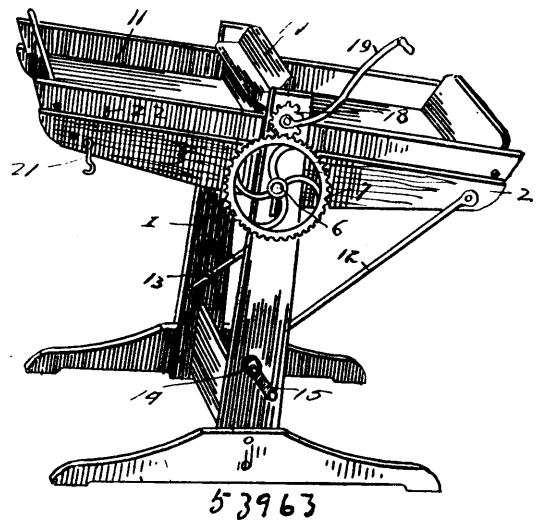
**No. 53,962. Table and Bath-Tub Combined. (Table et baignoire combinées.)**



William Henry Link, New Richmond, Wisconsin, U.S.A., 4th November, 1896; 6 years. (Filed 23rd October, 1896.)

*Claim.*—A combined table and bath-tub, the table having rigid legs at one end and a swinging leg and end piece at the other end, a swinging bath-tub hinged at one end to a rigid leg of the table and having a square or right angular free end extending up to the swinging leg and end piece of the table and adapted to swing under the table or out from the same, and a fastening device for locking the swinging device in its closed position when the bath-tub is under the table, substantially as shown and described.

**No. 53,963. Butter Worker. (Batte à beurre.)**



Wadsworth F. Waters, East Johnson, Vermont, U.S.A., 4th November, 1896; 6 years. (Filed 24th October, 1896.)

*Claim.*—1st. In a butter worker, the combination of a pair of supports, a frame pivoted between said supports, rods pivoted to said frame and adjustably secured to the supports, a tray carried by the frame, a butter-working roller fitting said tray, means for revolving said roller and means for reciprocating the tray upon the frame, substantially as described. 2nd. In a butterworker, the combination of a pair of supports, a frame pivoted between said supports, rods pivoted to said tray and adjustably secured to the supports, a tray carried by the frame, a chain 9 secured to said tray, shaft 6 extending through one of the pivots of the frame, a sprocket carried by the shaft and engaging chain 9, gear 7, roller 17, removably journaled in the supports, gear 18, and crank 19, substantially as described. 3rd. In a butterworker, the combination of a pair of supports, a frame pivoted between them, rods pivoted to said frame, means for adjustably securing said rods to the supports, whereby the frame may be held at any incline, means for vertically adjusting the frame on the supports, a tray carried by the frame, means for reciprocating said tray, a butter-working roller and means for revolving it, substantially as described and set forth.

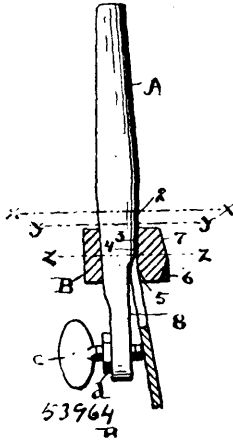
**No. 53,964. Saw-Set, etc. (Fer à contourner, etc.)**

The Spelman Manufacturing Company, assignee of Irwin H. Spelman, both of Cortland, Ohio, U.S.A., 4th November, 1896; 6 years. (Filed 16th September, 1896.)

*Claim.*—1st. The handle A, having the flat surface 8 at its lower end, and the shoulder 4 where said surface terminates, in combination with the head on said standard and a recess in said head oppo-

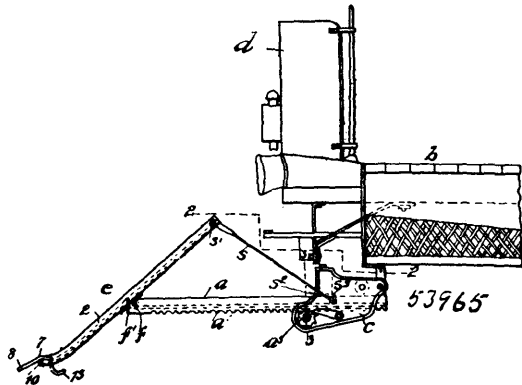


site shoulder 4 and rounded on its face, substantially as set forth. 2nd. The handle having a set-screw in its lower end to bear against



the side of the saw, and a shoulder 4 above said screw, in combination with the head having a bevelled portion 5, and a recess above said bevelled portion for the point of the tooth to enter, substantially as set forth. 3rd. The handle, and a head on the handle above its outer end having a recess with under cut converging sides adapted to receive a bevelled saw tooth, substantially as described.

**No. 53,965. Car Fender. (Défense de chars)**

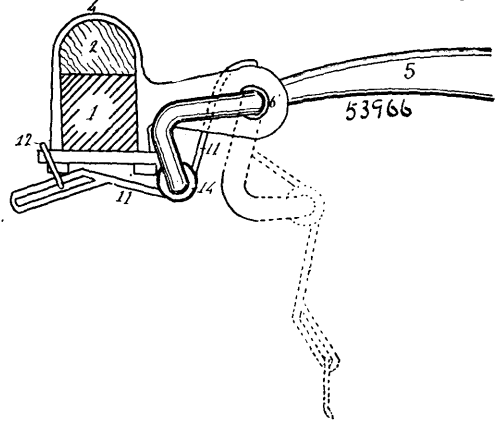


Harold Arthur Webster and Herbert Bryan Newton, both of Haverhill, Massachusetts, U.S.A., 4th November, 1896; 6 years. (Filed 21st October, 1896.)

*Claim.*—1st. A car fender for tramway cars, constructed and connected with a car as above described, and as shown in the accompanying drawing. 2nd. A car provided with a frame or support projecting forward from the platform thereof, and a fender pivotally connected with said support with its centre of gravity forward of its pivotal point, and adapted to swing from an inclined position with its forward end in close proximity to the track, to a substantially horizontal position, with its forward end elevated, stop mechanism independent of the car track, and carried by a frame or support for limiting the downward movement of the forward end of the fender, and having provision for permitting a rebounding or upward yielding movement of said end, and means for retiring the fender and its frame or support, and stop mechanism beneath the platform, substantially as shown and described. 3rd. A car fender comprising a frame or support pivotally connected beneath its front and rear edges to a support on the car, and having its forward portion curved or deflected from the plane of the body of the fender, and a flexible extension or buffer projecting from said forward portion, and comprising a bar extending across the forward portion of the fender, and arms projecting rearwardly from the ends of said bar, and pivotally connected with the fender to permit an upward and rearward swinging movement of the bar, the fender being provided with stops to limit the downward movement of said arms and bars, substantially as shown and described. 4th. A car fender comprising a support carried by a car body, a fender pivotally connected to said support at a point between the front and rear ends of the fender, and with its centre of gravity forward of its pivotal point, and equalizing connections between the pivoted fender and a portion of the car truck, whereby rocking of the car body on the truck will oscillate the fender, and retain the lower end of the latter adjacent to but out of connection with the track, substantially as shown and described. 5th. A car fender comprising a support carried by the car body, a fender pivotally connected to said support at a point between the front and rear

ends of the fender and with its centre of gravity forward of its pivotal point, and equalizing connection between the pivoted fender and a portion of the car truck, said connections including a lever connected at one end to the truck, and having its other end provided with a flexible but inelastic connection leading to the fender, substantially as shown and described.

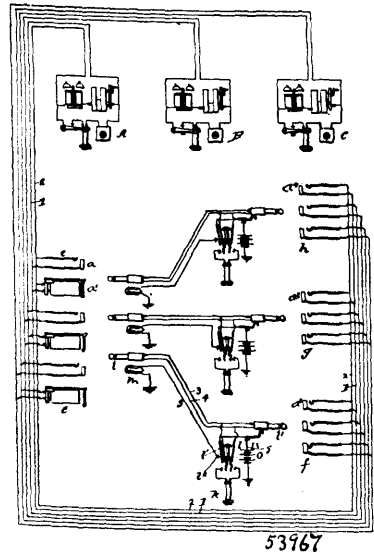
**No. 53,966. Thill Coupler. (Armon de limonière.)**



George S. Preston and Samuel Stinson, both of Titusville, Pennsylvania, U.S.A., 4th November, 1896; 6 years. (Filed 1st October, 1896.)

*Claim.*—1st. An anti-rattling thill coupler, consisting of the bent rod with the parallel arms 8 and 9 and the elbow 10 formed as shown, in combination with the spring 11 and the chair link 12, constructed and applied substantially as shown and described. 2nd. A thill coupler, consisting of the bent rod with the parallel arms 8 and 9 and with the elbow 10 formed as shown, the arm 8 for insertion in place of the coupling bolt, the arm 9 having hinged on it the spring 11, one end of which is adapted to bear against the rear end of the shaft or pole and the other end to be brought under the axle and secured to the clip by the chain link 12, all the parts working in combination substantially as shown and described.

**No. 53,967. Telephone Switchboard. (Appareil d'échange de téléphone.)**



The Bell Telephone Company of Canada, Montreal, Quebec, Canada, assignee of Frank Robert McBERTY, Dower's Grove, Illinois, U.S.A., 4th November, 1896; 6 years. (Filed 14th October, 1896.)

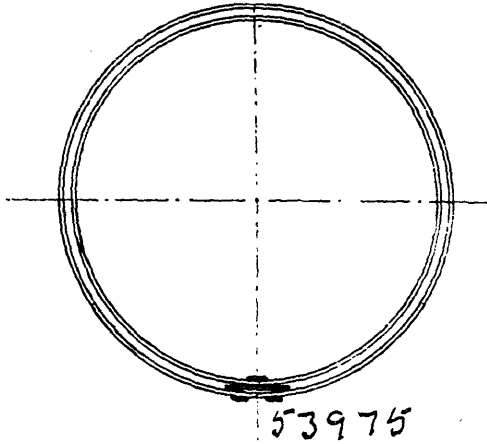
*Claim.*—1st. The combination with an annunciator board, in which are located the annunciators and terminal sockets of a number of telephone lines, answering boards in each of which are located terminal spring-jacks of said lines, and trunk lines from the annunciator board to the different answering boards, of a signal at the annunciator board for each answering board, and means for exciting each of said signals controlled at the corresponding answering board, substantially as described. 2nd. The combination with an annunciator board, wherein are located the annunciators and terminal sockets of a number of telephone lines, answering







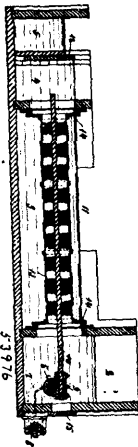
**No. 53,975. Triple Button. (Triple bouton.)**



August Johannes Theodor Sebelir, Skiel, Prussia, Germany, 6th November, 1896; 6 years. (Filed 14th September, 1896.)

*Claim.*—A collar button having on one face a head for holding the button on the neck band and on the other face two heads, of which one is for each end of the collar, substantially as herein shown and described.

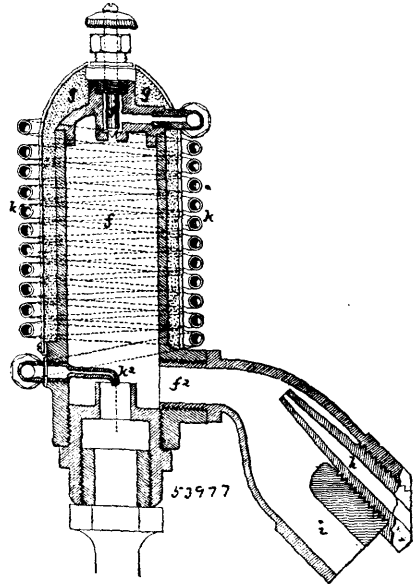
**No. 53,976. Pulp Strainer. (Couloir pour la pulpe.)**



Tvar Axel Ferdinand Wallberg, Karlstad Mekaniska, Verkstad and Johan Daniel Ullgren, Wernbol, Katrineholm, both in Sweden, 6th November, 1896; 6 years. (Filed 26th June, 1896.)

*Claim.*—1st. A process for straining wood pulp or other fibrous substances, consisting in continuously conducting the water or other fluid in which the fibrous material is suspended through a tube or drum which is composed partially or wholly of sieve or strainer plates and in causing the fluid to alternately recede from and strike against the sides of the tube through the medium of an elastic rod or plate arranged in the tube and having an undulatory vibrating motion in the direction of the length of the tube, substantially as described. 2nd. Apparatus for straining wood pulp or other fibrous substances, consisting of a tube 13 of any suitable cross section and composed wholly or partially of sieve or strainer plates, in which tube an elastic rod or plate 10 is arranged which is connected at one or both ends with a suitable arrangement (such as for instance an eccentric) adapted to impart an undulatory vibrating motion to the rod or plate, substantially as described and illustrated in the drawing. 3rd. Apparatus for straining wood pulp or other fibrous substances, consisting of a tube 13 of any suitable cross section and composed wholly or partially of sieve or strainer plates, which tube is rotatively mounted in the partition walls of a vessel or container and in which tube an elastic rod or plate 10 is arranged which is connected at one or both ends with a suitable arrangement (such as for instance an eccentric) adapted to impart an undulatory vibrating motion to the rod or plate, substantially as described and illustrated in the drawing.

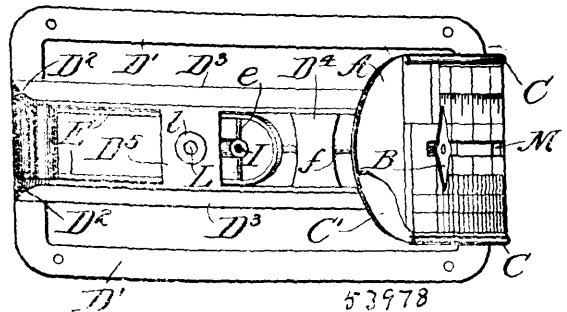
**No. 53,977. Ventilating Apparatus. (Appareil de ventilation.)**



Charles Harris and Thomas Francis Evans, both of Manchester, Lancaster, England, 6th November, 1896; 6 years. (Filed 27th July, 1895.)

*Claim.*—1st. The combined apparatus, consisting of an air or steam chamber, with improved nozzle, valve, and cooling coil, with the necessary fittings thereof, as described hereinbefore and shown in the accompanying drawing, and a series of concentric rings, for the purposes set forth. 2nd. The improved nozzle, with adjustable plates for the injection of compressed air, steam or gases, substantially as described and shown hereinbefore and in the accompanying drawings.

**No. 53,978. Postal Weighing Scale. (Balance à bascule postale.)**

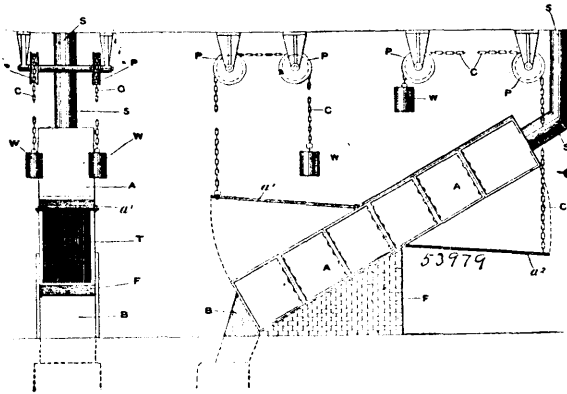


Essington N. Gilfillan, Chicago, Illinois, U.S.A., 6th November, 1896; 6 years. (Filed 8th April, 1895.)

*Claim.*—1st. In a weighing scale or balance, the combination with a frame, a scale pan, an oscillatory index connected with said pan and means for yieldingly supporting said pan and index, of a scale plate having its surface curved in an arc concentric with the arc described by said index, substantially as set forth. 2nd. In a weighing scale or balance, the combination with a frame, a scale pan, an oscillatory index arm connected with said pan and means for yieldingly supporting said pan and arm, of a scale plate having its surface curved in an arc concentric with the arc described by said arm, and an index secured transversely to said arm and projecting across the scale plate, substantially as set forth. 3rd. In a weighing scale or balance, the combination with a frame, a scale pan, an oscillatory index arm connected to said scale pan and means for yieldingly supporting said pan and arm, of a scale plate provided with a longitudinal slot and having its surface curved in an arc concentric with the arc described in such index arm, said index arm projecting through said slot and carrying a transversely arranged index extending across said plate, substantially as set forth. 4th. In a weighing scale or balance, the combination with a frame, a scale pan and means for yieldingly supporting said pan, of a scale plate having a cylindrical or curved surface, a pivoted oscillatory index arm having an upwardly bent or angular extension, carrying an index arranged transversely thereof across the face of said scale

plate and said arm being connected with said scale pan, and means for yieldingly supporting said arm, the surface of said scale plate being presented upwardly or at an angle to the perpendicular, substantially as set forth. 5th. In a weighing scale or balance, the combination with a frame, of a pair of spring-actuated arms pivoted in said frame, a scale pan having a stem pivoted to said arms and projecting above said frame, an index carried by one of said arms, and a scale plate having its surface curved on an arc concentric with the arc described by the arm carrying said index, substantially as set forth. 6th. In a weighing scale or balance, the combination with a frame, a pan, a scale plate secured thereto and having a slot therein, and a spring-actuated arm to which said pan is connected, pivoted to said frame, of an upwardly bent extension on said arm projecting through said slot, and an index on said extension, the scale plate having its surface bowed in an arc concentric with the arc described by such arm, substantially as set forth. 7th. In a weighing scale or balance, the combination with a frame, a pivoted oscillatory index arm connected to said scale pan and means for yieldingly supporting said pan and arm, of a scale plate provided with a longitudinal slot and having a cylindrical surface formed on an arc concentric with the arc described by said index arm, and being provided on one side of said slot with characters indicating weight and on the other side with characters indicating money, said index arm being projected through said slot, and a transversely arranged index on the end of said index arm, having two pointers projecting in opposite directions across said slot, substantially as set forth. 8th. In a weighing scale or balance, the combination with a frame, a scale pan, a pivoted oscillatory index arm connected with said pan and means for yieldingly supporting said pan and arm, of a slotted scale plate through which said index arm protrudes, said scale plate having a cylindrical surface bowed on an arc concentric with the arc described by said arm, the lower end of said scale being substantially level with the horizontal diameter of the said arc, and the said index arm at a point between its outer end and the point of attachment with the said pan, being bent upwardly, substantially as and for the purpose set forth.

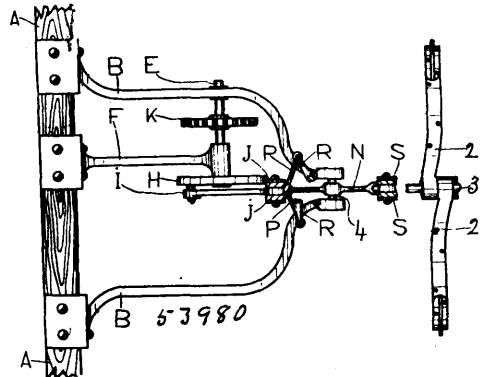
**No. 53,979. Machine for Drying Tubes.**  
(Machine à sécher les tubes.)



Robert Wootton, Birmingham, Warwick, and Mary Jane Hewitt, Smethwick, Stafford, all in England, 6th November, 1896; 6 years. (Filed 18th May, 1896.)

*Claim.*—1st. A tube drying machine, consisting of a tube holding receptacle provided with inlets and outlets for the drying mediums, an opening into the said receptacle to permit of the admission or removal of the tubes, a door to close the said opening, and means for supporting the tube holding receptacle at the required inclination, substantially as set forth. 2nd. A tube drying machine, consisting of a tube holding receptacle set at an inclination, and provided with an inlet and an outlet for the drying medium, an opening to permit of the admission or removal of its contents, a perforated plate over the lower inlet, and means for supporting the said receptacle, substantially as set forth. 3rd. A tube drying machine, consisting of a tube holding receptacle, an inlet at the bottom of the said receptacle for the drying medium, a perforated plate covering the said inlet spindles connected to the said support, and bearings for the said spindles, substantially as set forth. 4th. A tube drying machine, consisting of a tube holding receptacle, provided with an inlet and an outlet for the drying medium, a perforated plate over the lower inlet, a flue connected to the said inlet, to convey the drying medium to the receptacle, openings in the receptacle to permit of the admission or removal of the tubes, and door to close the said opening, substantially as set forth. 5th. A tube drying machine, consisting of a tube holding receptacle, provided with an inlet and an outlet for the drying medium, a perforated plate to cover the said inlet, a flue connected to the said inlet to convey the drying medium to the said receptacle, an opening in the said receptacle to permit of the admission or removal of its contents, a door to close the said opening, and trunnions upon which the machine is mounted, substantially as set forth.

**No. 53,980. Grain-shocking Machine.**  
(Machine à engerber.)

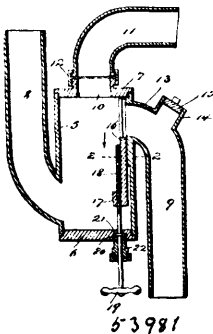


George Sheldon Bingham, Hamilton, Ontario, Canada, 7th November, 1896; 6 years. (Filed 27th October, 1896.)

*Claim.*—1st. The combination in a grain-shocking machine, of extended supporting arms, capable of rigid attachment to a reaping and binding machine, and provided with an open cylindrical sheaf receptacle, having adjustable sides, pivoted to said arms for tilting purposes, substantially as described. 2nd. The tapered and cylindrical receptacle, composed of outer metal ribs with an inner smooth lining secured thereto and formed into two semi-circular sides having open top and ends, the lower part of said ribs pivoted together on horizontal pin or bar for contracting and expanding purposes and adapted to receive pivotal connection to and in combination with a reaping and binding machine, substantially as described. 3rd. The herein described receptacle, pivoted to a reaping and binding machine by means of extended supporting arms and bracket provided with a driven transverse shaft, and capable of rear-tilting movement by means of crank wheel on said shaft, connecting rod and strap connection combined, substantially as described. 4th. In a grain-shocking machine, a sheaf receptacle constructed in two halves and tapered, which when brought together in position as shown and the lower parts pivoted or hinged together, a cylindrical receptacle is formed, one end of which is larger in capacity than the other, and capable of pivotal connection to and combination with a reaping and binding machine, substantially as described. 5th. In a grain-shocking machine, extending supporting arms conveniently and rigidly attached to a reaping and binding machine and capable of supporting in pivotal connection and combination a cylindrical sheaf receptacle having open ends and partially open at the top and tapered to facilitate the receiving of and the holding of sheaves, and capable of side contraction and widening out of the two sides of the receptacle to compress and then to free the shock of sheaves to facilitate the leaving of the same from said receptacle, substantially as described. 6th. A cylindrical sheaf receptacle in two halves and tapered, which when brought together is of cylindrical construction, the lower parts being pivoted or hinged in proximity and apart at the top, to admit sheaves, and capable of pivotal connection to a reaping and binding machine by means of extending and supporting arms, in combination with applied mechanism for the rearwardly tilting of the same to facilitate the egress of the shock, substantially as described. 7th. A sheaf receptacle in two halves tapered, which when in position are of cylindrical form, the lower parts of said halves being pivoted or hinged in proximity and open at the top, to admit sheaves, and capable of pivotal connection to a reaping and binding machine by means of supporting arms in combination with applied and connected mechanism for the purpose of partially closing and opening out of the upper parts of sides of receptacle to compress and then to free the shock, and also the rearwardly tilting of the same to facilitate the egress of the shock, substantially as described. 8th. The combination of the two-sided cylindrical receptacle pivoted or hinged to a lower pivotal bar and capable of having its upper sides opened out by means of a strap connected to said lower bar, a rear rod M connected to said strap and to bent lever N pivoted to the outer lower part of an arm attached to reaping and binding machine, the levers R forming lower extensions of the central outer ribs 2 of receptacle and connected to the said bent arm by means of the adjusting rods P, substantially as described. 9th. The combination of the receptacle pivoted or hinged to a lower pivotal bar and capable of being rearwardly tilted by means of strap connected to forward part of said pivotal rod, a crank on driven shaft in bearing on extended arms secured to reaping and binding machine and connected by rod I, the upper outer end of said extended arms pivoted to central pivotal rod of receptacle for tilting purpose, substantially as described. 10th. In a grain-shocking machine, consisting of the receptacle pivoted to a reaping and binding machine by means of rigid arms and bracket, having pivotal centre D and connection T, and tilted by means of a crank wheel on driven shaft, and rod I connected to lower pivotal bar 3 of receptacle in combination with the rear rod M connected thereto, the bent lever N pivoted to said rigid arms, the rods P, in connection with the receptacle levers R, to slightly

close the sides of receptacle on their pivotal bar 3, substantially as described. 11th. The combination of the rod M connected to receptacle by pivotal bar 3 and strap S, the bent lever N pivoted on arms B, the adjusting rods P connected to said bent lever and to the receptacle levers R, which form a part of the central ribs 2 of the automatic tilting and side-opening receptacle, substantially as described. 12th. In a grain-shocking machine, the herein described receptacle capable of opening out on its horizontal pivotal bar or pin 3 and arranged to pivot, for tilting purposes to a reaping and binding machine, by means of arm supports with bracket F and pivotal centre, and having driven transverse shaft provided with crank wheel and connecting rod, with strap, in combination with the rear rod M, connected by means of strap S to pivotal bar 3, the bent lever N pivoted on pin 4, in end of supporting arms, the adjusting rods P connected to said bent lever and to the receptacle levers R, which form a part of central ribs 2 of receptacle sides, to open the same, substantially as described.

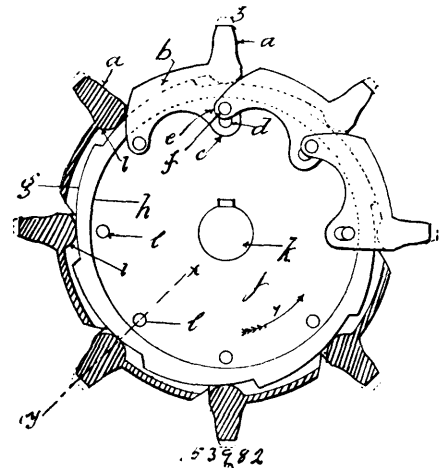
**No. 53,981. Trap for Sinks. (Trappe d'évier.)**



Omer LaRue, Putnam, Connecticut, U.S.A., 7th November, 1896; 6 years. (Filed 26th October, 1896.)

*Claim.*—1st. A trap, consisting of a casing, provided with a drainage pipe, and a sliding valve, which is adapted to close the communication between said casing, and said pipe, and said drainage pipe being provided with means for flushing or cleaning the same, substantially as shown and described. 2nd. A trap, consisting of a casing, provided with a drainage pipe, and a sliding valve, which is adapted to close the communication between said casing and said pipe, and said drainage pipe being provided with means for flushing or cleaning the same, and said sliding valve being operated by a screw-threaded rod, substantially as shown and described. 3rd. A trap, consisting of a casing, provided with a drainage pipe, and a sliding valve, which is adapted to close the communication between said casing and said pipe, and said drainage pipe being provided with means for flushing or cleaning the same, and said sliding valve being operated by a screw-threaded rod, and the trap being also provided with a vent above the point where the drainage pipe communicates therewith, substantially as shown and described. 4th. A trap of the class herein described, consisting of a cylindrical casing, having a removable top and bottom, a vent tube detachably connected with the top, an escape pipe connected with the side thereof below the top, and a sliding valve operated by a screw-threaded rod, which passes through the detachable bottom, and which is adapted to close the communication with the escape pipe, substantially as shown and described. 5th. A trap of the class herein described, consisting of a cylindrical casing, having a removable top and bottom, a vent tube detachably connected with the top, an escape pipe connected with the side thereof, below the top, and a sliding valve operated by a screw-threaded rod which passes through the detachable bottom, and which is adapted to close the communication with the escape pipe, said escape pipe being also provided with a tubular extension, whereby a flushing pipe may be connected therewith, substantially as shown and described. 6th. A trap of the class herein described, consisting of a cylindrical casing, having a removable top and bottom, a vent tube detachably connected with the top, an escape pipe connected with the side thereof, below the top, and a sliding valve operated by a screw-threaded rod, which passes through the detachable bottom, and which is adapted to close the communication with the escape pipe, said escape pipe being also provided with a tubular extension, whereby a flushing pipe may be connected therewith, and said casing being also provided with an induction pipe which communicates therewith, below the communication of the escape pipe substantially as shown and described. 7th. A trap of the class herein described, provided with a vent tube, and an escape pipe, which communicates therewith below the communication with the vent tube, the communication with the escape pipe being controlled by a valve, which is adapted to be operated by a screw-threaded rod, which passes through the casing of the trap, substantially as shown and described.

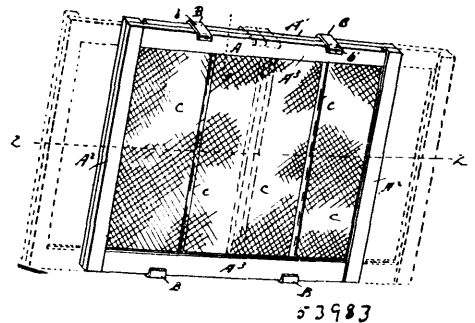
**No. 53,982. Chain Driving Wheel. (Chaine de roue conductrice.)**



Harry Morrison, Stratford, Essex, England, 7th November, 1896; 6 years. (Filed 26th October, 1896.)

*Claim.*—1st. In chain driving wheels, the radial adjustment of the teeth or spurs thereon for the purpose described. 2nd. In chain driving wheels, teeth or spurs attached to or formed integral with connecting links movably attached or pivoted together around a sleeve or drum having inclined surfaces or planes, said sleeve or drum surrounding the driving wheel, which is keyed to the driving shaft or spindle, for the purpose of enabling the teeth or spurs to be adjusted in a radial direction, substantially as described and illustrated.

**No. 53,983. Window Screen. (Store de fenetre.)**



Winfield B. Phillips, Trenton, Michigan, U.S.A., 7th November, 1896; 6 years. (Filed 24th October, 1896.)

*Claim.*—A window screen having three sided frames A A', laterally adjustable the one with respect to the other, each of said frames constructed with a vertical end bar A<sup>2</sup>, and with upper and lower horizontal bars A<sup>3</sup>, A<sup>3</sup>, rabbeted on their adjacent faces at their inner edges, combined with a screen fabric engaging with the rabbeted edges of each frame, and provided with a binding of sheet metal at its inner edges, the upper and lower bars A<sup>3</sup> of one of said frames being constructed with straight sides, U-shaped grooves in one of the vertical faces thereof and extending continuously from end to end of said bars, the upper and lower bars A<sup>3</sup> of the other frame constructed with correspondingly shaped tenons on the vertical faces thereof adjacent to said grooves extending continuously from end to end of said bars and having movable engagement in the grooves of the corresponding frame, the upper and lower faces of said grooves and tenons being horizontal and parallel throughout, the adjacent grooved and tenoned bars A<sup>3</sup> being provided with perpendicular parallel faces a<sup>3</sup>, a<sup>3</sup>, extending from the groove and tenon respectively inward to the rabbeted portion of the bars, and clips secured to the upper and lower bars of one of said frames, engaging the corresponding upper and lower bars of the opposite frame to hold the two frames together and to permit of their lateral adjustment, substantially as set forth.

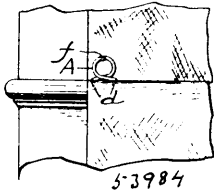
**No. 53,984. Carpet Fastener.**

(Appareil à assujettir les tapis.)

William D. Le Fevre, Littlestown, Pennsylvania, U.S.A., 7th November, 1896; 6 years. (Filed 20th October, 1896.)

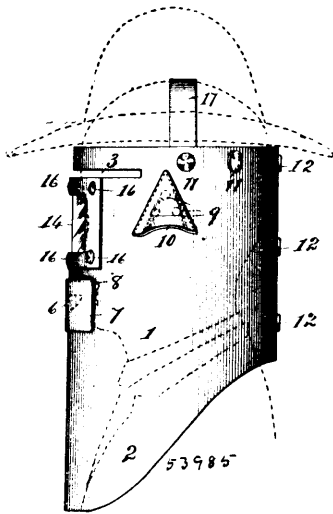
*Claim.*—1st. As a new article of manufacture, a carpet fastener, comprising a single piece of wire, bent upon itself to form a body A of any desired outline, securing points d projecting downwardly from the opposite ends of said wire, and a securing point f projecting

laterally in an upwardly-inclined direction from said wire at the body portion A, substantially as described. 2nd. A carpet fastener,



having a body A, comprising a single piece of wire, bent upon itself at b to form different desired figures, and crossed at c to form spring-legs C, C', securing points d projecting from said spring-legs C, C', and a securing point f projecting from the body A, laterally in an upwardly inclined direction, substantially as described.

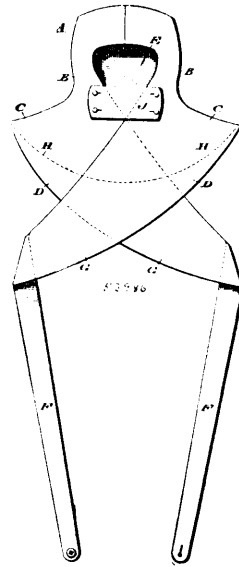
**No. 53,985. Head and Neck Protecting-Attachment for Hats, Caps and Bonnets.** (*Attache protecteur de la tête et du coup pour chapeaux, casques, etc.*)



Adna van Wormer, St. Louis, Missouri, U.S.A., 7th November, 1896; 6 years. (Filed 17th October, 1896.)

*Claim.*—1st. The herein described head apparel or protector, comprising an apron constructed with a downwardly pending portion and adapted to be passed around and in the rear of the wearer's head, said apron being constructed with protected apertures that are adapted to lie adjacent the eyes, ears and mouth of the wearer. 2nd. In a device of the class described, an apron adapted to pass around and be fastened together in the rear of the wearer's head and constructed with a transverse slot adapted to engage the visor of the cap of the wearer. 3rd. A device of the class described, comprising an apron constructed of flexible water-proof material adapted to pass around and be fastened together in the rear of the wearer's head and provided with a transverse slot adapted to engage the visor of the wearer's cap, and also provided with a rectangular aperture located immediately beneath the transverse slot. 4th. A device of the class described, comprising an apron provided with a downwardly pending portion and having a transverse slot beneath which is located a rectangular aperture, said apron being also provided with mouth and ear apertures located respectively below and on each side of the first mentioned rectangular aperture, said mouth and ear apertures being provided with protecting flaps. 5th. In a device of the class described, a rectangular apron having a downwardly pending portion, said apron being provided with a transverse slot through which the visor of the wearer's cap passes, triangular flaps sewn or fixed to the exterior of the apron in such a manner as to cause their lower edges to bulge outwardly, said flaps overlying and protecting a plurality of apertures so located as to coincide with the ears of the wearer. 6th. In a device of the class described, the combination of an apron provided with a downwardly pending portion adapted to pass around and be fastened at the rear of the head of the wearer and constructed with protected apertures and openings for the eyes, mouth and ears of the wearer, and a strap adapted to be secured to the upper edges of the apron and pass over the crown of the head of the wearer. 7th. In a device of the class described, the combination of an apron constructed with a downwardly pending portion and with protected ear and mouth apertures, and a flexible transparent section adapted to close the rectangular aperture that is so located as to coincide with the eyes of the wearer.

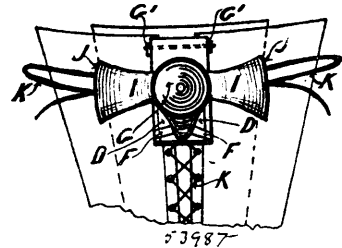
**No. 53,986. Hood. (Capuchon.)**



Moses Dubinsky, Max J. Nathan and Moses Eisenberg, all of Philadelphia, Pennsylvania, U.S.A., 7th November, 1896; 6 years. (Filed 19th October, 1896.)

*Claim.*—1st. A hood consisting of a head portion, and a cape depending therefrom and having neck and shoulder portions and crossed tabs, the bases of the shoulder portions and tops of the tabs being extended laterally, and the tabs continued forming bands which are adapted to be wrapped and secured about the person of the wearer. 2nd. A hood consisting of a head portion, a cape depending therefrom and having neck and shoulder portions and crossed tabs, the bases of the shoulder portions and tops of the tabs being extended laterally, and the tabs continued forming bands, which are adapted to be wrapped and secured about the person of the wearer, said hood having within the base portion thereof an opening for the face and a closing flap for said opening. 3rd. A hood consisting of a head portion, a cape depending therefrom and having neck and shoulder portions, and crossed tabs, and means for fastening, the bases of the shoulder portions and tops of the tabs being extended laterally.

**No. 53,987. Boot and Shoe. (Chaussure.)**



Augustus Gross, Sydney, New South Wales, 7th November, 1896; 6 years. (Filed 15th October, 1896.)

*Claim.*—1st. In the construction of all classes of lace boots or shoes, a clamp or lock secured in any suitable manner to the tongue, for the purpose of keeping said tongue in the centre of the front of the boot or shoe and for clasping the lace after being tied and preventing it becoming untied, except when required, substantially as herein described, explained and illustrated in the drawings. 2nd. In the construction of all classes of lace boots and shoes, a tongue and lace lock such as G provided with teeth on the inside of the extended sides, a spring such as D, a frame or casing such as A secured to the tongue of the boot or shoe, substantially as herein described, explained and illustrated in the drawing. 3rd. The combination and arrangement of the various parts herein described, explained and illustrated, all together forming the improvements in boots and shoes, substantially and for the purposes set forth.

**No. 53,988. Ventilated Boots and Shoes.**

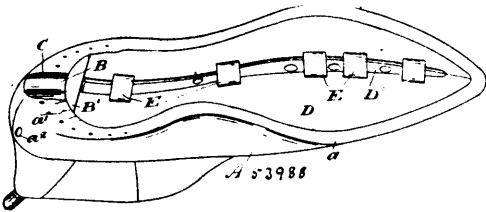
(*Chaussure ventilée.*)

William Wilson, assignee of Melville Durell, both of Toronto, Ontario, Canada, 9th November, 1896; 6 years. (Filed 22nd October, 1896.)

*Claim.*—1st. In a ventilated boot or shoe, the combination with a central channel extending longitudinally between the outer sole and

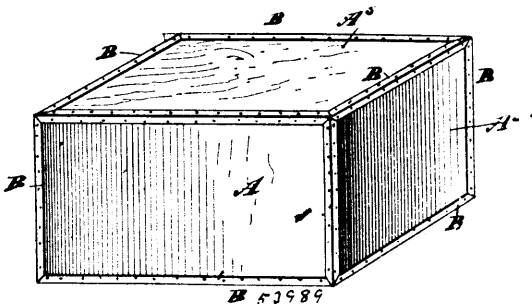


inner sole and provided with perforations in the inner sole, of the counter having a central substantially vertical channel cut in it



forming a continuation of the main longitudinal channel, a lining or covering closing the open side of the counter channel and eyelet holes extending from such channel through the heel portion, as and for the purpose specified. 2nd. In a ventilated boot or shoe, the combination with a central channel extending longitudinally between the outer sole and inner sole and provided with perforations in the inner sole, of a counter having a central substantially vertical channel cut in it forming a continuation of the main longitudinal channel, a lining or covering closing the open side of the counter channel, eyelet holes extending from such channel through the heel portion and a bridge spanning the channel groove of the counter, as and for the purpose specified. 3rd. In a ventilated boot or shoe, the combination with a central channel extending longitudinally between the outer sole and inner sole and provided with perforations in the inner sole, of the counter having a central substantially vertical channel cut in it forming a continuation of the main longitudinal channel, a lining or covering closing the open side of the counter channel, eyelet holes extending from such channel through the heel portion and a channel support located at the bottom of the counter channel groove and extending forward into the longitudinal channel between the heel and inner sole, as and for the purpose specified. 4th. In a ventilated boot or shoe, the combination with a central channel extending longitudinally between the outer sole and inner sole and provided with perforations in the inner sole, of the counter having a central substantially vertical channel cut in it forming a continuation of the main longitudinal channel, a lining or covering closing the open side of the counter channel, eyelet holes extending from such channel through the heel portion, a channel support located at the bottom of the counter channel groove and extending forward into the longitudinal channel between the heel and inner sole and a supplemental cork sole inserted between the inner sole and outer sole and provided with a central channel forming a continuation of the counter channel and extending nearly to the front of the sole, as and for the purpose specified. 5th. In a ventilated boot or shoe, the combination with a central channel extending longitudinally between the outer sole and inner sole and provided with perforations in the inner sole, of a counter having a central substantially vertical channel cut in it forming a continuation of the main longitudinal channel, a lining or covering closing the open side of the counter channel, eyelet holes extending from such channel through the heel portion, a channel support located at the bottom of the counter channel and extending forward into the longitudinal channel between the heel and inner sole, side wings extending laterally from the inner sole and outer sole provided with a central channel forming a continuation of the counter channel and abutting the front edges of the channel support and wings, as and for the purpose specified. 6th. In a boot or shoe of the class described, the combinations with the perforations arranged in substantial alignment along the centre of the inner sole, of a supplemental sole fitting flush with the turned-in edges of the upper, a central channel formed in such sole and a plurality of bridges spanning the channel and provided with spicular projections extending into the edges of the channel, and an outer sole suitably secured in position so as to cover the channel, as and for the purpose specified.

**No. 53,989. Box Fastener. (Attache de boîte.)**



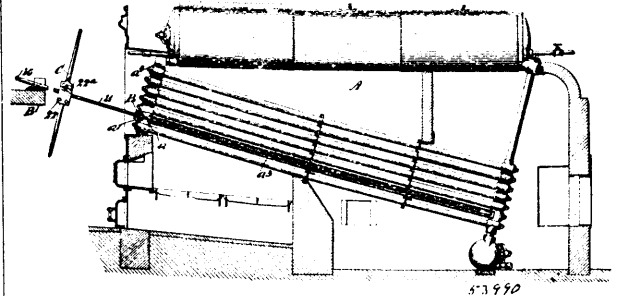
John Finley Wilts, Montclair, New Jersey, U.S.A., 9th November, 1896; 6 years. (Filed 19th October, 1896.)

Claim.—1st. A box fastener, provided with sheet metal bindings for the adjacent edges of the box parts, each binding comprising an

L-shaped outside member, and an inside member bent to form four arms, to produce, with the said outside member, two recesses standing at angles to one another for the insertion of the adjacent sides of the box parts, substantially as shown and described. 2nd. A box fastener, provided with sheet metal bindings for the adjacent edges of the box parts, each binding comprising an L-shaped outside member, and an inside member bent to form four arms, to produce, with the said outside member, two recesses standing at angles to one another for the insertion of the adjacent sides of the parts, one arm of the inside member extending between the adjacent ends of the box parts, substantially as shown and described. 3rd. A box fastener, provided with sheet metal bindings for the adjacent ends of the box parts, the two oppositely arranged bindings for the cover and corresponding sides being each formed of two members connected with each other by a lock seam, substantially as shown and described.

**No. 53,990. Boiler-tube Cleaner.**

(Nettoyeur de tube de chaudières.)



John Henry Voorhees, Brooklyn, New York, U.S.A., 9th November, 1896; 6 years. (Filed 26th October, 1896.)

Claim.—1st. A device for clearing the interior of tubes, or for similar purposes, the same consisting of blades held in sliding connection, and an expander controlling the movement of the said blades, as and for the purpose specified. 2nd. In a device for cleaning tubes, or for similar purposes, blades arranged in sliding engagement, and an expander of substantially wedge-shape, operating to impart movement to the said blades, as and for the purpose specified. 3rd. In a device for cleaning tubes and for like purposes, blades arranged side by side and provided with registering recesses in their opposing faces, and a tapering expander having movement in the recessed portions of the blades, whereby the outer or cutting surfaces of the blades may be moved inward or may be moved outward in an opposite direction, as and for the purpose specified. 4th. In a device for cleaning the interior of tubes, or for similar purposes, a conducting sleeve, a tube arranged to be fed through the said sleeve, blades mounted in the said tube and extending beyond its sides, the blades being mounted to slide inwardly or outwardly from the tube, and an expanding device operating to carry the blades outward, or permit of their inward movement, the expanding device being capable of operation from the exterior of the tube in which it is enclosed, and in which the knives are located, as and for the purpose specified. 5th. In a device for cleaning the interior of tubes, and for other purposes, an exteriorly-threaded casing, an interiorly-threaded conducting sleeve receiving the said casing, knives or blades having end movement within the said casing and extending beyond the sides of the same, an expander consisting of a rod located within the casing and having a wedge section mounted to slide between the blades or knives, and means, substantially as described, for imparting end movement to the said expander, as and for the purpose specified. 6th. In a device for cleaning boiler tubes, or for similar purposes, a casing having diametrically opposite slots, knives or blades having sliding connection and mounted to have end movement in the said casing, the ends of the knives or blades extending through the aforesaid slots, the said knives or blades having registering recesses in their inner faces, an expander located within the casing having a wedge surface entering the recesses in the knives or blades, and means, substantially as described, for giving end movement to the expander, as and for the purpose specified. 7th. In a device for cleaning boiler tubes, or for similar purposes, a casing having diametrically opposite slots, and knives or blades having sliding connection and mounted to have end movement in the said casing, the ends of the knives or blades extending through the aforesaid slots, the said knives having registering recesses in their inner faces, an expander located within the casing having a wedge surface entering the recesses in the knives or blades, means, substantially as shown and described, for giving end movement to the expander, a conducting sleeve arranged to fit the casing and adapted to be attached to a fixed support, and a device for imparting rotary movement to the said casing, as and for the purpose specified. 8th. In a device for cleaning boiler tubes, or for like purposes, the combination, with a sleeve adapted to be attached to a fixed support and having an interior thread, of an exteriorly-threaded casing, the thread of said casing being adapted to that of the sleeve, knives or blades in sliding engagement and mounted in the said casing in such manner as to have end movement, the knives or blades extending

beyond the exterior of the said casing, an expander having a wedge section, the said expander being located within the casing and the wedge section being arranged to pass between the blades or knives to impart end movement to the same, a regulating device for the expander, and means, substantially as described, for imparting rotary movement to the casing, as and for the purpose specified.

9th. In a device for cleaning tubes, and for like purposes, the combination of a conducting sleeve, a tube arranged to be fed through the said sleeve and provided with opposite openings, cutters mounted in the tube and projecting out through the openings thereof, the cutters having their shanks reduced and formed with shoulders, whereby an opening is formed between them, a tapering expanding device working in the opening between the shanks of the cutters, and means for operating the expanding device, substantially as described.

10th. In a device for cleaning tubes, and for like purposes, the combination of an internally-threaded sleeve, an externally-threaded tube working in the said sleeve and provided with opposite openings at its inner end, cutters in the tube and projecting through the openings thereof, the said cutters having their shanks reduced and provided with shoulders forming an opening between the said shanks, a rod having a wedge-shaped end working in said opening, the said rod extending out beyond the tube, and means for moving the rod endwise, substantially as and for the purpose specified.

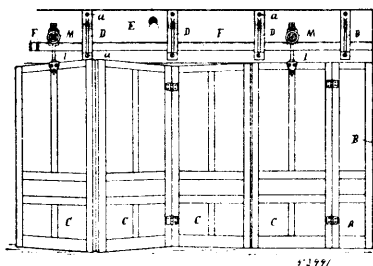
11th. In a device for cleaning tubes, and for like purposes, the combination of an internally-threaded sleeve, an externally-threaded tube working in the sleeve and provided with opposite slots in its inner end, means for imparting rotary motion to the tube, cutters in the tube and projecting through the openings therein, the said cutters having their shanks reduced and provided with shoulders to form an opening between them, a rod having a wedge-shaped end working in said opening, the said rod extending out beyond the end of the tube, and means for imparting endwise motion to the rod, substantially as set forth.

12th. In a device for cleaning boiler tubes, and for like purposes, the combination of an internally-threaded sleeve, an exteriorly-threaded tube working in the sleeve and provided with opposite slots at its inner end, mechanism for turning the tube, cutters arranged in the tube and projected through the slots thereof, the said cutters being arranged side by side and provided with an opening between them, a wedge-shaped expanding rod working in the said opening and serving to move the cutters endwise in opposite directions, and means for operating the said rods, substantially as described.

13th. In a device for cleaning boiler tubes, and for like purposes, the combination, with blades each having the rear face of its shank reduced, the reduced portion extending from the end of the shank opposite that carrying the blade to a point beyond the centre of the shank and terminating in a shoulder, the shanks being placed together with the reduced portion of one resting upon the unreduced portion of the other, whereby the opening will be formed between them, and a tapered expander movable in the opening between the shanks of the blades and adapted to engage the shoulders of the shanks of the blades to move them endwise in opposite directions, substantially as described.

**No. 53,991. Hanger for Folding Doors.**

(*Crochet pour portes à deux battants.*)

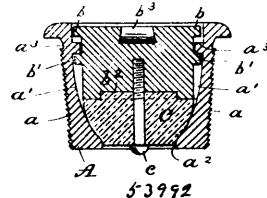


William Schenck Roof, Franklin, Ohio, U.S.A., 9th November, 1896; 6 years. (Filed 26th October, 1896.)

*Claim.*—1st. In a door-hanger, the combination with a bracket provided with tracks, of a base L carrying rollers running on said tracks and provided at its upper end with the swivel base L<sup>1</sup>, the vertically adjustable spindle I rigidly secured at its lower end to the door and screw-threaded at its upper end and loosely passing through said swivel base, the swivel base engaging the screw-threaded portion of the spindle I, and a set nut screwed on said spindle, substantially as described. 2nd. In a door-hanger, the combination with a bracket provided with tracks, of a base L carrying rollers running on said tracks and provided at its upper end with the swivel base L<sup>1</sup>, the vertically adjustable spindle I rigidly secured at its lower end to the door and screw-threaded at its upper end and loosely passing through said swivel base, the swivel base engaging the screw-threaded portion of the spindle I, a set nut screwed on said spindle above the base, the adjacent faces of the base L and swivel base L<sup>1</sup> being provided with corresponding annular grooves and balls arranged in said grooves, substantially as described. 3rd. In a door-hanger, the combination with a U-shaped bracket D provided with tracks, of a base L provided with axles, the rollers F, F<sup>1</sup>, journalled on said base by means of ball bearings and run-

ning on said tracks, the swivel base L<sup>1</sup>, carried by base L, the vertically adjustable spindle I provided at its lower end with a yoke H, s, s<sup>1</sup>, embracing the upper edge of the door and secured thereto, and screw-threaded at its upper end and loosely passing through said swivel base, a swivel nut L<sup>1</sup>, engaging the screw-threaded portion of the spindle I, a set nut R screwed over said spindle above the nut L<sup>1</sup>, the adjacent faces of the swivel base and nut being provided with corresponding annular grooves, and balls m, arranged in said grooves, substantially as specified.

**No. 53,992. Bung. (Bondon.)**



Finley R. Butterfield, Concord, New Hampshire, U.S.A., 9th November, 1896; 6 years. (Filed 17th October, 1896.)

*Claim.*—1st. A bung-hole lining having at its top an external flange and slightly below its top an internally-projecting flange the under surface of which is spirally inclined on opposite sides and slots formed in the thinnest portion of said flange, and a bowl-shaped bottom opening and a bung provided with projections for engaging the under side of said internal flange and adapted to seat itself in and close the bottom opening of said lining, and an annular flange at its top to exclude dirt. 2nd. A bung-hole lining provided with an internally projecting flange located near its top, the under surface of said flange being spirally inclined on opposite sides, slots arranged diametrically opposite through the thinnest portion of said flange, the interior of said lining being bowl-shaped and provided with a bottom opening having its edges rounded, and a bung provided with projections for engaging the under side of said flange, and a bowl-shaped rubber gasket secured to the bottom of the said bung, all substantially for the purpose set forth. 3rd. A bung-hole lining being internally bowl-shaped and externally threaded and provided with an external flange at its top, an internally-projecting flange near its top provided with slots at opposite sides, the under surface of said flange being spirally inclined between said slots, and a bung having an annular flange at its top and projections on opposite sides and below said flange adapted to enter the slots and engage the under side of the internal flange of said lining, and a rubber plug secured to the bottom of said bung fitting the bowl-shaped interior of said lining.

**No. 53,993. Composition Destroying Thistles, etc.**

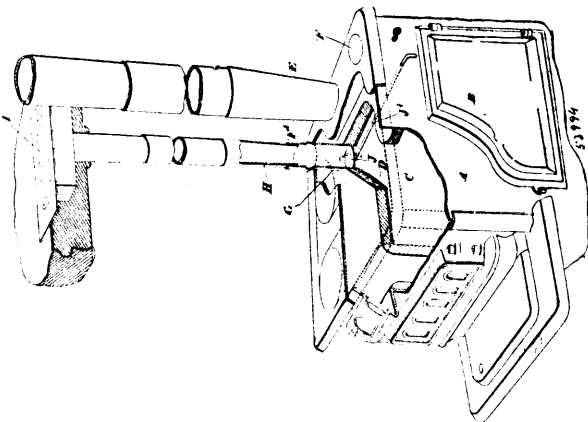
(*Composition pour détruire les chardons.*)

Rozel Morgan Curtiss, Union, Illinois, U.S.A., 9th November, 1896; 6 years. (Filed 19th October, 1896.)

*Claim.*—The composition of matter consisting of arsenious acid, bi-chloride of mercury and cyanide of potash in the proportions and combined in the manner described.

**No. 53,994. Heater for Cooking Stoves.**

(*Chauffeur pour poêles de cuisine.*)

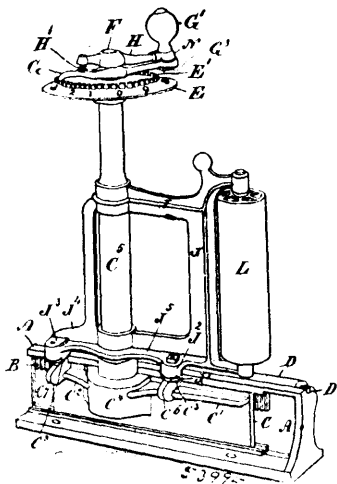


Robert M. Ballantyne, Atwood, Ontario, Canada, 9th November, 1896; 6 years. (Filed 10th October, 1896.)

*Claim.*—In a cooking stove, in combination the oven, the supplemental pipe extending through the top lining thereof and the top of the stove, a radiating opening in the floor of the room above to which such pipe is connected, and a damper suitably pivoted and provided with operating means as shown and for the purpose specified.

**No. 53,905. Timber-Sawing Gauge.**

(Jauge pour scies à bois.)



Thomas McQuat, Lachute, Quebec, Canada, 9th November, 1896; 6 years. (Filed 16th October, 1896.)

*Claim.*—1st. The combination with a base-supporting rail A, having a toothed rack B, of the adjustable plate C, sliding in grooves at that side of the rail, said plate having brackets or bearings C<sup>2</sup>, C<sup>7</sup>, each provided with a notch C<sup>3</sup>, a boxing C<sup>4</sup>, and a hollow post C<sup>5</sup>, standing on said boxing, a gate J, swinging on said post and having a rearward extension J<sup>1</sup>, a removable lug J<sup>2</sup>, at the bottom of the gate to engage either of said notches to permit the gate to be reversed, and to hold it frictionally closed, a shaft F, journaled in said boxing and carrying a cog pinion K, meshing with the toothed rack, a notched dial plate E, on top of said post, and an arm or index finger G, registering in said notches, and rocking the shaft to move said plate to adjust the gate reciprocally, substantially as set forth. 2nd. The combination with the base rail A, having a toothed rack B, of the adjustable plate C, carrying a hollow post C<sup>5</sup>, a shaft F, passing through said post and carrying a cog pinion K, meshing with the rack, a gate J, hung on said post to open in either direction and having a frictional bearing on said plate, an index finger G, and lever H, to rock said shaft and held adjustably by a dial-plate at the top of the post, as set forth. 3rd. The combination with the base rail A, having a toothed rack B, of the sliding plate C, having a post C<sup>5</sup>, a gate J, hung to said post and having a frictional bearing to hold the gate closed, a shaft F, journaled to said post and carrying a pinion K, meshing with said rack, and means for holding the shaft in a rocked position, as set forth for the purpose described. 4th. The combination with the base rail A, having a toothed rack B, of the sliding plate C, having a hollow post C<sup>5</sup>, and provided with notches C<sup>3</sup>, a gate J, hung to said post and having a lug J<sup>1</sup>, engaging one of said notches, a rock shaft F, within said post and carrying a pinion meshing with said rack, a notched dial-plate at the top of said post and a hand or pointer near the top of said shaft engaging the notches in the dial plate, as and for the purpose set forth. 5th. The combination with the notched dial plate and rock shaft journaled therethrough, of the arm G, sleeved on said shaft and rocking on the dial plate and provided with a segment slot near the outer end, a bearing-block N, intervening said slot and a knob or handle G<sup>1</sup>, a bolt passing through said knob, bearing block and slot, and a spring H<sup>1</sup>, near the opposite end, whereby said knob and block are adjustable on the arm, as and for the purpose set forth. 6th. The combination of the base A, having a toothed rack B, the sliding plate C, carrying a hollow post C<sup>5</sup>, the rock shaft F, within said post and carrying a pinion K, meshing with said rack, the arm G and lever H, rocking said shaft, and the dial plate E, secured to the top of said post, and having notches engaged by said arm, an l a gate J, swinging on said post and held closed by frictional contact with a portion of the sliding plate, substantially as and for the purpose set forth.

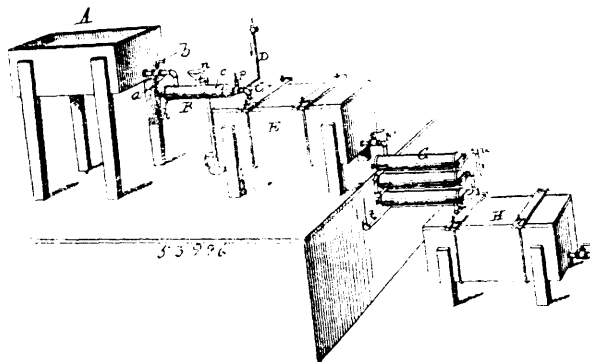
**No. 53,906. Apparatus for Treating Milk or Cream.**

(Appareil pour le traitement du lait ou crème.)

David W. Curtis, Fort Atkinson, Wisconsin, U.S.A., 9th November, 1896; 6 years. (Filed 26th October, 1896.)

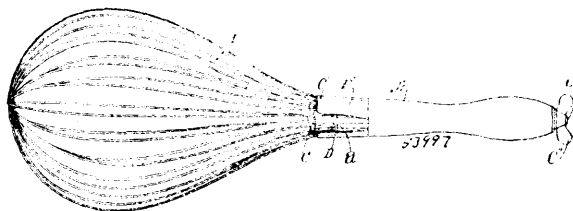
*Claim.*—1st. In combination with a jacketed vessel provided with pipes for insuring a circulation of the heating or cooling medium in the jacket, and closed at one end and open at the other, a removable hollow shell of slightly less diameter than the vessel and adapted to be readily inserted into and removed from the same, a packing ring carried by the shell and closing one end of the milk passage, and means for holding the shell in place. 2nd. In combination with the jacketed vessel c closed at one end and open at the other, a closed vessel e of a length and diameter less than that

of the jacket, and having a packing ring i to close and form one end of the narrow milk passage or channel f between the vessels c and



c, means for supplying a heating or cooling medium to the space d of the jacket, a pipe to admit milk to the passage f, and a milk outlet. 3rd. In a heater having a water jacket and a passage for the milk or cream, the perforated steam supply pipe provided with the slotted discharge spout. 4th. In combination with the jacketed vessel closed at one end, the closed shell fitting within the vessel, a packing ring carried by the closed vessel and fitting against the open end of the jacketed vessel, and means for holding the shell in place. 5th. In combination with the jacketed vessel g, having a diaphragm s to divide the water space of said jacket, inlet and outlet pipes t and u located in said space on opposite sides of the diaphragm, a closed vessel v fitting within the jacketed vessel g, but set away from the sides of the latter to afford a thin or narrow milk channel w, and milk inlet and outlet pipes.

**No. 53,907. Egg Whisk.** (Vergette de cuisine.)

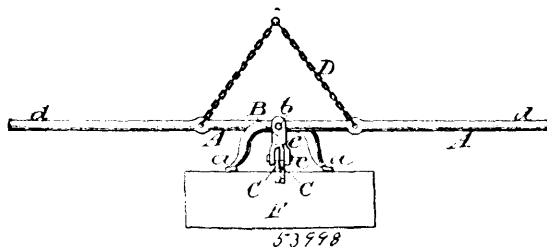


Thomas A. Moody, Santa Monica, California, U.S.A., 9th November, 1896; 6 years. (Filed 26th October, 1896.)

*Claim.*—1st. An egg-whisk composed of a hollow handle having a socket at one end, the whisk-wires arranged within the socket against the wall thereof, a compressed elastic plug seated in the socket and compressed endwise and expanded laterally against and between the wires and against the inner wall of the socket, and the screw-bolt and nut arranged to hold the elastic plug thus compressed in the socket. 2nd. An egg-whisk, comprising a holder provided with a socket, an elastic packing arranged in the socket, the whisk-wires having their ends seated in the socket, and suitable means arranged to compress the packing to thereby cause it to expand around and bed the wires. 3rd. In an egg-whisk, the combination of the hollow handle having a socket at one end, a spiral spring arranged in the socket, a washer arranged upon the spring, the egg-whisk wires arranged within the socket against the walls thereof, a compressible elastic plug seated on the washer in the socket and nut arranged to hold the wires in place, and the screw-bolt and nut arranged to compress the elastic plug and the spring.

**No. 53,908. Lifting and Carrying Device.**

(Appareil pour soulever et transporter.)

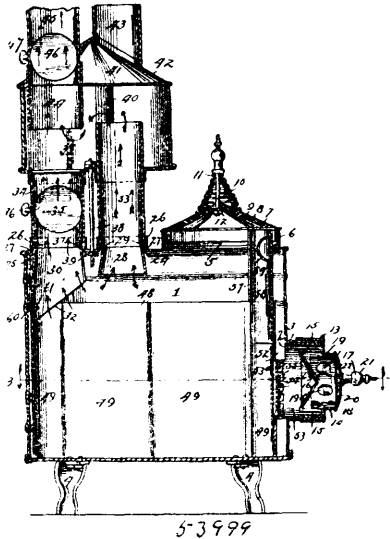


Daniel Broderick, Laurel Hill, New York, U.S.A., 9th November, 1896; 6 years. (Filed 27th October, 1896.)

*Claim.*—1st. In a lifting and carrying device, the combination of two levers and a shackle, all pivoted together by one pivot, and a pair of grappling hooks pivoted to the shackle, substantially as herein described. 2nd. In a lifting and carrying apparatus, the com

combination of two levers one end of each of which is adapted to bear upon the body to be lifted, a shackle to which said levers are pivoted by one common pivot, and a pair of grappling hooks pivoted to said shackle and provided with horns projecting upwards through and beyond the shackle, substantially as herein described.

**No. 53,999. Heating-Stove. (Poêle à chauffer.)**



William L. Wilkinson, Olathe, Kansas, U.S.A., 9th November, 1896; 6 years. (Filed 28th October, 1896.)

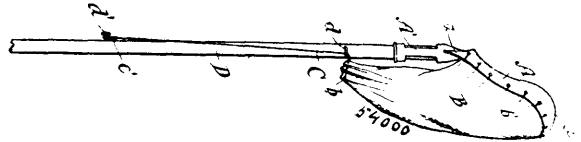
*Claim.*—1st. In a heating-stove, the combination with a body or shell having an opening surrounded by a sleeve, an annular lining within and upon the bottom of the stove but terminating short of the upper end of the stove, and provided with an opening near its lower end and opposite said sleeve, a guide-tube communicating with the said opening and projecting into said sleeve, and provided with an opening which communicates with the space between the stove body or shell and the lining, and a damper controlling the opening of the lining, whereby more or less of the air entering the stove-sleeve may be compelled to pass through said opening or all of it may be compelled to pass upwardly through the opening in the lining and into the space between the body or shell and the lining of the stove, substantially as and for the purpose set forth. 2nd. In a heating-stove, the combination with a body or shell having an opening surrounded by a sleeve, of an annular lining within and resting upon the stove and formed in removable sections, and provided with an opening in one of said sections and opposite the sleeve, a guide tube surrounding the opening of said section and projecting into said sleeve, and provided with an opening communicating with the space between the said body or shell and the lining, and a sliding damper carried by said section of the lining, and controlling its opening, substantially as and for the purpose set forth. 3rd. In a heating-stove, the combination of a body or shell, a heating-drum, a valve-controlled pipe connecting the drum and the body or shell, a second pipe connecting the body or shell and the drum, and projecting upward into the latter some distance, and a valve-controlled pipe leading from said drum and depending into the same some distance, substantially as and for the purpose set forth. 4th. In a heating-stove, the combination of a body or shell, a heating-drum comprising two superimposed chambers, air-tubes communicating at their upper ends with the external air and extending through the lower chamber, an escape-tube for hot air communicating with the upper chamber, a pipe connecting the lower chamber with the body or shell, and a valve-controlled pipe leading from said lower chamber to carry off the products of combustion, substantially as set forth. 5th. In a heating-stove, the combination of a body or shell, provided with holes or apertures in its top, collars surrounding said apertures and formed with inwardly-projecting shoulders marginally of said holes or apertures, flaring tubes depending within the body or shell and provided at their upper ends with outwardly-projecting shoulders which engage the first-mentioned shoulders, pipes resting upon said shoulders, a heating-drum communicating with said pipes, and a valve-controlled escape-pipe for the products of combustion communicating with said drum, substantially as set forth.

**No. 54,000. Fruit Picker. (Jaffet.)**

Alfred M. Terrill, Picton, Ontario, Canada, 9th November, 1896; 6 years. (Filed 27th October, 1896.)

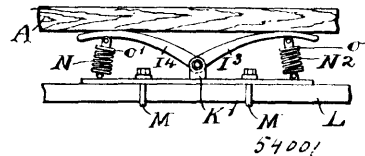
*Claim.*—1st. In a fruit picker, the combination of a stiff, narrow, perforated rim forming the remains of an inverted pan or basin approximately hemispherical and having a large pear-shaped opening nearly circular at the rear and terminating in an elongation or slot at the front, the outer edge following approximately the contour of

said opening, an extension and socket formed at the wide or rear end of said rim, a handle secured to said socket, an open-bottomed



bag, having the edge of its mouth secured through the perforations of said rim, a series of eyes secured to or formed in said bag near its bottom edge, a cord passing through said eyes, an eye secured to said handle approximately opposite the bottom of said bag and a button or hook secured to said handle lower down, said cord passing through said eye and adapted to be secured to said button when drawn tight and the bottom of the bag is closed, substantially as set forth. 2nd. In a fruit picker, the combination in a rim of an inverted pan or basin approximately hemispherical in shape, a pear-shaped opening in the same nearly circular at one end and large enough to admit the largest fruit to be gathered freely and gradually narrowing and terminating in a narrow elongation or slot, the outer edge of said rim following approximately the inner edge shape of the opening, an extension at the end where the opening is wide, a stem or socket formed on said extension and perforations in said rim adapting it to secure a fabric thereto, substantially as set forth. 3rd. In a fruit picker, the combination of a rim forming the remains of an inverted pan or basin approximately hemispherical around a pear-shaped opening terminating in a narrow elongation or slot, an extension at the wide end, a socket or stem secured to said extension, a handle secured to said socket or stem, an open-bottomed bag secured to the outer edge of said rim, a running cord adapted to gather and hold the bottom edge of said bag, an eye on said handle approximately opposite the bottom of said bag, through which said cord passes, and means of securing and releasing the ends of said cord, substantially as set forth. 4th. The combination with the handle of a fruit-picker, of a rim having a slotted opening and having the mouth of an open-bottomed bag secured to it, a cord adapted to close the bottom of said bag, an eye on said handle opposite the bottom of said bag through which said cord passes, and a button on said handle for securing the end of said cord, substantially as set forth.

**No. 54,001. Vehicle Spring. (Ressort de voiture.)**

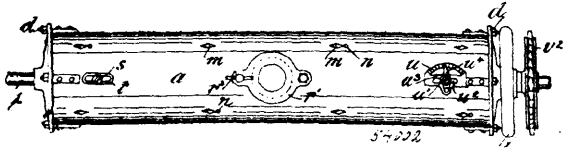


Martin Luther Senderling, Jersey City, New Jersey, U.S.A., 9th November, 1896; 6 years. (Filed 27th October, 1896.)

*Claim.*—1st. In combination, a lever, a spring cushion forming a bearing for the lever and means for sustaining a load upon the lever, the connection between the load sustaining means and the lever being such that the bearing point of the load, as the weight of the load increases, may automatically shift from its starting point to a point nearer the fulcrum of the lever than the bearing point of the spring cushion, thereby changing the advantage of leverage in favour of the spring and against the weight of the load, substantially as set forth. 2nd. The combination with a vehicle body and its running gear, of a pair of levers pivoted intermediate the running gear and vehicle body and a spring engaging the levers for yieldingly supporting the body, the engagement of the body with the levers being such that when the levers are depressed the bearing point of the body may shift from its starting point to a point nearer the fulcrum of the lever than the point where the spring engages the lever, thereby changing the advantage of leverage in favour of the spring and against the weight of the load, substantially as set forth. 3rd. The combination with a vehicle body and its running gear, of a pair of two-armed levers pivoted to the running gear, the upper arms of said levers supporting the vehicle body, the vehicle body having a shifting engagement with said arms and a spring interposed between the lower arm of said levers for forcing them apart to yieldingly support said vehicle body, substantially as set forth. 4th. The combination with a vehicle body and its running gear, of a pair of two-armed levers pivoted to the running gear, the upper arms of said levers supporting the vehicle body, the said body having a shifting engagement with said arms, a spring interposed between the lower arms of said levers to force them apart, and means for limiting their outward movement, substantially as set forth. 5th. The combination with the vehicle body and its running gear, of a pair of levers pivoted intermediate the running gear and vehicle body and forming a support for the vehicle body, and a spring carried by and forming a yielding cushion between the levers, the engagement of the body with the levers being such that when the levers are depressed the bearing points of the body may shift relatively to the fulcrums of the levers, substantially as set forth. 6th. The combination with a vehicle body and its running gear, of a pair of two-armed levers

pivoted to the running gear, the upper arms of said levers supporting the vehicle body, pressure plates pivoted to the lower arms of the said levers, and a spring interposed between said pressure plates for forcing them apart to yielding support the said vehicle body, substantially as set forth. 7th. The combination with the vehicle body and its running gear, of a pair of two-armed levers pivoted to the running gear, the upper arms of said levers supporting the said body, pressure plates pivoted to the lower arms of said levers, a spring interposed between said pressure plates for forcing them outwardly, and a bar engaging the lower arms for limiting their outward movement under spring pressure, substantially as set forth.

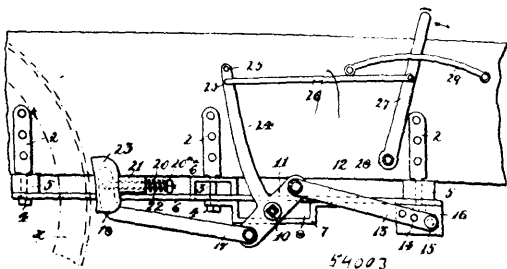
**No. 54,002. Seed Distributor. (Distributeur de graine.)**



Samuel Hardley, 71 Cathedral Square, Canterbury, New Zealand, 9th November, 1896; 6 years. (Filed 28th October, 1896.)

*Claim.*—1st. A seed distributor consisting of a cylindrical casing provided with holes in its periphery fitted with an inner cylinder which revolves with it and has corresponding holes, the inner cylinder being adjustable longitudinally whereby the holes therein may be brought into correspondence with the holes in the casing or the holes in the casing partly or entirely closed, substantially as herein specified. 2nd. In combination the cylindrical casing *a*, secured upon the shaft *b*, and having holes in its periphery, an inner cylinder *c*, having corresponding holes and seed cups *o*, being fixed upon the tube *f*, surrounding the shaft *b*, upon which it is capable of longitudinal adjustment by a nut *h*, working upon the screwed end of the tube *f*, and operated by a hand-wheel *i*, the cylinder *c* being caused to revolve with the casing *a*, by one or more studs *s*, secured to the cylinder taking into slots *t* in the casing, substantially as and for the purposes herein described. 3rd. In combination the casing *a*, upon the shaft *b*, the inner cylinder *c*, upon the tube *f*, having compartments formed by the rings *p*, and being provided with seed cups *o*, substantially as specified. 4th. The semi-circular index plate upon the casing *a*, the latter having a longitudinal slot receiving a pin attached to the inner cylinder, such pin engaging in a slot in a pointer which is thereby operated, substantially as and for the purposes herein described.

**No. 54,003. Wagon Brake. (Frein de wagon.)**

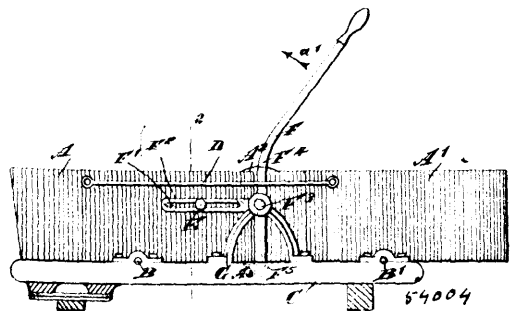


Laurens Star Wheeler, Tyro, Kansas, U.S.A., 9th November, 1896; 6 years. (Filed 27th October, 1896.)

*Claim.*—1st. In a wagon-brake, the combination of a pivoted elbow-lever, means for rocking the same, a brake beam having a shoe adapted to bear on the wheel, a connecting rod coupled at one end to the elbow-lever, and an elastic connection between the other end of said connecting rod and the brake beam, substantially as set forth. 2nd. In a wagon-brake, the combination of the pivoted elbow-lever, means for rocking the same, a brake beam having a shoe arranged to bear on the wheel, a connecting rod coupled at one end to the elbow-lever, a bolt coupled to the other end of the connecting rod, and a spring connecting the bolt with the brake beam, substantially as set forth. 3rd. In a wagon-brake, the combination of an elbow-lever having its pivot pin mounted to slide on a horizontal plane in a guide on the wagon bed, means for rocking said lever, a link connected at one end to the bed and at the other end to one arm of the elbow-lever, a brake beam having a shoe arranged to bear on the wheel, and a connection between said brake beam and the elbow-lever, substantially as set forth. 4th. In a wagon-brake, the combination of an elbow-lever having its pivot pin mounted to slide in guides on the wagon bed, means for rocking said lever, a link connected at one end to the bed and at the other end to one arm of the elbow-lever, a brake beam having a shoe arranged to bear on the wheel, and an elastic connection between the brake beam and the elbow-lever, substantially as set forth. 5th. In a wagon-brake, the combination of an elbow-lever having its pivot pin mounted to slide in guides on a frame attached to the wagon bed, means for rocking said lever, a link connected at one end to the wagon bed and at the other end to one arm

of said elbow-lever, a brake beam adapted to slide on a horizontal plane on the frame and having a shoe arranged to bear on the wheel, and a connecting rod coupled at one end to the other arm of the elbow-lever and at its opposite end having an elastic connection with the said brake beam, substantially as set forth. 6th. In a wagon-brake, the combination of an elbow-lever having its pivot pin mounted to slide in guides on the wagon bed, means for rocking said lever, a link connected at one end to the bed and at the other end to one arm of the elbow-lever, a brake beam having a shoe arranged to bear on the wheel, a connecting rod coupled at one end to the other arm of said elbow lever, a bolt connected with the opposite end of said connecting rod, and an elastic connection between the bolt and the brake beam, substantially as set forth. 7th. The combination, in a wagon-brake, of a frame, side bars mounted at opposite sides thereof and having longitudinal guide-ways aligned with each other, a tie rod arranged to play in said guide-ways, elbow-levers mounted on opposite ends of said tie bar, a brake lever connected with one arm of one of said elbow-levers, a link connected at one end to the wagon bed and at the other end with one arm of one of said elbow-levers, a brake beam movable longitudinally of the frame and provided with shoes arranged to bear on the wheel, and links yieldingly connecting the respective opposite ends of the brake beam with the elbow-levers, substantially as set forth.

**No. 54,004. Dumping Wagon. (Wagon à bascule.)**



John Jacob Theobald, Galveston, Texas, U.S.A., 9th November, 1896; 6 years. (Filed 24th October, 1896.)

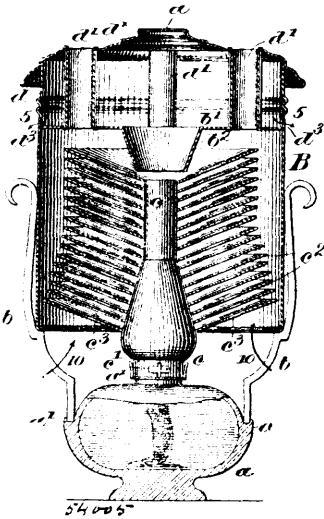
*Claim.*—1st. A dumping wagon, comprising two pivoted sections, and a dumping and closing lever having means for engaging with said sections to lock them in a closed position, substantially as described. 2nd. A dumping wagon, comprising a wagon body made in two pivoted parts, a lever for imparting a swinging motion to the said body parts, cams on each body part, the cams of one part being adapted to engage with the other part, and means engaging with the cams for locking the said body parts in a normal, horizontal position, as set forth. 3rd. A dumping wagon, comprising a wagon body made in two parts, each part mounted on trunnions, a link for pivotally connecting the said parts with each other, and a lever having a slotted arm engaging a pin on one of the body parts, the said lever operating to both dump and close the body parts, substantially as shown and described. 4th. A dumping wagon, comprising a wagon body made in two parts, each part mounted on trunnions, a link for pivotally connecting the said parts with each other, and a lever having a slotted arm engaging a pin on one of the body parts, the said lever being also provided with lugs adapted to engage cams on the said parts, substantially as described.

**No. 54,005. Heating Apparatus. (Appareil de chauffage.)**

Morton Frederick Beal, Wellesley Hills, Massachusetts, U.S.A., 9th November, 1896; 6 years. (Filed 22nd October, 1896.)

*Claim.*—1st. An air-heating apparatus, comprising an enclosing casing or shell, through which the air to be heated passes, a series of parallel and separated sheet metal heating surfaces within the casing and unconnected therewith, said heating surfaces being provided with air-circulatory openings, a metallic support for said surfaces, and means, as a flame, enclosed by said support to heat the same, substantially as described. 2nd. An air-heating apparatus, comprising an enclosing casing or shell open at its lower end, a series of slightly-separated, substantially parallel sheet metal heating plates within the casing and unconnected therewith, to divide the air into thin layers, a metallic flue or hollow support, to which the said plates are directly connected, to be heated thereby by conduction, and means to heat the support, substantially as described. 3rd. An air-heating apparatus comprising an enclosing casing, through which the air to be heated passes, a hollow metallic flue or chimney within the casing, to be heated passes, a hollow metallic flue or sheet metal heating plates secured to said flue, to be heated thereby by conduction, and a burner adapted to be inserted in the base of and to heat the flue, substantially as described. 4th. An air-heating apparatus, comprising an enclosing casing open at its lower end, a drum mounted on the casing and having escape passages there-through communicating with the upper end of the casing, a central metallic flue within the casing and opening into the drum, a series

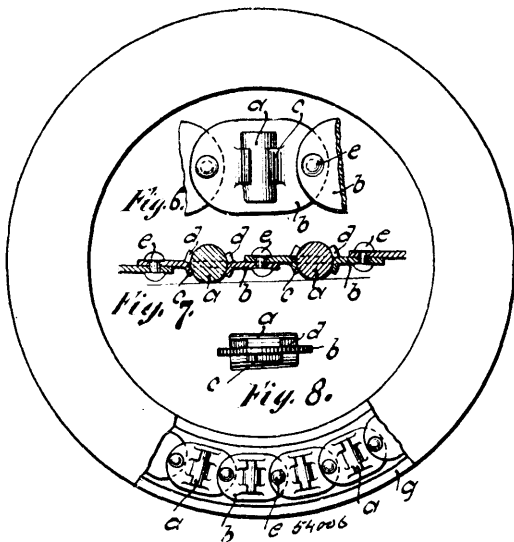
of sheet metal cones secured concentrically to said flue to be heated by conduction thereby, and means to heat the flue, the products of



combustion passing into the drum, substantially as described. 5th. An air-heating apparatus comprising a metallic chimney, a burner adapted to be inserted in the lower end of and to support the chimney, a series of inserted, slightly separated sheet metal cones secured to the chimney concentrically, and provided with circulation openings, a surrounding casing through which the air to be heated passes, said casing being open at its lower end, and having escape passages at its upper end for the heated air, substantially as described. 6th. An air-heating apparatus, comprising a casing, a hollow metallic flue and a series of concentrically attached, slightly-separated sheet metal heating cones, all within and disconnected from the casing, a burner to heat said flue, a drum located on the casing and through which the heated air passes from the casing, said drum having a slight opening in its top above the flue, by which the condition of the burner flame may be observed, substantially as described.

**No. 54,006. Fifth Wheel for Trucks, etc.**

(Rond d'avant train pour chariots)



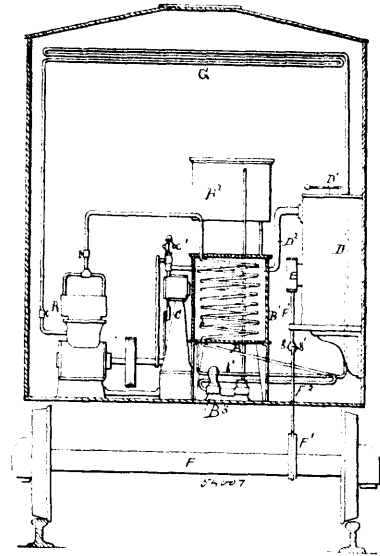
Christen Nielson and Richard A. Berger, both of Brooklyn, New York, U.S.A., 9th November, 1896; 6 years. (Filed 31st July, 1896.)

Claim.—1st. A roller bearing for fifth wheels comprising an endless chain of pivotally connected links and cylindrical rollers pillowed in the links. 2nd. In a roller bearing for fifth wheels, the combination with cylindrical rollers of plates adapted to be pivotally connected with each other into an endless chain and provided with slots, having their opposite edges split into lips or lugs bent alternately above and below the plane and forming bearings for the cylindrical rollers. 3rd. A fifth wheel constructed of two bearing plates having concave bearing surfaces and of an endless chain of pivotally connected links and cylindrical rollers pillowed in the links. 4th. In a fifth wheel

the combination with an endless chain of pivotally connected links and cylindrical rollers pillowed in the links, of circular bearing plates having concave bearing surfaces.

**No. 54,007. Refrigeration of Railway Cars.**

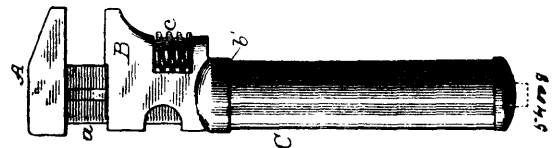
(Appareil réfrigérant pour chars de chemin de fer.)



Archibald Lamont, Chatham, Ontario, Canada, 9th November, 1896; 6 years. (Filed 21st October, 1896.)

Claim.—1st. A refrigerating apparatus for cars, having a compression system actuated by power derived from a car axle, substantially as set forth. 2nd. A refrigerating apparatus for railway cars, having a compression system actuated by compressed air, the air being compressed from power derived from the car axle, substantially as set forth. 3rd. A refrigerating apparatus for railway cars, having a compression system, a compressed air engine to actuate said system, a compressed air storage tank to contain air to drive said engine, and a pump to compress air into said tank, said pump driven by a car axle, substantially as set forth. 4th. A refrigerating apparatus for railway cars, having a compression system, a compressed air engine to actuate said system, a compressed air storage tank to contain air to drive said engine, a pump to compress air into said tank, and an eccentric upon a car axle to drive said pump, substantially as set forth. 5th. The combination with a railway car, having a cooling chamber, a refrigerating apparatus, a compression system provided with a condensing chamber, a storage water tank, feed and return pipes connecting said water tank with said condensing chamber, a pump to return the water from the cooling chamber to said storage tank, and mechanism driven by a car axle to actuate said compression system, said return pipe being led through the cooling chamber of the car, substantially as and for the purpose described.

**No. 54,008. Bicycle Tool. (Outil de bicycles.)**



Robert Crozier Fawcett, Carrollton, Ohio, U.S.A., 9th November, 1896; 18 years. (Filed 17th October, 1896.)

Claim.—In a combined wrench and air pump, the combination substantially as hereinbefore described, of an outer jaw having a stem provided with a piston, an inner jaw freely slidable on said stem, a tubular handle which also serves as a pump barrel firmly attached to the base of said inner jaw, and a suitable device for not only locking said inner jaw to the stem for enabling the two jaws to co-operate for wrench service, but also for unlocking said jaw, for enabling it and the handle or barrel to slide freely on the stem and co operate for service as an air pump.

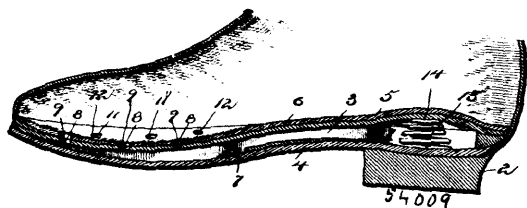
**No. 54,009. Ventilated Shoe. (Chaussure ventilée.)**

Mathew Hilgert, Salt Lake, Utah, U.S.A., 10th November, 1896; 6 years. (Filed 23rd October, 1896.)

Claim.—1st. In a boot or shoe, the combination with the outer sole and solid heel of the boot or shoe, of a false insole fitted on the outer sole and heel and provided at one end directly over the heel with a circular opening, and also having air-circulating slots com-

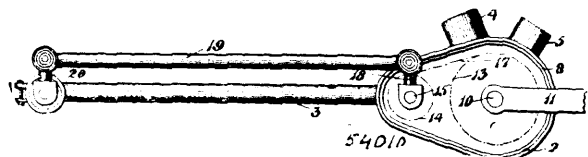
municating with such opening, the main insole arranged over the false insole and provided at the ball of the boot or shoe with open-

combination and arrangement with the tires, having inflating valves of one and preferably two air pumps or inflators connecting to the



ings communicating with the circulating slots of the false insole, said main insole being also provided with an enlarged heel portion of a greater size than the interior of the boot or shoe at the counter thereof to form a loose flexible imperforate cover portion for the circular opening in the false insole, and a spring supported on the solid heel under the enlarged heel portion of the main insole to normally dish and elevate said heel portion of the main insole to provide an air bulb operated by the heel of the wearer during the act of walking, substantially as set forth. 2nd. In a boot or shoe, a laminated insole provided at the heel thereof with a circular opening, and also having an air circulating slot communicating with such opening, the upper portion of the insole being provided near the front end with an opening communicating with the circulating slot, said upper portion of the insole being further provided with an enlarged heel portion forming a loose flexible imperforate cover portion for the circular opening in the insole, and a spring supported within the insole under the enlarged heel portion thereof to normally dish and elevate said heel portion of the insole to provide an air bulb operated by the heel of the wearer during the act of walking, substantially as set forth.

**No. 54,010. Velocipede. (Vélocipède.)**



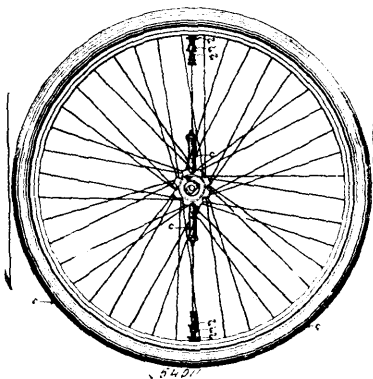
U. S. Cycle Improvement Company, assignee of Charles S. McIntire, Pittsburg, Pennsylvania, U.S.A., 10th November, 1896; 6 years. (Filed 12th September, 1896.)

*Claim.*—1st. In velocipedes, the combination of a pedal shaft, a sprocket-wheel upon the same, a countershaft immediately in the rear of said pedal shaft, a reduced sprocket-wheel upon the same, a chain connecting the two sprocket-wheels, cranks upon the ends of the counter-shaft, cranks upon the axle of the driving-wheel and connecting rods joining the pairs of cranks. 2nd. In velocipedes, a compound gear between the pedal shaft and the axle of the driving-wheel, the forward and shorter member of the gear consisting of sprocket mechanism and the rear and longer member of the gear consisting of connecting rods and cranks. 3rd. In velocipedes, a compound gear between the pedal shaft and the axle of the driving-wheel, the forward and shorter member of the gear consisting of sprocket mechanism, the rear and longer member of the gear consisting of connecting rods and cranks and a case rigidly connected with the frame and inclosing the sprocket mechanism, said case being provided with a removable side plate. 4th. In velocipedes, a compound gear between the pedal shaft and the axle of the driving-wheel, the forward and shorter member of the gear consisting of sprocket mechanism, the rear and longer member of the gear consisting of connecting rods and cranks and a case rigidly connected with the frame and inclosing the sprocket mechanism, said case being provided with a removable side plate. 5th. In velocipedes, the combination of a frame, a case secured to the lower ends of the bottom tube and upright tube, a pedal shaft journaled in the forward end of said case substantially at the point of intersection of the prolongation of the bottom and upright tubes, a sprocket-wheel upon said pedal shaft, a counter shaft journaled in said case immediately in the rear of the pedal shaft, a reduced sprocket-wheel upon said counter shaft, a chain connecting the two sprocket-wheels, cranks upon the axle of said driving-wheel and parallel driving rods connecting the pairs of cranks.

**No. 54,011. Pneumatic Tired Wheels. (Bandage de roue pneumatique.)**

Kelso King, Sidney, assignee of William Merton, Marriekville, both in New South Wales, 10th November, 1896; 6 years. (Filed 12th October, 1896.)

*Claim.*—1st. In a pneumatic tired wheel, the hub or boss constructed with a central hollow enlargement or box or casing for the purposes set forth, substantially as herein described and explained. 2nd. In a pneumatic tired wheel, the combination and arrangement with the axle and midway of the journal thereof, of a cam or eccentric or the like, for the purposes set forth, substantially as herein described and explained. 3rd. In pneumatic tired wheels, the

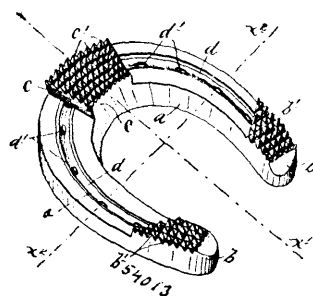


said inflating valves a central enlargement or casing of the boss or hub supporting said pumps, and a cam or eccentric or other device on the axle within said enlargement or casing adapted to operate said air pumps or inflators, substantially as herein described and explained. 4th. In pneumatic tired wheels, the combination and arrangement with an axle such as *b*, having thereon a cam such as *B*, of a sliding spring key such as *B'*, and devices adapted to be externally operated to engage or disengage the said key and said cam, substantially as herein described and explained and as illustrated in the drawings. 5th. In pneumatic tired wheels, the combination and arrangement with a central hollow enlargement and a central axle cam or operating device of the mechanical parts, forming a spring-air pump or inflator, and its connections with the inflating valves of the tire, substantially as herein described and explained and as illustrated in the drawings. 6th. In pneumatic tired wheels, the special combination and arrangement of mechanical parts, all together forming automatic inflating apparatus upon revolution of the wheel, substantially as herein described and explained and as illustrated in the drawings.

**No. 54,012. Electrical Apparatus. (Appareil électrique.)**  
John F. Kelly, Pittsfield, Massachusetts, U.S.A., 10th November, 1896; 6 years. (Filed 23rd October, 1896.)

*Claim.*—1st. In an electrical apparatus having when in operation a varying magnetic flux, a laminated iron core traversed by said varying flux having in its composition an alloy preventing hysteresis growth, substantially as described. 2nd. In an electrical apparatus having when in operation a varying magnetic flux, a laminated iron core traversed by said varying flux having in its composition an abnormal proportion of silicon, substantially as described. 3rd. In electrical apparatus having when in operation a varying magnetic flux, an annealed laminated iron core traversed by said varying flux having in its composition sufficient silicon to prevent hysteresis growth at temperatures to which transformers are subjected when in use, substantially as described.

**No. 54,013. Elastic Horseshoe. (Fer à cheval élastique.)**

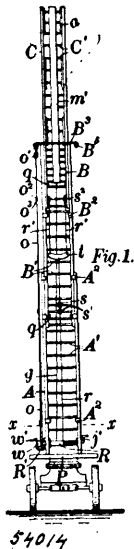


Ellery C. Davis, George Vine, Iver A. Krohne, Thomas G. Thomp-son and Halver Steenerson, all of Crookston, Minnesota, U.S.A., 10th November, 1896; 6 years. (Filed 27th October, 1896.)

*Claim.*—1st. A horseshoe having parts formed of elastic material for preventing jars to the horse's foot, substantially as described. 2nd. A horseshoe having its striking face or parts formed of rubber or similar elastic material for preventing jars to the horse's foot, substantially as described. 3rd. A horseshoe having its body portion and striking face formed of rubber or similar elastic material for preventing jars to the horse's foot, substantially as described. 4th. A horseshoe having its body constructed of rubber or similar elastic material, and provided with a metallic piece formed with nail holes, and constituting a lining for the fallering or nail-hole crease, substantially as described. 5th. A horseshoe having its body constructed of rubber or similar elastic material, and provided

with a counter-sunk metallic piece formed with nail holes and constituting a lining for the fullering or nail-hole crease, substantially as described. 6th. A horseshoe, the body of which is constructed of rubber or similar elastic material, is formed with fullerings or nail-hole creases, one in each quarter, and is provided with a pair of metallic channel pieces formed with nail holes and constituting independent linings, one for each of said fullerings, substantially as described. 7th. In a horseshoe, the combination with the elastic body portion *a* provided with the calks *b*, *c*, and the fullerings *a*<sup>1</sup>, of the metallic channel pieces *d* formed with nail holes *d*<sup>1</sup> and constituting linings for said fullerings *a*<sup>1</sup>, substantially as described.

**No. 54,014. Combined Extension Ladder and Fire Escape.** (*Echelle à rallonge et sauveteur d'incendie combinés.*)

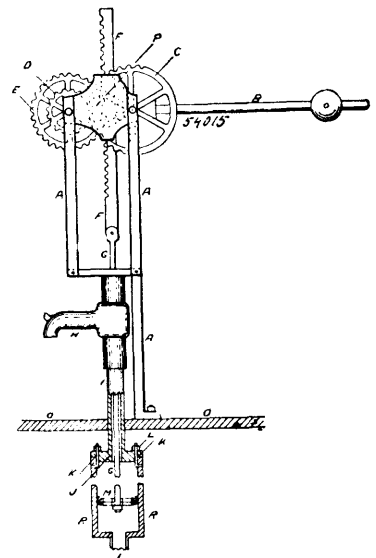


Ralph Steven Young, Kearney, New Jersey, U.S.A., 10th November, 1896; 6 years. (Filed 21st October, 1896.)

*Claim.*—1st. The extension ladder, comprising a lower section, having a guide pulley near the upper end and a reel at its foot, one or more intermediate sliding sections of which the lower is adapted to slide upon the first-named section, and provided each with guide pulleys near the opposite ends, an upper or bridge section fitted to slide upon the adjacent intermediate section, automatically operating detents for retaining said sliding sections in their extended positions, guides for always retaining said intermediate section or sections in parallel relation with the lower section, and guides for retaining said upper or bridge section parallel with the adjacent section until fully extended upon the same, and a line attached at one end to the lower end of the bridge section, passing over the guide pulleys as described and running to the reel at the foot of the lower section, whereby the rotation of the reel in one direction to draw in the line operates to extend the ladder, and the turning of the reel in the opposite direction for slackening said line causes the upper or bridge section to swing transversely upon its detents, as and for the purpose set forth. 2nd. The extension ladder, comprising the lower section A A<sup>1</sup>, with guides A<sup>2</sup>, and provided with reel R and grooved pulley *s*, the intermediate section B B<sup>1</sup>, with guides B<sup>2</sup>, and grooved pulleys *s*<sup>1</sup> *s*<sup>2</sup>, and with cross-bar B<sup>4</sup>, the upper or bridge section C C<sup>1</sup>, with laterally and upwardly-projecting hooks C<sup>2</sup> adapted to engage the cross-bar B<sup>4</sup>, the line *r* *r*<sup>1</sup> passing around the pulleys *s* *s*<sup>1</sup> and *s*<sup>2</sup> and connecting the lower end of the bridge section with the reel R, and detents interposed between the adjacent sections for retaining the same in their elevated positions, as and for the purpose set forth. 3rd. The extension ladder, comprising the lower section A A<sup>1</sup>, with guides A<sup>2</sup>, the intermediate section B B<sup>1</sup>, with guides B<sup>2</sup> and cross-bar B<sup>3</sup>, carrying depending pulley block *o*<sup>1</sup>, and the upper or bridge section C C<sup>1</sup>, means for elevating the intermediate and bridge sections and retaining them in their elevated positions and for laterally extending said bridge section, a hoisting drum *w* at the base of the lower section, and an endless sectional line *o* extended between said pulley block and hoisting drum, each section of said line having a ring at *o*<sup>2</sup> at one end and a hook *o*<sup>3</sup> at the other end, whereby the length of said line may be varied by the removal or insertion of sections to adapt it to correspond with the degree of extension of the ladder, as and for the purpose set forth. 4th. In an extension ladder, constructed with a sliding and swinging upper section, and means for elevating and laterally extending the same, the combination with said upper section, of a folding platform composed of longitudinally-hinged portions, of which one is fixed to the rungs of said section, as and for the purpose set forth. 5th. In an extension ladder, comprising a lower section A A<sup>1</sup>, an intermediate section B B<sup>1</sup>, an upper or bridge section C C<sup>1</sup>, and means for elevating the intermediate and

bridge sections and for laterally extending the said bridge section, the combination with the bridge section, of rods *a* pivoted to the side bars C in the upper or outer portion thereof, and springs for retaining said rods normally in parallel relation to the side bars, and lines *a*<sup>2</sup> connected at one extremity to the outer ends of said side bars attached to the free ends of said rods, passing thence through suitable guides to the opposite ends of said side bars C, and secured at the opposite ends to the intermediate section beneath said bridge section, as and for the purpose set forth. 6th. In an extension ladder, comprising a lower section A A<sup>1</sup>, an intermediate section B B<sup>1</sup>, an upper or bridge section C C<sup>1</sup>, and means for elevating the intermediate and bridge sections and for laterally extending the latter, the combination with the bridge section, of rods *a* pivoted to the side bars C in the upper or outer portion thereof, and springs for retaining said rods normally in parallel relation to the side bars, and lines *a*<sup>2</sup> connected each at one extremity to the outer end of one of said side bars attached to the free ends of said pivoted rods, passing thence through suitable guides to the opposite end of said bar C, and through a combined guide and stop *b*<sup>2</sup> upon the intermediate section beneath the bridge section, and attached at the outer extremity to a depending counterbalance rod *b*, as and for the purpose set forth. 7th. In an extension ladder, comprising a lower section A A<sup>1</sup>, an intermediate section B B<sup>1</sup>, an upper or bridge section C C<sup>1</sup>, and means for elevating the intermediate and bridge sections and for laterally extending the latter, the combination with the bridge section, of the lines *c* having their extremities attached to the opposite ends of the side bars of the section C C<sup>1</sup> upon the under side, the rods *a* having extensions *a*<sup>6</sup> pivoted to said bars intermediate to the extremities of the lines *c*, and means for automatically turning said pivoted rods into parallel and transverse relation to said bars C for varying the tension of the lines *c*, as and for the purpose set forth.

**No. 54,015. Pump.** (*Pompe.*)



William C. Buck, Peterboro', Ontario, Canada, 10th November, 1896; 6 years. (Filed 28th October, 1896.)

*Claim.*—1st. The combination in a pump head having the metal frame A A, handle B, gearing C, D, E, upright cogged bar F, and plate P, substantially as and for the purpose hereinbefore set forth. 2nd. The combination in a cylinder having cap J counter-sunk into cylinder R R, and bolted down with bolts K K, having nuts L L, substantially as and for the purpose hereinbefore set forth. 3rd. The combination in a pump sucker M, having a circular spring N N, substantially as and for the purpose hereinbefore set forth.

**No. 54,016. Power Mechanism for Bicycles.**

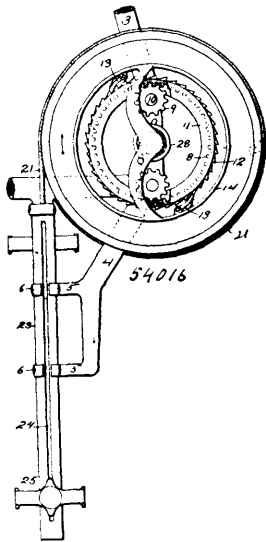
(*Mécanisme d'engrenage pour bicycles.*)

August Brauer, Independence, Missouri, U.S.A., 10th November, 1896; 6 years. (Filed 27th October, 1896.)

*Claim.*—1st. A power-mechanism for bicycles, comprising a suitable framework, a shaft journaled therein, a wheel upon said shaft, cog-pinions upon said shaft, internally toothed rings engaging said pinions and arranged eccentrically thereon, and provided externally with ratchet-teeth, grooved annuli surrounding said rings concentrically and suitably journaled, spring-actuated pawls carried thereby and engaging said ratchet-teeth, vertical slotted guide-tubes carried by the framework, sliding blocks therein and projecting through said slots, pedals carried by said blocks, cables engaging and secured to said grooved annuli and to said sliding blocks, and cushions or springs in the upper and lower ends of said guide-tubes, substantially as described. 2nd. A power-mechanism for bicycles, com-

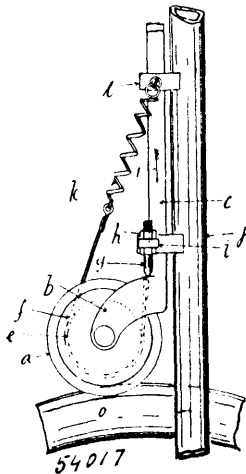


prising a framework, a shaft journaled therein, a wheel mounted upon said shaft, cog-pinions upon said shaft, idle cog-pinions carried



by stub-shafts of the framework, rings excentrically surrounding the first-named cog-pinions and provided with cog-teeth engaging said cog-pinions and the idle cog-pinions and with flanges at the inner and outer sides or faces of the same, and provided also with peripheral ratchet-teeth, annuli surrounding said rings, and provided with central stub-shafts journaled in the framework, springs secured at their opposite ends to said framework and to said annuli, spring-actuated pawls engaging said ratchet-teeth and carried by said annuli, flexible connections mounted in peripheral grooves of said annuli, and vertically reciprocating pedals attached to said cables, substantially as described.

**No. 54,017. Brake. (Frein.)**



Harry Morrison, Stratford, Essex, England, 10th November, 1896; 6 years. (Filed 26th October, 1896.)

*Claim.*—In brakes of the class herein described, a band or strap passing partially round a wheel or drum attached to or formed integral with the brake roller, said band being secured at one end to a spring and at the other end to a screw bolt secured by nuts in a suitable bracket or support, the brake roller and wheel or drum being carried in suitable bearings, on a brake rod or the like, sliding in sockets or bearings attached to the machine.

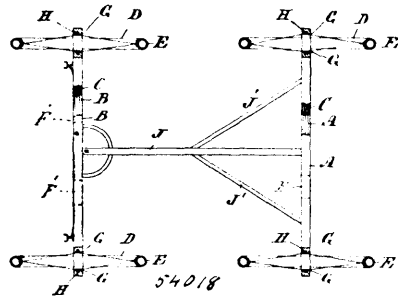
**No. 54,018. Bicycle Wheel Carriage.**

(Voiture à roue de bicycles.)

John W. Windle, Ormstown, Quebec, Canada, 10th November, 1896; 6 years. (Filed 21st October, 1896.)

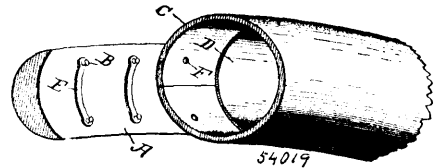
*Claim.*—1st. A bicycle wheel carriage having the rear wheel bars A, A', and the front wheel bars B, B', curved downwardly at the ends and forming a bifurcation at the ends to receive the wheels D, the ends of said bar A', connected by a bar C, and bar A, stiffened by braces F, connecting with bar C, and the ends of bar B', con-

nected by a bar C', and a bar B, stiffened by braces F', connecting with bar C', and said bars C, C', connected by a reach J, as set



forth. 2nd. A carriage gear having a bar bifurcated and curved at the ends and straddling the front wheels, and a bar bifurcated and curved at the ends and straddling the rear wheels, each wheel journaled in its respective bifurcation by a short axle, and said bars stiffened between the ends by other bars and braces, and a reach connecting the front and rear wheel bars, as set forth. 3rd. A carriage running gear, having front and rear wheel bars bifurcated at the ends and curved downwardly, and straddling the front and rear wheels respectively, a reach connecting said wheel bars, and a wheel journaled at the end of a bifurcation, as set forth. 4th. In a four-wheel carriage, the combination of the front and rear wheel bars bifurcated and curved downwardly to straddle a wheel, said bars connected by a reach and stiffened between the ends by bars and braces, and wheels independently journaled to run in the bifurcations substantially as set forth.

**No. 54,019. Pneumatic Tire. (Bandage pneumatique.)**



Hugh Lawson Warner, Hamilton, Ohio, U.S.A., 10th November, 1896; 6 years. (Filed 20th October, 1896.)

*Claim.*—1st. The combination of a wooden wheel rim having its periphery concave in cross section, a casing in the form of a flat endless strip adapted to form a circular tube when its edges are brought together, and attaching devices in the form of studs and apertures for them at the edges of the strip and wheel rim adapted to engage each other and hold the casing to the wheel rim, substantially as and for the purpose set forth. 2nd. The combination of a wooden rim having its periphery concave in cross section and having studs projecting from its periphery at intervals near its side edges, and a casing in the form of an endless strip having perforations near its edges adapted to engage said studs and hold the casing to the wheel rim, substantially as and for the purpose set forth. 3rd. The combination of a wheel rim having its periphery concave in cross section, studs projecting outwardly at intervals near the edges of the concavity of the wheel rim, metallic strips lying in the concavity of the wheel rim and connecting the studs in pairs, and a casing in the form of an endless flat strip having perforations near its edges adapted to engage said studs, substantially as and for the purpose set forth.

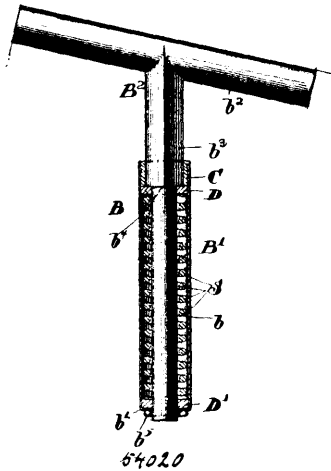
**No. 54,020. Supporting Post for Bicycles.**

(Poteau de support pour bicycles.)

Robert F. W. Beardsley, Chicago, Illinois, U.S.A., 10th November, 1896; 6 years. (Filed 15th July, 1896.)

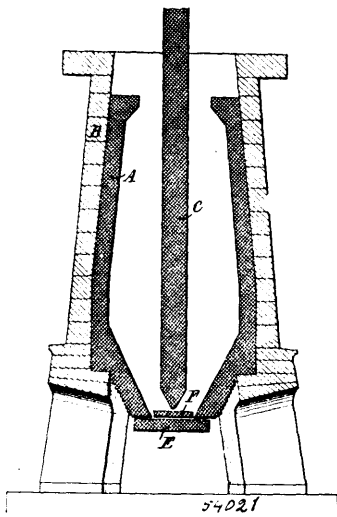
*Claim.*—1st. A supporting post for bicycles, comprising a casing B', a plug C rigidly secured thereto at one end and having a non-circular opening therein, a washer D' secured to the opposite end of the casing, a coiled spring interposed between the plug and the washer, and a post B' having a portion of its stem fitted to said non-circular opening in the plug and adapted to rest upon the spring. 2nd. A supporting post for bicycles, comprising a casing B', a plug C rigidly secured in one end thereof and having a non-circular opening therein, a washer D' in the opposite end of the casing, a flange b' formed on the end of the casing and adapted to retain the washer, a second washer D, a coiled spring interposed between said washers, and a post B' having a portion of its stem fitted to said non-circular opening in the plug, and a shoulder b' adapted to rest upon the washer D. 3rd. In a supporting post for bicycles, the combination of the casing B' having the annular flange b', the washer D' resting upon said flange, the plug C rigidly secured in the opposite end of

the casing and having the square opening *c*, the washer *D*, the coiled spring *S* interposed between said washers, and the post *B*<sup>2</sup> having a



square portion fitted to said square opening in the plug, the shoulder *b*<sup>1</sup> adapted to rest upon the washer *D*, the cylindrical portion *b* extending through the washers *D*, *D*<sup>1</sup> and the split pin *b*<sup>2</sup>, substantially as described.

**No. 54,021. Electrolytic Manufacture of Ferro Manganese, Ferro Chrome, Ferro Aluminium, Ferro Nickel and other Alloys having an Iron Base.** (*Fabrication électrolytique composée de fer.*)



Joseph Heibling, Paris, France, 10th November, 1896; 6 years. (Filed 20th November, 1895.)

*Claim.*—1st. The manufacture by means of electricity of alloys containing iron through the medium of a lime flux capable of becoming carbureted calcium and silicon, substantially as described. 2nd. As a means of practically carrying out the process claimed in the first claim, the employment of a carbon furnace with a movable bed plate, in which is heated by electricity a mixture prepared in suitable proportions, of ore (oxide), of carbon and of lime employed as a flux with or without the addition (as the case may be) of an oxide of iron or of fluorspar (fluoride of calcium  $CaF_2$ ), substantially as described with reference to the accompanying drawings.

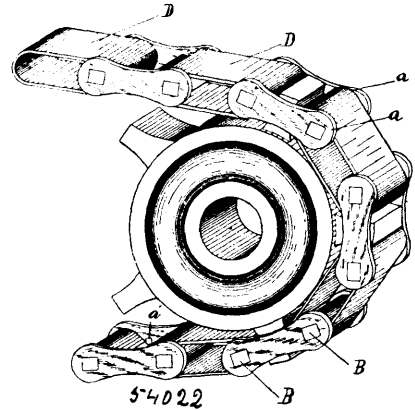
**No. 54,022. Bicycle or Sprocket Chain.**

(*Chaîne de bicyclette et chaîne dentée.*)

David Falconer, Victoria, British Columbia, Canada, 10th November, 1896; 6 years. (Filed 16th October, 1896.)

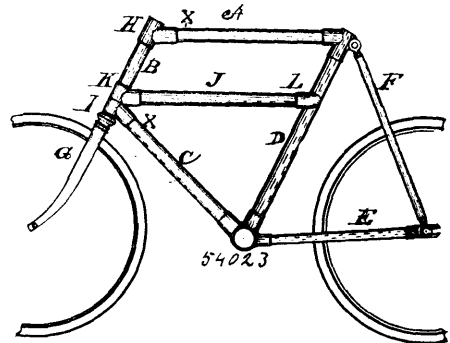
*Claim.*—1st. In a bicycle chain or sprocket chain for other machinery, a main link consisting of two side bars, rivets connecting together the opposite ends of the side bars, each rivet conoidal in cross-section, the apex of each rivet projecting inwardly, and a coupling link provided with a socket to embrace the said apex of the conoid of the rivet, substantially as specified. 2nd. In a bicycle chain or sprocket chain for other machinery, a main link consisting

of two side bars, rivets connecting together the opposite ends of the side bars, each rivet conoidal in cross section, the apex of each rivet



projecting inwardly, a coupling link provided with a socket to embrace the said apex of the conoid of the rivet, and burred projections formed on the inner side of each of the side bars in close proximity to the rivets adapted to bear against the side of the coupling link, substantially as specified.

**No. 54,023. Bicycle Frame.** (*Cadre de bicyclette.*)

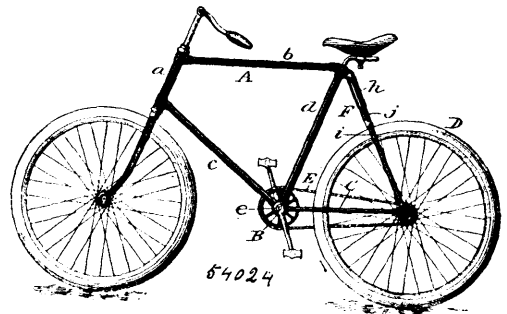


Thomas L. Southam and Alexander Kay, both of Toronto, Ontario, Canada, 10th November, 1896; 6 years. (Filed 9th October, 1896.)

*Claim.*—1st. A bicycle frame known as a diamond frame composed of the following and other necessary parts:—Tube A, ball head tube B, bottom tube C, seat post tube D, back fork E, back fork stay F, front fork G, top ball head connection H, bottom ball head connection I, in combination with tube J, ball head connection K, seat post connection L, all formed, arranged and combined, substantially as and for the purpose hereinbefore set forth. 2nd. The combination with a diamond bicycle frame of a second bar either on a parallel plane with the top bar A, of frame as shown, or vertically inclined as desired, having connections of bars J and C to join at ball head B.

**No. 54,024. Bicycle and like Vehicle.**

(*Bicyclette et véhicule.*)



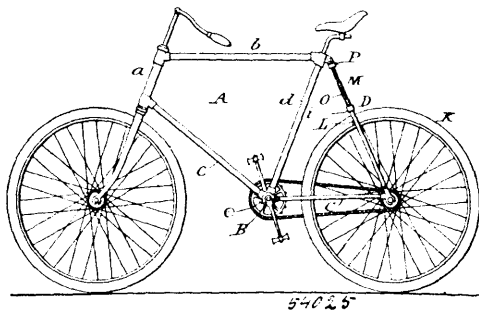
Charles L. Travis, Minneapolis, Minnesota, U.S.A., 10th November, 1896; 6 years. (Filed 21st December, 1895.)

*Claim.*—In combination with a rigid front frame, a rear-wheel fork flexibly connected therewith at or near the pedal shaft bearing,

a tubular shell flexibly connected at its upper end to the rear portion of the front frame, a forked brace flexibly connected to the rear portion of the rear wheel fork, and provided at its upper end with a tube adapted to telescope with the tubular shell, and a coiled spring having one end seated in the tubular shell and the other end seated in the tubular extension of the forked brace, substantially as shown and described, whereby the use of a long and elastic spring is permitted. 2nd. In a bicycle or like vehicle, the combination of a rigid front frame carrying a rider's seat support and a pedal shaft bearing, a rear-wheel fork flexibly connected with said front frame at or near the pedal shaft bearing, a forked brace flexibly connected with the rear portion of the rear-wheel fork, and a yielding or elastic member interposed between the circumference of the rear wheel and the rear portion of the front frame, and consisting of a tubular extension of the forked brace and a tubular shell flexibly connected with the front frame, telescoping one within the other, and a spring having its ends seated in the respective tubular shells. 3rd. In a bicycle or like vehicle, the combination of a rigid front frame carrying a rider's seat support and a pedal-shaft bearing, a rear-wheel fork, a lock-joint connecting the rear-wheel fork with the front frame at or near the pedal-shaft bearing, a forked brace flexibly connected with the rear portion of the rear-wheel fork, and a yielding or elastic member interposed between the circumference of the rear wheel and the rear portion of the front frame, and consisting of a tubular extension of the forked brace and a tubular shell flexibly connected with the front frame, telescoping one within the other, and a spring having its ends seated in the respective tubular shells. 4th. In a bicycle or like vehicle, the combination of a rigid front frame A, provided with pedal-shaft bearing *c*, shaft B, and rider's seat support *d*, rear fork C hinged to frame A, at or near bearing *e*, rear brace F comprising the tubular member *h* jointed to the upper rear portion of the main frame A, member *i* jointed to rear fork B, and tubular extension *j*, arranged to telescope with the member *h*, and spring G, bearing at its ends against the telescopic members *h* and *j* respectively and tending to hold them apart, substantially as set forth.

**No. 54,025. Bicycle and like Vehicle.**

(Bicycle et véhicule.)



Charles L. Travis, Minneapolis, Minnesota, U.S.A., 10th November, 1896; 6 years. Filed 17th March, 1896.)

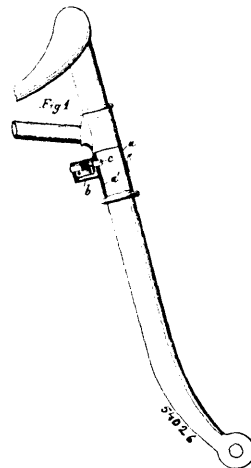
*Claim.*—1st. In combination with a rigid front frame, a rear wheel fork flexibly connected with said front frame, a brace flexibly connected with the rear wheel fork and with the front frame, and comprising shells *a*<sup>1</sup> and *c*<sup>1</sup> fitting air-tight one within the other, and a spring D<sup>1</sup> inclosed within said shells and bearing at its ends against the outer ends of said shells, substantially as described and shown. 2nd. In a brace or support for bicycles and like vehicles, the combination of a pair of tubular shells arranged to telescope one within the other, a cup or case smaller than said shells, centrally located therein, and a spring extending from the closed outer end of one shell to the closed outer end of the other, and seated within said cup or case, for the purpose explained. 3rd. In a brace or support for bicycles and like vehicles, the combination of shell *a*<sup>1</sup> provided with cap *b*<sup>1</sup>, having a central cavity, shell *c*<sup>1</sup> arranged to telescope with shell *a*<sup>1</sup>, spring cup or case *e*<sup>1</sup> placed within and concentric with shell *c*<sup>1</sup>, and spring D<sup>1</sup>, having one end seated in the cavity of cap *b*<sup>1</sup>, and the other end seated in cup or case *e*<sup>1</sup>, substantially as shown and described. 4th. In combination with steel tube *e*<sup>1</sup>, steel tube *a*<sup>1</sup> faced on the outside with brass, brass cup or shell *c*<sup>1</sup> located within shell *c*<sup>1</sup>, and steel spring D<sup>1</sup> seated within cup or shell *c*<sup>1</sup>, whereby brass and steel surfaces are brought into opposition throughout. 5th. The herein described brace or support for bicycles and like vehicles, comprising shell *a*<sup>1</sup> with its cap *b*<sup>1</sup>, shell *c*<sup>1</sup>, spring cup or case *e*<sup>1</sup>, spring D<sup>1</sup>, and outer shell or guard *a*<sup>1</sup>, all combined and arranged to operate substantially as set forth.

**No. 54,026. Device for Locking the Steering Gear of Velocipedes.** (*Appareil pour fermer l'engrenage conducteur des velocipèdes.*)

Franz Josef Brons, 8 Karpfenstrasse, Lübeck, Germany, 10th November, 1896; 6 years. (Filed 27th August, 1896.)

*Claim.*—1st. The combination with a velocipede, of a device for locking the steering fork so arranged that when the fork is locked it

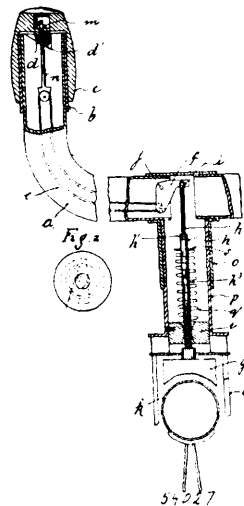
is held at such an angle to the frame that the velocipede can only travel in a circle, constructed and arranged substantially as herein-



before described. 2nd. The device for locking the steering fork of a velocipede, constructed and arranged substantially as hereinbefore described, said device comprising a spring bolt for engaging the front fork and a second spring bolt transverse to and adapted to engage the first bolt. 3rd. The modified construction of the locking device, constructed and arranged substantially as hereinbefore described, said device comprising a hinged bar having a stud for engaging the front fork and a key-operated device for locking said bar.

**No. 54,027. Brake for Velocipedes.**

(Frein de velocipèdes.)



Joseph Hollis, Ilkeston, Derbyshire, England, 10th November, 1896; 6 years. (Filed 29th August, 1896.)

*Claim.*—1st. The combined brake for bicycles enclosed in a hollow handle bar, substantially as described. 2nd. In brakes for bicycles, in combination with a hollow handle bar, a loose sleeve carrying the handles, said loose sleeve turning upon the end of the handle bar, which is hollow, and has inclined planes or surfaces cut or formed upon the ends of the same, a sliding piece or bar attached to said sleeves carrying the handle pieces and which engages upon the inclined planes or surfaces aforesaid; a flexible wire or connecting piece attached to said bar by means of a screw threaded rod having a nut for adjusting the position of the same, a pivoted quadrant or bent lever operated by said flexible wire or connection, a telescopic rod attached at one end to the said quadrant and carrying at the other end the brake block for engaging upon the wheel; a spring for controlling the said telescopic rod, substantially as described and illustrated.

**No. 54,028. Tire for Cycles and Similar Vehicles.**

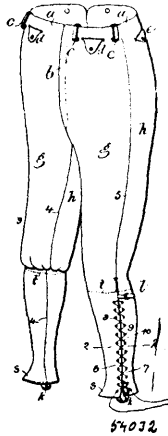
(Bandage pour cycles, etc.)

Theodore Müller, Gross Salze, Saxony, Prussia, Germany, 10th November, 1896; 6 years. (Filed 4th September, 1896.)

*Claim.*—1st. An elastic tire, having its elastic medium formed by pith, the latter being kept under a constant pressure, and being



and united by inner seams that extend down to the lower part of the leg portions, and by outer seams that extend down below the



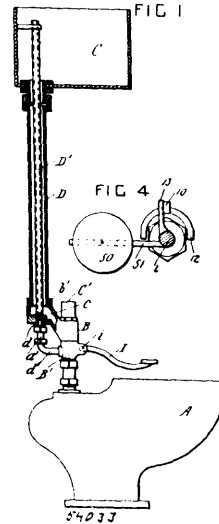
knee to leave openings similar to leggings with lacings or other devices for drawing the parts around the lower limb, substantially as set forth. 2nd. The combined trousers and leggings having the fabric of the front and back pieces extending the entire length of the legs and united by inner seams that extend down to the lower part of the leg portions, and by outer seams that extend down below the knee to leave openings similar to leggings with lacings or other devices for drawing the parts around the lower limb, a stiffening lining applied within the legs and below the knee portions for keeping the leggings portions smooth and also protecting the wearer, substantially as set forth. 3rd. The combined trousers and leggings formed of fabric that extends from the waist portion to the lower ends of the legs and united throughout by inner seams and by outer seams extending down below the knee, the garment being loose at and above the knee, and the lower ends of the front fabrics being cut to form uppers over the instep, a stiffening fabric within the lower portions of the legs, and lacings and eyelets or similar devices for tightening the leggings portions around the lower limb, substantially as set forth. 4th. The combined trousers and leggings formed of fabric that extends from the waist portion to the lower ends of the legs and united throughout by inner seams and by outer seams extending down below the knee, the garment being loose at and above the knee, and the lower ends of the front fabrics being cut to form uppers over the instep, a stiffening fabric within the lower portions of the legs, and lacings or similar devices for tightening the leggings portions around the lower limbs, and a lining of fibrous material for the leggings portions, substantially as set forth. 5th. The combined trousers and leggings made with front and back fabrics united down the inner parts by seams, and down the outer parts to below the knee, and provided with lacings or similar devices for tightening the leggings portions around the lower limbs, the lower ends of the front fabrics extending over the insteps, substantially as specified. 6th. The combined trousers and leggings made with front and back fabrics united down the inner parts by seams, and down the outer parts to below the knee, and provided with lacings or similar devices for tightening the leggings portions around the lower limbs, the lower ends of the front fabrics extending over the insteps, and the back fabrics being contracted at incisions or openings to come below the calves of the legs, substantially as specified.

**No. 54,033. Water Closet. (Latrine à eau.)**

David Thomas Kenney, North Plainfield, New Jersey, U.S.A., 11th November, 1896; 6 years. (Filed 28th August, 1896.)

*Claim.*—1st. The combination, with a main valve, and a casing inclosing it and provided with a water inlet at its lower part, and a water passage connecting its upper and lower parts, of a vent valve carried by the main valve, and a stem operating to raise first the vent valve and then the main valve, substantially as set forth. 2nd. The combination, with a valve outlet chamber provided with a main valve seat, of an inlet chamber secured over the said seat, a valve casing provided with a water inlet at its lower part and secured over the said valve seat inside the said chamber, a main valve freely slidable in the said casing and provided with a tubular stem, a vent valve carried by the said main valve, and a stem for raising first the vent valve and then the main valve, substantially as set forth. 3rd. The combination, with a flushing valve provided with a stuffing-box, and an externally screw-threaded bearing at the sides of its outlet chamber, of a spindle journaled in the stuffing-box and provided with an external operating lever, and an internal arm for opening the valve, a cylindrical nut screwed on the end of the said spindle and journaled in the said bearing, and a cap closing the end of the bearing, substantially as set forth. 4th. The combination, with a flushing valve, as set forth in claim 1, of a ring slidable on the said valve casing and operating to adjust the area of the said water inlet. 5th. The combination, with a flushing valve

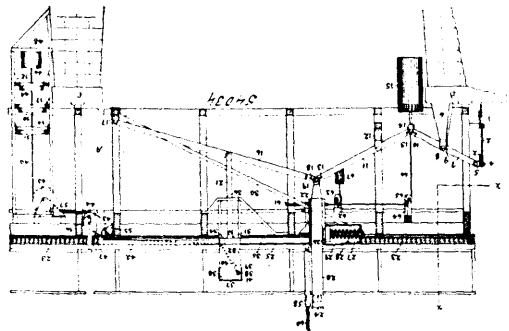
as set forth in claim 1, of cylinders secured on the under side of the main valve and forming an annular passage inside the valve seat,



one of the said cylinders being adjustable and permitting the rush of water through the said annular passage to be varied. 6th. The combination, with a flushing valve as set forth in claim 1, of an annular air vessel formed under the main valve in the upper part of the outlet chamber, substantially as set forth. 7th. The combination, with the means for operating the flushing valve as set forth in claim 3, of a projecting stop on the said spindle, and an arm pivoted to the said stuffing-box, and projecting into the path of the said stop and provided with a forked portion engaging with the nut of the stuffing-box. 8th. The combination, with a flushing valve at the pan of a water closet, of a raised cistern, a supply pipe connecting the said valve with the said cistern, and an overflow pipe arranged inside the said supply pipe, substantially as set forth. 9th. The combination, with the supply pipe of a water closet, of a longitudinal obstruction, such as a pipe, arranged inside the supply pipe and operating to prevent the water from whirling around in the pipe and drawing air down its centre. 10th. The combination, with a flushing valve having an inlet chamber and an outlet chamber, of a raised cistern, a water supply pipe connecting the cistern with the said inlet chamber, and an overflow pipe passing through the said supply pipe and secured to the said outlet chamber, substantially as set forth.

**No. 54,034. Drawbridge Safety Device.**

(Appareil de sûreté pour pont-levis.)



John Coup, Cleveland, Ohio, U.S.A., 11th November, 1896; 6 years. (Filed 31st August, 1896.)

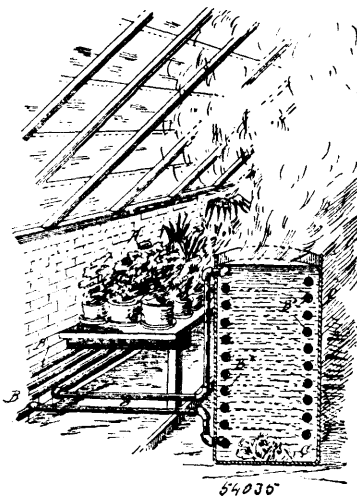
*Claim.*—1st. The combination in a drawbridge safety device, of a series of levers actuated by the draw and a counterweight, a rising-and-falling plunger operated by said levers, and a travelling obstruction carried by said plunger, substantially as and for the purpose set forth. 2nd. The combination in a drawbridge safety device, of a series of levers actuated by the draw and a counterweight, a rising-and-falling obstruction and plunger operated by said levers, and a travelling obstruction carried by said plunger, substantially as and for the purpose set forth. 3rd. The combination in a drawbridge safety device, of a series of levers actuated by the draw and a counterweight, a rising-and-falling plunger operated by said levers, a head on said plunger, and a travelling obstruction detachably connected to said head, substantially as and for the purpose set forth. 4th. The combination in a drawbridge safety device, of a

rising-and-falling plunger carrying a travelling obstruction, ropes attached to said obstruction, and weights and auxiliary weights arranged to be lifted by said ropes when said obstruction is forced forward, substantially as and for the purpose set forth. 5th. The combination in a drawbridge safety device, of a rising-and-falling plunger, a head on said plunger, a travelling obstruction detachably connected to said head, ropes attached to said obstruction, and weights and auxiliary weights arranged to be lifted by said ropes when said obstruction is forced forward, substantially as and for the purpose set forth. 6th. The combination in a drawbridge safety device, of a rising-and-falling plunger carrying a travelling obstruction, inverted troughs pivotally attached in a slot to the bridge floor, ropes passing through said troughs and fastened to said obstruction, and weights and auxiliary weights arranged to be lifted by said ropes when said obstruction is forced forward, substantially as and for the purpose set forth. 7th. The combination in a drawbridge safety device, of a rising-and-falling plunger, a head on said plunger, a travelling obstruction detachably connected to said head, inverted troughs pivotally connected in a slot to the bridge floor, ropes passing through said troughs and fastened to said obstruction, and weights and auxiliary weights arranged to be lifted by said ropes when said obstruction is forced forward, substantially as and for the purpose set forth. 8th. The combination in a drawbridge safety device, of the levers 7 and 11, a counterweight depending from their contiguous ends, the levers 2 pivotally connected to the front of the bridge and actuated by the draw and said counterweight, and an obstruction pivotally attached to the rear end of said lever 11 and adapted to be raised and lowered by said levers, substantially as and for the purpose set forth. 9th. The combination in a drawbridge safety device of the levers 7, 11 and 16 pivotally connected, a counterweight depending from the contiguous ends of said levers 7 and 11, the levers 2 pivotally connected to the front of the bridge and actuated by the draw and said counterweight, and an obstruction pivotally attached to the adjacent ends of said levers 11 and 16 and adapted to be raised and lowered by the operation of all of said levers, substantially as and for the purpose set forth. 10th. The combination in a drawbridge safety device, of a sleeve and a box, a rising-and-falling obstruction operating through said sleeve, and a spring-actuated buffer in said box adjacent to the front of said obstruction, substantially as and for the purpose set forth. 11th. The combination in a drawbridge safety device, of a sleeve and a box, a sliding cover on said box, a rising-and-falling obstruction operating through said sleeve, and a spring-actuated buffer in said box adjacent to the front of said obstruction, substantially as and for the purpose set forth. 12th. The combination in a drawbridge safety device, of a series of levers actuated by the draw and a counterweight, a rising-and-falling obstruction operated by said levers, one or more vertical rods journaled to the bridge structure and carrying gates, sheaves fast to the lower ends of said rods, and other sheaves supporting ropes having counterweights at one end and connected with said levers at the other end, said ropes passing around said rod-sheaves and turning the same when said levers are actuated, thereby closing or opening said gates, substantially as and for the purpose set forth. 13th. The combination in a drawbridge safety device, of a series of levers actuated by the draw and a counterweight, one or more vertical rods journaled to the bridge structure and carrying gates, sheaves fast to the lower ends of said rods, and other sheaves supporting ropes having counterweights at one end and connected with said levers at the other end, said ropes passing around said rod-sheaves and turning the same when said levers are actuated, thereby closing or opening said gates, substantially as and for the purpose set forth. 14th. The combination in a drawbridge safety device, of a series of levers actuated by the draw and a counterweight, a rising-and-falling obstruction and plunger carrying a travelling obstruction, operated by said levers, one or more vertical rods journaled to the bridge structure and carrying gates, sheaves fast to the lower ends of said rods, and other sheaves supporting ropes having counterweights at one end and connected with said levers at the other end, said ropes passing around said rod-sheaves and turning the same when said levers are actuated, thereby closing or opening said gates, substantially as and for the purpose set forth. 15th. The combination in a drawbridge safety device, of a travelling obstruction, one or more inverted troughs pivoted in a slot to the bridge-floor back of said obstruction, and ropes weighted at one end passing through said troughs and fastened to the upper part of said obstruction, whereby the front ends of said trough are elevated beneath a car which is driving forward said obstruction, substantially as and for the purpose set forth. 16th. The combination in a drawbridge safety device, of a travelling obstruction, ropes attached thereto, and weights and auxiliary weights arranged to be lifted by said ropes when said obstruction is forced forward, substantially as and for the purpose set forth. 17th. The combination in a drawbridge safety device, of a travelling obstruction, inverted troughs pivoted in a slot to the bridge-floor, ropes passing through said troughs and fastened to said obstruction, and weights and auxiliary weights arranged to be lifted by said ropes when said obstruction is forced forward, substantially as and for the purpose set forth.

**No. 54,035. Green House. (Serre-chaude.)**

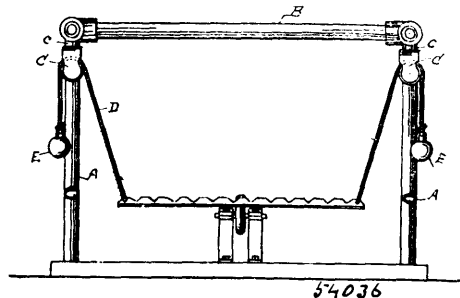
Norman S. Chapman, Springfield, Massachusetts, U.S.A., 11th November, 1896; 6 years. (Filed 26th September, 1896.)

*Claim.* The combination with the steam-pipes B, of a greenhouse, of a subsidiary pipe-coil B<sup>2</sup>, an evaporating tank C contain-



ing a liquid decoction, the vapour of which is poisonous to insects, and inlet and outlet pipe connections between said steam-pipes and coil, whereby heat is applied to said tank, and said poisonous vapour set free, substantially as described.

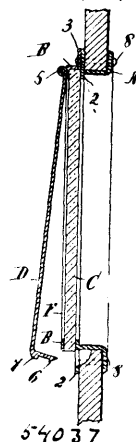
**No. 54,036. Device for Grinding Mowing Machine Knives. (Machine à aiguiser les couteaux de faucheuses.)**



William Campbell Case, Dexter, New York, U.S.A., 11th November, 1896; 6 years. (Filed 26th April, 1896.)

*Claim.*—In a device of the nature described, the combination of an upright frame, of two pulleys respectively swivelled at the opposite sides of said frame and cords or chains passing about said pulleys and adapted to be connected at one end to the knife to be ground, and having attached at their opposite ends counterweights, substantially as described.

**No. 54,037. Name Holder for Trunks, etc. (Porte-adresse pour coffres, valises, etc.)**

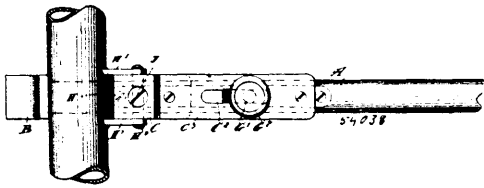


John W. LaBaw, Avondale, New Jersey, U.S.A., 11th November, 1896; 6 years. (Filed 10th August, 1896.)

*Claim.*—1st. The combination in a name holder for trunks and similar articles, of the flanged frame A adapted to set around an

opening in the trunk or valise, the frame B adapted to set against the inner surface of the trunk or valise, and means for connecting the frames A and B together and to the trunk or valise, a glass carried by the frame B and adapted to receive behind it the card or plate with the name or address, substantially as set forth. 2nd. The combination in a name holder for trunks and similar articles, of a flanged frame A adapted to set around an opening in the trunk or valise, the frame B adapted to set against the inner surface of the trunk or valise, and means for connecting the frames A and B together and to the trunk or valise, a glass carried by the frame B and a hinged flap behind the glass and adapted to confine the card or name plate, substantially as set forth. 3rd. The combination in a name holder for trunks and similar articles, of a flanged frame A adapted to set around an opening in the trunk or valise, the frame B adapted to set against the inner surface of the trunk or valise, and means for connecting the frames A and B together and to the trunks or valise, a glass carried by the frame B, a hinged flap behind the glass and adapted to confine the card or name plate, a latch connected with the hinged flap for holding the same in position, when closed, substantially as set forth.

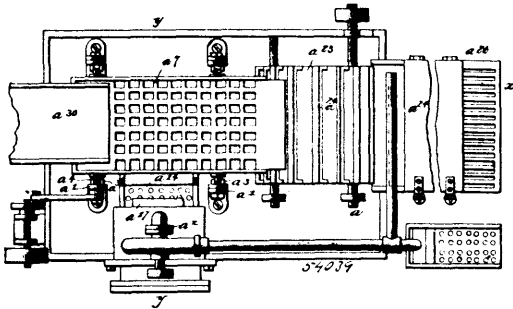
**No. 54,038. Combination Pipe and Monkey-Wrench.**  
(Clé à tuyau et écrou combinées.)



Thomas Dixon, McKeesport, Pennsylvania, U.S.A., 11th November, 1896: 6 years. (Filed 28th September, 1896.)

*Claim.*—1st. A wrench, comprising a fixed jaw, a movable jaw on the shank of the fixed jaw and having a recess formed in it, a block in said recess adapted to move transversely of the fixed jaw shank and having teeth to engage teeth on the shank, a wedge adapted to slide longitudinally of the recess and engage upon a longitudinally inclined surface of the block, and clamping means for said wedge, substantially as specified. 2nd. A wrench, comprising a fixed jaw, a jaw movable on the shank of the fixed jaw, clamping means comprising a slidable wedge, a roller jaw, arms in which said roller jaw is mounted, a shaft from which said arms extend, the said shaft having bearing in slots in the movable jaw extended parallel with the gripping face of the movable jaw, a spring engaging on said shaft, and a screw block in the movable jaw engaging the opposite end of the spring, substantially as specified. 3rd. A monkey-wrench, comprising a shank carrying a fixed jaw, a movable jaw fitted to slide on said shank, a rack secured on said shank, a spring-pressed toothed block fitted to slide in said movable jaw and adapted to engage said rack, and a wedge movable on said movable jaw and adapted to engage said toothed block, substantially as shown and described.

**No. 54,039. Method of Washing, Concentrating and Amalgamating Ores, and in Apparatus therefor.** (*Méthode de laver, concentrer et amalgamer les minerais et appareil à cet effet.*)



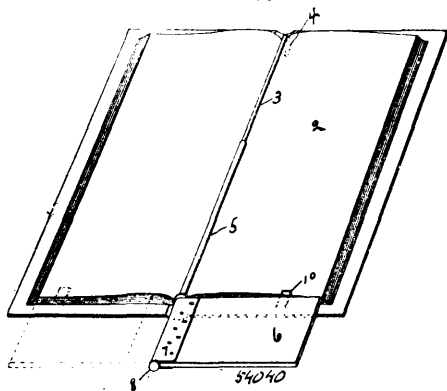
Charles Frederick Pike, Philadelphia, Pennsylvania, U.S.A., 11th November, 1896: 6 years. (Filed 10th November, 1894.)

*Claim.*—1st. The method of separating metals from ore or gangue, which consists in placing a layer or body of mercury in a vessel, depositing the ore adjacent to the surface of the mercury, causing said ore to be scattered or disturbed above the surface of the mercury and correspondingly propelled or conveyed from its place of supply to a place of discharge distant from the former, for effecting a separating of the metal from the ore without commingling the latter with the mercury, and then discharging the gangue from said vessel, substantially as set forth. 2nd. The method of separating metal particles from black-sand (as it is conducted over shaking riffle

plates in water in placer gravel machines), which consists in imparting to the black-sand repeated short advancing movements, and suspending or keeping it alive in the water at the termination of each such movement, substantially as set forth. 3rd. In the art of working placer gravel, the method which consists in feeding the material through a body of water onto an amalgamating surface and removing the magnetic and non-magnetic constituents of said metal separately from said surface, substantially as and for the purpose set forth. 4th. In the art of washing and concentrating ores, the method of maintaining the black-sand particles of the ore in a scattered or diffused condition, which consists in imparting to the ore repeated short advancing movements, and simultaneously therewith repeatedly and successively magnetically condensing such sand particles and scattering or diffusing them in the washer in advance of their discharge, substantially as set forth. 5th. The mode of washing and concentrating ores and maintaining the black-sand particles in a scattered and diffused condition from the entry of such sand into the washer until it reaches a suction-discharge for said sand, which consists in repeatedly and successively magnetically condensing such sand particles and scattering or diffusing them in the washer in advance of their discharge, and in again magnetically condensing and then scattering or diffusing them in the vicinity of the inlet to the suction-discharge, substantially as set forth. 6th. The method herein described of washing and concentrating ore, which consists in feeding the ore into a depth of still or quiescent water to admit of the metal particles of the ore falling through the water faster than the waste matters, then subjecting the metal particles and waste matters to the action of a moving body of mercury at the termination of their descending movement, and then discharging such waste matters, substantially as set forth. 7th. The method herein described of washing or concentrating ore, which consists in feeding the ore into a stratum or body of circulating or moving water, then causing it to pass through a stratum or body of quiescent water beneath said circulating water, and then subjecting it to the action of amalgamation, and then removing the waste matter, substantially as set forth. 8th. In a machine for working placer gravel, the combination of a stationary vessel containing a body of water, a series of screens of different mesh one above the other and inclining downwardly from their feed to their discharge ends, a correspondingly inclined riffle plate beneath the lowest screen and moving with said screens, and a discharge device for the waste material with or without a separate discharge for the black-sand escaping from the riffle plate, substantially as and for the purpose set forth, and as shown. 9th. In an ore washing, concentrating and amalgamating plant having a series of succeeding vessels, means for discharging the flow of gangue from said vessels and returning part of the discharge to the vessel from which it was discharged, substantially as set forth and shown. 10th. In an amalgamator, an amalgam plate, a feed device and a suction-discharge device, said amalgam plate having motion relatively to the feed and suction-discharge devices, or vice versa, for the purpose as set forth and as shown. 11th. In an ore washer or concentrator, the combination of a stationary vessel containing a body of water, a rotating mercury containing vessel in said stationary vessel, a feed device, and a suction-discharge, substantially as set forth, and as shown. 12th. In an ore washer or concentrator, a receiving vessel adapted to contain a body of water, a partition  $f^2$ , and an adjustable gate on said partition, substantially as set forth, and as shown. 13th. In an ore washer or concentrator, a receiving vessel having a suction-discharge, and a feed device sealed from said suction-discharge, with or without a shed or cover for the latter, substantially as set forth, and as shown. 14th. In an ore washer or concentrator, a receiving vessel having a feed device, a suction-discharge, and a chamber enclosing inlet end of said suction-discharge, substantially as set forth, and as shown. 15th. In an ore washer or concentrator, the combination of a mercury containing vessel, a feed device and a suction-discharge device located at a distance apart, a jet tube or tubes for propelling the ore across and adjacent to the surface of the mercury from the feed to the discharge, substantially as set forth. 16th. In an ore washer or concentrator, the combination of a vessel adapted to contain mercury, a suction-discharge pipe for said vessel, and a mercury cover or arresting plate located adjacent to the inlet end of the suction-discharge pipe, substantially as set forth. 17th. In an ore washer, concentrator or amalgamator, the combination of a receiving vessel, a suction-discharge therein, a magnet at or near the inlet of said suction-discharge, and circuit connections including a source of electric supply for said magnet, substantially as set forth. 18th. In an ore washer or amalgamator, the combination of a receiving vessel, a shaking or jigger bottom for or in said vessel, transverse riffles on said bottom, a feed device and a suction-discharge for said vessel, one or more magnets located between the feed and discharge devices, and above and adjacent to said bottom, and circuit connections with a source of electrical supply for said magnets, substantially as set forth. 19th. In an ore washer and amalgamator, the combination with a receiving vessel containing an amalgamating surface, and a superposed body of water, a feed device, a suction-discharge distant from said feed device, and means for moving the ore from the feed device to said suction-discharge, of an auxiliary suction-discharge located between the feed and main suction-discharge, for the purpose set forth. 20th. In an ore washer or amalgamator, the combination with a receiving vessel containing a body of water, a feed device, a suction-discharge distant from said feed device, and a movable amalgamating surface

immersed in the water, said surface adapted to convey the ore fed thereto to the suction-discharge, of revoluble magnets between the feed and suction-discharge and adjacent to the inlet of the latter and to the amalgamating surface, and means for clearing the said magnets and magnetic material adhering thereto, substantially as and for the purpose set forth. 21st. In an ore washer or concentrator, the combination of a receiving vessel, a feed device, a rotating or travelling amalgam. surface, a suction-discharge and a magnetic discharge device, substantially as set forth. 22nd. In an amalgamating device having a flow for passing the ore or gangue through the amalgamator, gangs of clutes in the path of said flow for dividing the flow into a number of thin streams, and pockets at the ends of said gangs for remitting said streams in a single flow, substantially as set forth. 23rd. The combination with chamber, of the gangs of alternately directed casings  $m^1$ , and actuating devices for varying the degree of their inclination, substantially as set forth. 24th. The combination of tubular casings having edge flanges and a catch pocket bolted to said flanges and common to a series of plates in said casings, substantially as set forth. 25th. The combination of the sectional tubular uprights, as  $n, n$ , having inlet and outlet ports, and tubular casings as  $n^1, n^1$ , having their opposite ends respectively connected with the inlet and the outlet ports of said uprights, and a cross partition below one of the inlet ports of each upright, substantially as set forth. 26th. In an ore washer and amalgamator, the combination of sectional tubular ends  $n, n$ , having draw-off cocks, removable caps or covers, and inlet and outlet ports, tubular casings  $n^1$ , joining said ends, and gangs of catch-plates  $m$ , in casings  $n^1$ , substantially as set forth.

**No. 54,040. Arm Rest. (Appui-bras.)**

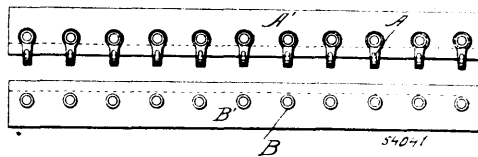


Charles S. Gilman, Minneapolis, Minnesota, U.S.A., 11th November, 1896; 6 years. (Filed 29th September, 1896.)

*Claim.*—1st. An arm rest, comprising telescoping tubes to rest upon the surface of the book, means for holding the same in position, and a board or rest provided on the end of one of the said tubes, and forming a continuation of the leaf of the book, substantially as described. 2nd. An arm rest, comprising telescoping tubes adapted to rest upon the surface of the book, means for holding the same in position, and a pivoted plate or board provided on the end of one of said telescoping tubes, and forming a continuation of the leaf of the book, substantially as described. 3rd. An arm rest, comprising telescoping tubes adapted to rest upon the surface of the book, means for holding the same in position, a pivoted plate or board provided on the end of said telescoping tubes, and adapted to be turned to form a continuation of either the right or left hand page of the book, and said plate being provided with a staple or projection to rest upon the surface of the leaf, for the purpose set forth. 4th. In a device of the class described, the combination with the outer tube, of the inner tube or rod having a hooked outer end and slidable within said first-named tube, the plate adapted to form a continuation of the leaf of the book, and the thumb screw provided upon the outer end of said tube, for the purpose set forth. 5th. The combination with the outer tube, of the inner tube slidable therein, said inner tube having a hooked outer end and an enlarged inner end to bear upon the inner surface of said outer tube, a pivoted plate provided with a staple or lug to bear upon the surface of the leaf, and a ring or collar arranged upon said outer tube near the inner edge of said plate, for the purpose set forth. 6th. In a device of the class described, the combination with a tube, of a second tube or rod adapted to slide therein, said second tube being tapered at its outer end and bent to form a wedge-shaped hook, and a plate or board arranged upon the outer end of said first-named tube, and adapted to form a continuation of the leaf of the book, substantially as described. 7th. In a device of the class described, the combination with a tube, of a second tube or rod slidable therein, a plate carried by said first-named tube, said second tube being provided with a hook at its outer end and having an enlarged inner end, for the purpose set forth. 8th. The combination, with the outer tube, of the inner tube or rod having a hooked outer end, the plate carried by said outer tube, and forming a continuation of the leaf of the book, and the staple provided in the edge of the said plate, for the purpose set forth.

**No. 54,041. Dress Waist Fastener.**

(Manière de poser les agrafes sur les vêtements.)

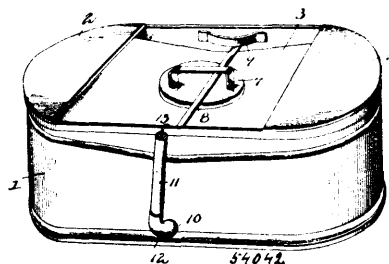


Ernest Toussaint Lorin, Montréal, Québec, Canada, novembre 11 1896; 6 ans. (Déposé le 12 juin 1896.)

*Résumé.*—Ce procédé de poser les agrafes et leurs œillets sur les vêtements consistant à poser les dites agrafes et les dits œillets sur des lisières de tissu puis à coudre ces lisières au vêtement, le tout tel que décrit et pour les fins indiquées.

**No. 54,042. Sap-gathering Tank.**

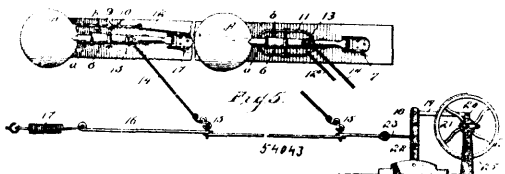
(Réservoir pour recueillir la sève.)



William E. Burt, Enosburg Falls, Vermont, U.S.A., 13th November, 1896; 6 years. (Filed 17th June, 1896.)

*Claim.*—1st. A sap-gathering tank, oblong in form and having its top sides closed at its ends by covers which extend inward for a short distance, a plate or head located a short distance below the plane of the top edge of the tank and entirely covering the same, and inclining from an intermediate point in its length towards its ends in an upward direction, and a perforated cylinder located at the central or depressed part of the said plate or head, substantially as set forth. 2nd. A sap-gathering tank, oblong in form and having its top closed at its ends by covers which extend inward for a short distance, a plate or head located a short distance below the top edge of the tank and extending over the said tank, and inclining upwardly toward its ends from an intermediate point, and having an opening at its middle or lowest point, a cylinder reaching from the plate or head to the bottom, a strainer fitted in the said cylinder, and a ring attached to the bottom of the tank in vertical alignment with the opening in the said plate or head and receiving the lower end of the cylinder, substantially set forth for the purpose described. 3rd. In combination, a sap-gathering tank having handles on its inner side at diametrically-opposite points, a synclinal plate or head extending over the tank and located a short distance below the plane of its top edge, a cylinder removably fitted in an opening at the middle or lowest point of the said plate or head, a cover for closing the said cylinder, and a rod or bar for securing the said cover and cylinder against accidental displacement and adapted to have its ends engaged with the said handles, substantially as set forth.

**No. 54,043. Automatic Fan. (Éventail automatique.)**



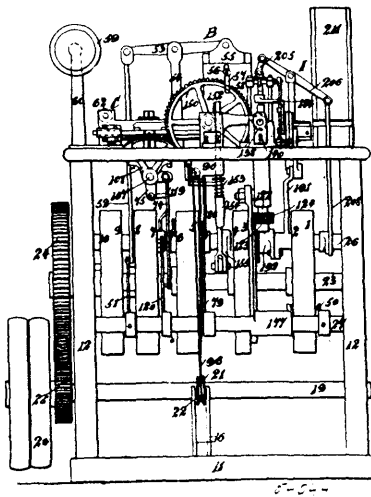
Leaney Recht, Platte, Missouri, U.S.A., 13th November, 1896; 6 years. (Filed 22nd July, 1896.)

*Claim.*—In a fan attachment, the cross-bar G, the vertical hooks H secured thereto and which catch over the top of the chair and support the bar, and the rods I which extend straight down from the bar a suitable distance and then have their ends curved horizontally outward, combined with the fan mounted on the bar, and cords k for securing the cross-bar in place, substantially as shown. 2nd. In a fan attachment, the cross-bar, the vertical hooks H, and the bent rods I secured thereto, combined with the standard fork at its upper end, the tubular socket pivoted to the standard, the plates b secured to the standard, the spring C, the flexible connection secured to one end of the spring and at the other end to the tubular socket, and a fan adjustably held in said socket, substantially as



described. 3rd. The combination of a standard, a tubular fan holder pivoted to the same, a spring connected with the tubular fan holder and the standard, upper and lower swinging loops secured to the tubular standard, a hand-pull attached to the upper loop, and a treadle connected by a cord with the lower loop, substantially as described. 4th. The combination of a standard, a tubular fan holder pivoted to the same, a spring connected with the tubular fan holder and the standard, upper and lower swinging loops secured to the tubular standard, a hand-pull attached to the upper loop, a treadle connected at one end with the lower loop and provided at its other end with an opening, and an anchoring cord connected with the treadle and adapted to be secured to the floor, substantially as described. 5th. The combination of a keeper designed to be secured to a sewing machine table, or the like, a pivoted bar arranged to swing in the keeper, provided with a longitudinal slot and having a socket, a fan stepped in the socket, and a treadle cord passing through said slot and connected with the fan, substantially as described. 6th. The combination of a series of tubular fan holders, springs connected with the same, a link-bar pivoted intermediate of its ends to one of the tubular fan holders, a link pivoted to the other fan holder, connections between the link and the link-bar, and means for actuating the tubular fan holders, substantially as described. 7th. The combination with a series of tubular fan holders, an oscillating rod provided at one end with a spring, connections between the tubular fan holders and the rod, an oscillating bar connected with the rod, a crank-shaft actuating the oscillating bar, and a pulley or band-wheel mounted on the crank-shaft adapted to receive a belt, substantially as described.

**No. 54,044. Cigarette Machine. (Machine à cigarette.)**



Domínguez Pérez Y. Bunol, Havana, Cuba, 13th November, 1896; 6 years. (Filed 9th March, 1896.)

*Claim.*—1st. A cigarette machine, comprising a receiver adapted to contain the filling, a wrapping device for winding a wrapper around the filling in the receiver, a wrapper-cutting device, a conveying device for feeding the cut wrappers to the said wrapping device, and means secured to the conveying device for holding and releasing the wrappers, substantially as described. 2nd. A cigarette machine, comprising a series of connected receiver sections adapted to hold the fillings, a mating receiver section to complete the receiver, a wrapping device constructed to enter the said receiver to wind the wrappers around the fillings therein, and mechanism for successively carrying each of the connected receiver sections from the position in which it receives the tobacco into operative relation to the wrapping device, substantially as described. 3rd. A cigarette machine, comprising a series of connected receiver sections constructed to move in unison, a mating receiver section to complete the receiver, a device for successively filling the said connected sections with tobacco, a wrapping device constructed to enter the said receiver to wind the wrappers around the fillings therein, and a mechanism for intermittently advancing the series of connected receiver sections to successively carry each of them from the position in which it receives the filling into operative relation to the wrapping device, substantially as described. 4th. The combination with the apron, of a series of tobacco separating boxes connected to move in unison, and guides for causing the said boxes to first approach the apron, then move longitudinally thereof, and then recede from the apron, as and for the purpose set forth. 5th. The combination with the apron, of a rotary shaft, a slotted arm thereon, a tobacco separating box provided with a pin extending through the slot of the said arm, and guides for causing the box to first approach the apron, then move longitudinally thereof, and then recede from the apron, as and for the purpose set forth. 6th. The combination of the rotary shaft, a slotted arm thereon, a pin extending through the slot of the arm, a tobacco separating box hung on the said pin, and

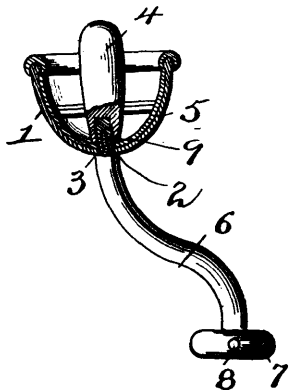
rectangular guides to cause the said box to perform a rectangular movement during the rotation of the shaft, substantially as and for the purpose set forth. 7th. The combination with the apron, of the casing arranged above the same and provided with rectangular guide channels on its inner faces, a shaft journaled in the said casing, radially slotted arms on the shaft, pins extending through the slots of the arms, tobacco separating boxes hung on the said pins between the corresponding slotted arms, and guide heads secured to the pins exteriorly of the slotted arms and adapted to engage the guide channels of the casing, substantially as and for the purpose set forth. 8th. The combination with the lower receiver section, the inclined chute above the same, and a tobacco feed device having movement toward the said chute, of a guide frame above the chute and forming a shoulder therewith, and a plunger having vertical movement in the said frame and the chute, the lower portion of the plunger being yielding so that it will move toward or from the wall of the chute when the said portion comes in contact with the shoulder formed between the guide frame and the chute, substantially as described. 9th. A paper feed device, comprising a reciprocating slide having movement in the direction of the feed, supplemental slides having guided movement in first-named slide essentially perpendicular to the movement thereof, jaws secured to the said supplemental slides, and means for moving the said slides carrying the jaws toward or from each other, substantially as described. 10th. A paper feed device, comprising a reciprocating slide having movement in the direction of the feed, clamping jaws having sliding connection with the said slide and adapted to move essentially perpendicular to the direction of the feed, a rock shaft journaled in the slide, and an operative connection between the rock shaft and the clamping jaws to move the latter toward or from each other, substantially as described. 11th. A paper feed device, comprising a reciprocating slide having movement in the direction of the feed, clamping jaws having sliding connection with the said slide and adapted to move essentially perpendicular to the direction of the feed, a rock shaft journaled in the slide, a plate secured to the rock shaft and provided with cam slots, means for operating the plate, and pins connected to the jaws and engaging the said slots, substantially as described. 12th. A paper feed device, comprising a reciprocating slide having movement in the direction of the feed, a table over which the paper is adapted to pass, said table being provided with a longitudinal slot, clamping jaws having sliding connection with the slide and having movement relatively thereto essentially perpendicular to the table to engage or release the paper thereon, said jaws being arranged in alignment with the slot of the table, and means for opening and closing the jaws, substantially as described. 13th. The combination of the longitudinally slotted table, the reciprocating slide having movement essentially parallel thereto, the clamping jaws having sliding connection with the slide and adapted to move essentially perpendicular to the table toward or from the slot thereof, the oscillating plate journaled in the slide, an operative connection between the said plate and the clamping jaws to move the same in unison toward or from each other, and means for turning the said plate and actuating the slide, substantially as described. 14th. The combination with the feed device having reciprocating movement in the direction of the feed and provided with a clamp to draw the paper forward, and the cutting device located in advance of the reciprocating feed device, and adapted to cut the paper into wrappers, of a reciprocating wrapper conveying device provided with a clamp located in advance of the cutting device and adapted to hold the paper while it is being cut, and then carry the wrapper forward, substantially as described. 15th. The combination, with the slide having a rack, and a fixed jaw, of a movable jaw pivoted to the slide, a sliding rod connected to the movable jaw, a rocking arm adapted to actuate the sliding rod, and a toothed sector engaging the rack of the slide and provided with lugs or abutments between which extends the said rocking arm, the latter being capable of moving independently of the toothed sector, substantially as described. 16th. The combination, with the slide having a rack and a fixed jaw, of a movable jaw pivoted to the slide, a sliding rod connected to the movable jaw, a rocking arm having an elastic operative connection with the sliding rod, a toothed sector pivoted concentrically with the said arm, and engaging the rack of the slide, said arm being capable of moving independently of the sector, and abutments secured to the sector on each side of the arm and adapted to be alternately engaged thereby, substantially as described. 17th. The combination, with the paper feed device, and the wrapper conveying device, of a wrapper cutting device, located in advance of the feed device, and a gumming device adapted to gum the edge of the wrapper adjacent to the cutting device, substantially as described. 18th. The combination with the paper feed device, and the wrapper conveying device, of a wrapper cutting device located in advance of the feed device, and a gumming device operatively connected to the cutting device to move in unison therewith and gum the edge of the wrapper adjacent to the cutting device, substantially as described. 19th. The combination, with the series of connected receiver sections, and means for intermittently advancing them, of a tobacco feed device adapted to convey the tobacco to the receiver sections, a device for closing the receivers of which said sections form a part, a paper feed device, and a wrapper conveying device for carrying the wrappers to the receiving sections, said wrapper conveying device being provided with an arm adapted to push the finished cigarettes out of the

receiver sections, and a wrapping device for winding the wrappers around the tobacco fillings, substantially as described. 20th. In a cigarette machine, a rotatable platform, radially disposed blocks carried by the platform and capable of movement perpendicular to the plane of the platform, said blocks forming part of a receiver, an additional receiver section to complete the receiver, and means for moving each receiver block toward the said additional receiver section to close the receiver, substantially as described. 21st. The combination of the platform, the essentially radial guides secured thereto, the receiver blocks set radially between the guides and having movement thereon essentially perpendicular to the plane of the platform, each of the blocks with its guides forming a receiver section, an additional receiver section disposed essentially radially in relation to the platform, so that the longitudinal axis of the receiver formed by the said sections extends substantially in the direction of the centre of the platform, and means for closing the receiver, as set forth. 22nd. The combination with the platform, the essentially vertical guides secured thereto and disposed radially, and supports secured between the guides, of receiver blocks loosely set between the guides and forming receiver sections therewith, said blocks being provided with cavities extending in an essentially radial direction, the blocks having shoulders adapted to rest on the said supports, and being capable of movement perpendicular to the plane of the platform, an additional receiver section to complete the receiver, and means for moving each receiver block toward the said additional receiver section to close the receiver, substantially as described. 23rd. The combination, with the wrapper conveying device, and the wrapping device provided with jaws to take the wrapper from the wrapper conveying device, of the platform and receiver block holding guides secured thereto, one of the said guides being lower than the other to permit the wrapper to pass over it into the path of travel of the wrapping jaws, substantially as described. 24th. In a cigarette machine, a wrapping device, comprising a reciprocating slide, jaws rotatably mounted on the slide and extending in the direction in which the slide is adapted to move, one of the jaws being movable relatively to the other, means for opening and closing the jaws, means for advancing and retracting the slide, and means for rotating the jaws, substantially as described. 25th. In a cigarette machine, a wrapping device, comprising a reciprocating slide, jaws rotatably mounted thereon, one of the jaws being movable relatively to the other, a rod having movement relatively to the slide, and an operative connection to open or close the jaws, means for actuating the said rod and the slide, and means for rotating the jaws, substantially as described. 26th. In a cigarette machine, a wrapping device, comprising a reciprocating slide, a shaft journaled in the slide, a jaw which is stationary relatively to the shaft, another jaw having movement relatively to the fixed jaw yet held to rotate therewith, a sliding rod operatively connected to the movable jaw, and means for rotating the jaws, substantially as described. 27th. The combination, with the shaft of the wrapping device and the jaws held to rotate therewith, one of the jaws being movable relatively to the other, of a rod having sliding movement longitudinally to the shaft, and an operative connection to open or close the jaws, means for actuating the said rod, and means for rotating the shaft, substantially as described. 28th. The combination of the shaft of the wrapping device, the jaw fixed thereto, another jaw movable toward and from the fixed jaw, a sleeve having longitudinal movement on the shaft and operatively connected to the movable jaw, means whereby the movable jaw is compelled to rotate with the shaft, and means for rotating the shaft, substantially as described. 29th. The combination of the shaft of the wrapping device, the jaw fixed thereto, a pin secured to the fixed jaw, another jaw having guided movement on the said pin toward and from the fixed jaw, another pin secured to the movable jaw, and a sliding sleeve provided with inclined slots engaged by the pin of the movable jaw to control the position of the latter, substantially as described. 30th. The combination of the shaft of the wrapping device, the vertically adjustable bearings wherein the said shaft is journaled to permit of giving various inclinations to the shaft, the wrapping jaws held to rotate with the shaft, one of the jaws being movable relatively to the other, means for opening and closing the said jaws, and means for rotating the shaft, substantially as described. 31st. The combination of the shaft of the wrapping device, a jaw fixed thereto and provided with a sleeve-like portion, a movable jaw whose end is located within the said sleeve-like portion, a pin extending transversely within the said sleeve portion and secured thereto, said pin being loosely engaged by the movable jaw to permit the same to approach or recede from the fixed jaw, the pin also compelling the movable jaw to rotate with the fixed jaw and holding it against the longitudinal displacement relatively thereto, another pin secured to the movable jaw and projecting outwardly through the sleeve-like portion of the fixed jaw, a sleeve having sliding movement on the said portion of the fixed jaw and provided with inclined slots engaged by the pin of the movable jaw, a plate wherein the said sleeve is loosely mounted, and means for moving the said plate longitudinally in relation to the shaft to open or close the jaws, substantially as described. 32nd. The combination, with the receiver block and guides wherein it is adapted to move, and wherewith it forms a lower receiver section, of two slides having reciprocating movement toward and from each other, one of the slides being adapted for operative engagement with the receiver block to raise the same, while the other slide carries an upper receiver section

having guided movement toward and from the lower receiver section, and means for operating the slides to move the block and the upper receiver section toward each other and thus close the receiver, substantially as described. 33rd. The combination with the receiver block, guides wherein it is adapted to move, and wherewith it forms a lower receiver section, and supports on which the block is adapted to rest, of two slides having reciprocating movement toward and from each other, one of the slides carrying arms adapted to engage the receiver block from below and raise it off its supports, while the other slide carries an upper receiver section having guided movement toward and from the lower receiver section, and means for operating the slides to move the block and the upper receiver section toward each other and thus close the receiver, substantially as described. 34th. The combination with the receiver block forming a part of a receiver section, the guides wherein the said block is adapted to move, and the supports on which it is adapted to rest, of stationary guides, slides constructed to move thereon, a pivoted disc provided with cam slots engaged by projections from the slides, means for operating the disc, arms secured to one of the slides and adapted to engage the receiver section secured to the other slide, and adapted to move toward and from the first-named receiver section, substantially as described. 35th. The combination, with the receiver or cigarette support, of a sliding frame provided with points whose path of travel extends adjacent to the ends of the support, another sliding frame having movement in the same direction as the first-named frame, and tongues pivoted to one of the frames, and loosely connected with the other frame to receive a pivotal movement when one of the frames moves relatively to the other, said tongues being provided with points to fold the wrapper, substantially as described. 36th. The combination, with the cigarette support, of the upper sliding frame provided with points to engage the wrapper ends from above, the lower sliding frame having a loose connection with the said upper frame, and tongues having a pivotal connection with the upper frame so as to receive a swinging movement when the upper frame moves relatively to the lower one, said tongues carrying point adapted to engage the wrapper ends from below, substantially as described. 37th. The combination, with the cigarette support, of the upper sliding frame provided with points to engage the wrapper ends from above, the lower sliding frame having a loose connection with the said upper frame, and tongues having an adjustable pivotal connection with the upper frame and a pin and slot connection with the lower frame, so as to receive a swinging movement when the upper frame moves relatively to the lower one, said tongues carrying points adapted to engage the wrapper ends from below, substantially as described. 38th. The combination with the cigarette support, of the upper sliding frame provided with points to engage the wrapper ends from above, the lower sliding frame having a loose connection with the said upper frame, tongues each having an adjustable pivotal connection with the upper frame and a pin and slot connection with the lower frame so as to receive a swinging movement when the upper frame moves relatively to the lower one, said tongues carrying at their free ends points having an adjustable pivotal connection therewith, and adapted to engage the wrapper ends from below, and means for fastening the points relatively to the tongues after adjustment, substantially as described. 39th. The combination, with the cigarette support, of the upper sliding frame provided with points to engage the wrapper ends from above, the lower sliding frame having a loose connection with the said upper frame, tongues each having a transverse slot adapted to be engaged by a fulcrum screw secured to the upper frame, and a longitudinal slot adapted to be engaged by a guide pin secured to the lower frame, so that the tongues will receive a swinging movement when the upper frame moves relatively to the lower one, said tongues carrying points adapted to engage the wrapper ends from below, substantially as described. 40th. The combination of the tobacco hopper, the cutter therein, and the delivery roller located adjacent to the outlet of the hopper and rotating toward the same to throw the material back to the cutter, substantially as described. 41st. The combination of the tobacco hopper, the rotary cutter therein, and the delivery roller located adjacent to the outlet of the hopper, and operatively connected to the cutter to rotate in unison therewith and throw the material back to the cutter, substantially as described. 42nd. The combination of the tobacco hopper, the rotary cutter therein, the delivery roller likewise arranged in the hopper, and a driving connection between the said roller and the cutter, whereby they are caused to rotate in the same direction, the roller rotating toward the cutter to throw the material back thereto, substantially as described. 43rd. The combination of the tobacco hopper, the cutter therein, the roller located at the outlet of the hopper, and means for adjusting the roller relatively to the outlet to regulate the delivery of cut tobacco, substantially as described. 44th. The combination of the tobacco hopper, the rotary cutter therein, the frame loosely mounted on the shaft of the cutter, the roller journaled in the said frame and arranged adjacent to the outlet of the hopper, intermeshing gear wheels on the shafts of the roller and cutter respectively, and means for turning the frame on the cutter shaft to adjust the roller relatively to the outlet, substantially as described. 45th. The combination of the tobacco hopper having a downwardly tapering portion, and an enlarged portion below the said tapering portion, a vertically disposed agitator extending longitudinally of the hopper to the lower end of the tapering portion thereof, a rotary cutter located in the narrow

portion of the hopper to receive the material that has passed through the agitator, the shaft of the cutter being disposed horizontally, a shield with which co-operates the rotary cutter, a roller located in the enlarged portion of the hopper near the delivery end thereof, and a driving connection between the cutter and the roller, substantially as described. 46th. The combination of the tobacco hopper, the cutter therein, the roller arranged at the outlet of the hopper, the conveyer arranged below the hopper, and means for adjusting the roller relatively to the conveyer, substantially as described.

**No. 54,045. Combined Pessary and Womb Battery.**  
(*Pessaire et batterie de matrice combinés.*)

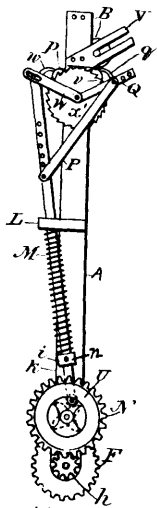


54045

Martha Ellen Keller, Fort Worth, Texas, U.S.A., 13th November, 1896; 6 years. (Filed 24th July, 1896.)

*Claim.*—1st. A pessary comprising a cup of aluminum lined with silver, a silver stem, and a zinc plate arranged at the base of the stem and in the bottom of the cup, substantially as set forth. 2nd. A pessary, comprising a cup presenting an inner surface of silver, a zinc piece in the bottom of the cup, and a metallic stem, substantially as specified. 3rd. A pessary comprising a cup presenting an inner surface of silver, a zinc screw in the bottom of the cup, and a silver stem attached to the zinc screw, substantially as specified. 4th. The combination with a pessary presenting an inner surface of silver, of a silver stem, and a plate of zinc arranged at the bottom of the pessary, substantially as described. 5th. A pessary comprising a cup beaded at its edge and presenting an inner surface of silver, a zinc screw fitted in the bottom of the cup, a silver stem secured to the screw, a zinc plate apertured to receive the stem and placed in the bottom of the cup, and an agee-shaped arm detachably connected with the screw and having a button at its outer end, substantially as set forth.

**No. 54,046. Knitting Machine.** (*Machine à tricoter.*)



54046

John Bentley, Brooklyn, assignee of Joseph J. Adgate, Liberty, both in New York, U.S.A., 13th November, 1896; 6 years. (Filed 24th September, 1896.)

*Claim.*—1st. The combination of a revolving take-up frame, a series of cloth rollers journalled therein, a ratchet wheel attached to the shaft of one of said rollers, two pawl-arms journalled on said

shaft and provided with pawls engaging with said ratchet-wheel, a driving rod connected with one of said pawl-arms, a connecting rod connecting the other of said pawl-arms with said driving rod, a coiled spring operating to depress said driving rod, an anti-friction roller carried by the lower end of said driving rod, a shaft journalled in said take-up frame, a four-armed cam carried upon said shaft, and operating against said anti-friction roller to intermittently raise said driving rod, a stationary series of concentric toothed tracks, a shaft journalled in said take-up frame, a cog-wheel thereupon, engaging with one of said tracks and rotating said last-named shaft, and gearing for transmitting the motion of said shaft to the shaft bearing the four-armed cam, substantially as and for the purposes set forth. 2nd. The combination of a revolving take-up frame, a series of cloth rollers journalled therein, a ratchet-wheel attached to the shaft of one of said rollers, two pawl-arms journalled on said shaft and provided with pawls engaging with said ratchet-wheel, a driving rod connected with one of said pawl-arms, a connecting rod connecting the other of said pawl-arms with said driving rod, a coiled spring operating to depress said driving rod, an anti-friction roller carried by the lower end of said driving rod, a shaft journalled in said take-up frame and carrying a four-armed cam, which operates against said anti-friction roller to intermittently raise said driving rod, a gear wheel loosely journalled upon said shaft and provided with a toothed clutch, a corresponding clutch upon said shaft, provided with a pin sliding in a longitudinal slot in said shaft, an elastic cushion operating against the latter clutch, a nut threaded upon said shaft and operating to compress said cushion, a stationary toothed track, a shaft journalled in said take-up frame, a cog-wheel thereupon engaging with said track and rotating said last-named shaft, and a pinion upon said shaft engaging with the gear wheel upon the shaft carrying the four-armed cam, substantially as and for the purposes set forth. 3rd. The combination of a revolving take-up frame A, provided with the slotted arms V, V, a series of cloth rollers D, C, B carried by said frame, a ratchet-wheel X' carried upon the shaft of the roller D, two pawl-arms W, Q, journalled on said shaft, and provided with the pawls *w*, *q*, and shoes *p*, *r*, engaging on opposite sides of said ratchet-wheel, a driving rod K pivoted to the pawl-arm W, a connecting rod P connecting the pawl-arm Q with the driving rod K, guides L, *l* to guide the rod K, a coiled spring M around said driving rod and operating to depress the same, a collar *i* and set screw *n* to regulate the tension of said spring, an anti-friction roller *k* carried by the lower end of said driving rod K, a shaft O journalled in bearing in said take-up frame, a four-armed cam J carried upon said shaft O and operating against said anti-friction roller to intermittently raise said driving rod K, a stationary series of concentric toothed tracks E with intervening grooves, a cog-wheel F adjustable upon the shaft G, and provided with the set screw *g* and travelling upon one of said tracks and adjustable from one to another thereof, the pinion wheel *h*, cog-wheel N, clutch R, clutch Z provided with the pin *r*, cushion S, nut T, the shaft G, being provided with the groove *o*, substantially as and for the purposes described. 4th. The improved take-up device, consisting of track E, cog-wheel F, shaft G, pinion *h*, cog-wheel N, clutch R, clutch Z provided with the pin *r*, cushion S, nut T, shaft O provided with the groove *o*, the same operating to revolve the rollers B, C and D, whereby the actuating mechanism is enabled to be placed below the roll of cloth, substantially as and for the purposes set forth. 5th. The combination in a take-up device, of the track E, cog-wheel F, shaft G, pinion *h*, cog-wheel N, clutch R, clutch Z provided with the pin *r*, cushion S, nut T, shaft O provided with the groove *o*, and mechanism for transmitting the motion of the shaft O to the rollers B, C and D, and the inclined slotted arms V, V carrying the roller B, whereby the actuating mechanism is enabled to be placed below the roll of the cloth, substantially as and for the purposes set forth.

**No. 54,047. Jack for Knitting Machine Needles.**

(*Garde-aiguille de machine à tricoter.*)

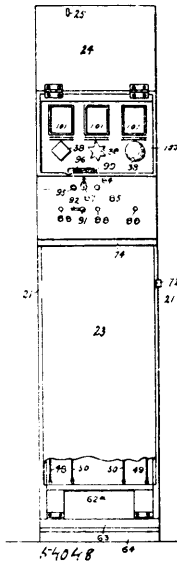


John Bentley, Brooklyn, assignee of Joseph J. Adgate, Liberty, both in New York, U.S.A., 13th November, 1896; 6 years. (Filed 24th September, 1896.)

*Claim.*—1st. A needle jack composed of a single piece of metal, and having a knee integral therewith and formed from the same thickness of metal as the body of the jack, and provided with vertical crimps alternating on opposite sides of the knee, substantially as and for the purposes set forth. 2nd. A series of needle jacks provided with knees formed from the same thickness of metal as the bodies of the jacks, said knees being provided with vertical bends or crimps alternating to opposite sides of the knees, the direction of such bends or crimps being reversed in every alternate knee, substantially as and for the purposes set forth. 3rd. A needle jack composed of a single piece of metal, having a knee integral with the

body thereof, provided with crimps D and E, the upper portion of the body of such jack being uniformly reduced in width from F to C, substantially as and for the purposes set forth. 4th. A needle jack formed of a single piece of flat metal, and having the knee B reinforced by a portion bent over and resting evenly against the same, substantially as shown and described. 5th. A needle jack formed of a single piece of flat metal and reinforced on one side thereof, substantially as shown and described. 6th. A needle jack formed out of a single piece of metal having a body, a knee reinforced on one side, said knee being provided with a rounded top and bottom, substantially as and for the purposes set forth.

**No. 54,048. Voting Machine. (Machine à voter.)**

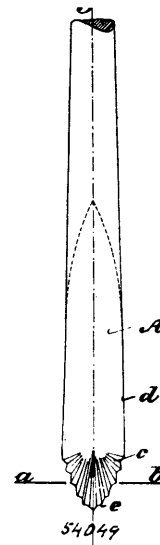


Cyrille Leveque, Ottawa, Ontario, Canada, 13th November, 1896; 6 years. (Filed 9th September, 1896.)

*Claim.*—1st. A voting machine consisting of a number of wheels, having one or more columns of figures inscribed on their peripheries, the said wheels being journaled on a shaft in a suitable casing and rotating independently of one another, pawls engaging teeth in the said wheels and rotating them, the said pawls being pivoted to the spindles of knobs or other objects, means for locking the said spindles in either position, substantially as set forth. 2nd. In a voting machine, a series of pivoted pawls carried on the ends of the spindles of object knobs adapted to be pushed in by the voter, the said pawls engaging teeth on wheels adapted to be rotated by the pushing of the said knobs, a bar running under and held down by the weight of the said pawls, the said bar being carried by the beam of a balance, a series of adjustable weights adapted to counterbalance one or more of the said pawls, and render them inoperative, substantially as set forth. 3rd. A voting machine in which the polling is accomplished by pushing in knobs, which cause numbered wheels to rotate, the said knobs being of different shapes, so as to be easily distinguished by the blind or illiterate, substantially as set forth. 4th. In a voting machine, the combination with the toothed wheels 32, of the pawls 36 pivoted to the spindles 37, springs 41 pushing out the said spindles, the pins 52 engaging sockets in the said spindles, the spring detents 43 carried by the said spindles, and the sliding bar 45, acting as a stop to the said detent, substantially as set forth. 5th. In a voting machine, the combination with the sliding bar 45, held up by tension springs, and the locking bar 49 held up by tension springs, and carrying the pins 52, of wires or rods connecting the said locking bar and sliding bar with a sliding frame 62<sup>a</sup>, the sliding frame 62<sup>b</sup>, hinged platform 63, hinged to the said frame, a spring bolt engaging the said frame and adapted to hold the said frame down, a lever adapted to withdraw the said bolt, substantially as set forth. 6th. In a voting machine, the combination with the wheels 32, having two or more columns of figures on their peripheries, the said figures running from zero consecutively through each column, cams 82 on the side of each of the said wheels, of the pointers 77 adapted to slide in suitable guides, a pin or pins 81 carried by each of said pointers, the said pin or pins adapted to be engaged by the said cams, when one or more revolutions of the said wheels has been made, and draw back the pointer to the next column, substantially as described. 7th. In a voting machine, the combination with the wheels 32, having a series of ratchet teeth on their peripheries, one or more columns of figures inscribed on the longer faces of the said ratchet teeth, pawls engaging the said teeth, of the spring detents 35 engaging the said teeth, and holding the said wheels after they have been operated by the said pawls, substantially as set forth. 8th. In a voting machine, the combination with the inner door 73, hinged to the casing of the machine, having

a series of glazed apertures 76, pointers 77, sliding in front of the said apertures, a lock 75 in the upper side of the said door, and a staple or eye 34, of the outer hinged door 85, having a slot 86, through which the said eye or staple 84 passes, a padlock for securing the said door, a series of apertures in said door registering with the glazed aperture 76 in the inner door, a hit-and-miss slide adapted to register with and close the said apertures, a spring catch holding the said slide in the closed position, a knob adapted to operate the said slide from the outer side of the said door, substantially as set forth. 9th. In a voting machine, the combination with the door 24 hinged at its upper side, and closing the object knobs, an eye 25 at the lower side of the said door, of the hook 96, pivoted to the casing and adapted to engage the said eye 25, the said hook being bifurcated at its inner end, a lever 97 pivoted to a bracket 98 engaging the said bifurcated end of the hook, a spring 99, drawing the said hook into the said eye 25, and a pin 95 carried by the outer door 85, and passing through an aperture in the inner door 73, the said pin engaging the tail of the lever 97, locking the hook 96, either in or out of engagement with the eye 25, substantially as set forth.

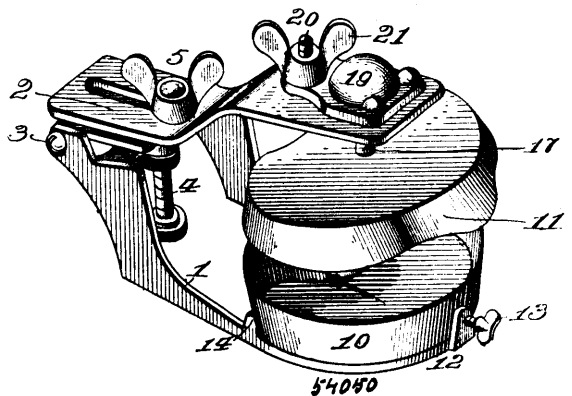
**No. 54,049. Stone Auger or Drill. (Foret pour la pierre.)**



Hermanu Schwartzenhauer, Berlin, Prussia, (Germany, 13th November, 1896; 6 years. (Filed 29th August, 1896.)

*Claim.*—A stone auger having a spoon-shaped cutting end provided on the outer or convex surface of said end with a series of converging cutting ribs forming cutting teeth in the cutting-end edge of the auger, as set forth.

**No. 54,050. Art of Making Artificial Dentures. (Art de faire des dentures artificielles.)**

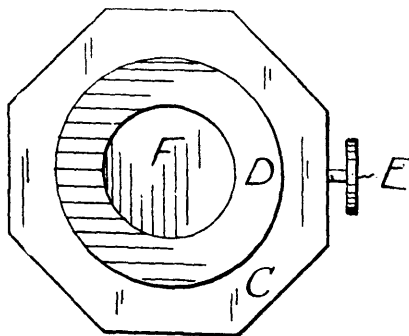


Kelly Ragland Bragg, Shelbina, Missouri, U.S.A., 13th November, 1896; 6 years. (Filed 14th September, 1896.)

*Claim.*—1st. In a dental vulcanizing-flask, a base or bottom portion having a removable lining or model-cup fitting in it, substantially in the manner and for the purpose herein set forth. 2nd. In a dental vulcanizing-flask, the base or bottom portion of said flask having a removable lining or model-cup and formed with an edge of increased thickness around the edge of the lining or model-cup, substantially as and for the purpose herein set forth. 3rd. In a dental vulcanizing-flask, a base or bottom portion formed with a removable

lining or model-cup, said lining or model-cup having means for attaching it to the articulator when separated from said base or bottom, substantially as herein explained. 4th. In a dental vulcanizing-flask, the combination of the base or bottom portion formed with the removable lining or model-cup and formed with a thick edge surrounding the edge of the lining or cup, the central ring surmounting the base or bottom portion and of thickness reduced to leave a space within it above the thick edge of the base or bottom portion of the flask, and a cap-plate for the flask, all substantially as herein set forth. 5th. In an apparatus for making artificial dentures, the combination of an articulator, a model-cup, and a pin having connection at its respective ends, at single points with the articulator, and the model-cup, and one of said connection being ball-and-socket joint, substantially as shown and for the purposes set forth. 6th. The art of forming artificial dentures which consists in taking the impression of the mouth in the impression-cup, then forming from said impression, a model in a model-cup constructed for attachment to the articulator, then setting up the teeth in a suitable manner with the aid of the articulator and inserting it in the base or bottom portion of a flask, then applying the middle ring and filling same with plaster, then supplying the material for forming the base of the denture, and then closing the flask and while closing adding to or taking from the material forming the base of the denture, by removing the base or bottom of the flask while leaving intact the model-cup and model contained therein, all substantially as herein set forth.

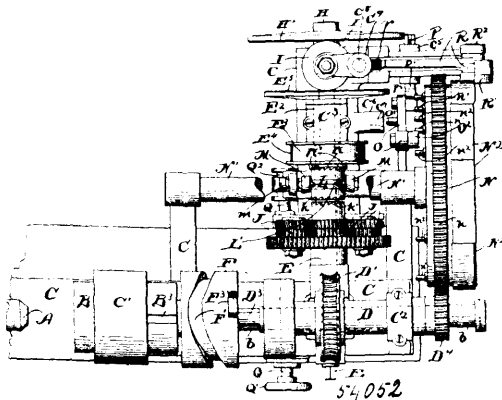
**No. 54,051. Method of Securing the Contents of Vessels.** (*Méthode d'empêcher la perte causée par la surabondance des liquides et gaz.*)



John Carlos Henderson, New York, State of New York, U.S.A., 13th November, 1896; 6 years. (Filed 16th September, 1896.)

*Claim.*—1st. The method of securing the contents of vessels, pipes and cylinders, containing liquids, vapours or gases against loss from overcharging, or too greatly increasing the pressure of the material confined therein, employing the downward pressure of the atmosphere from without, and upon the upper surface of a diaphragm plate, to counteract the expansive force of the material stored within, substantially as described. 2nd. In devices for securing the contents of vessels, cylinders and the like, for storing liquids, vapours and gases against loss due to too great an increase of pressure of the substance confined therein, the combination of a diaphragm metal plate or film, operated upon the upper surface thereof, by atmospheric pressure from without, and the storing vessel connected thereto, substantially as shown and described. 3rd. In safety devices for relieving excessive pressures, the hollow nut C, the plate B and the nipple A attached thereto, adapted to be secured to a cylinder or storing vessel, the said hollow nut provided with an opening communicating with the outside atmosphere, and the valve B located in said opening, and the diaphragm G clamped between the said nut C and plate B, substantially as herein shown and described. 4th. In safety devices for relieving excessive pressures, the recessed nut C, the plate B, the pipe A, and the diaphragm G, in combination with a storing vessel or cylinder X, substantially as herein shown and described. 5th. In devices for relieving excessive pressures, the recessed nut C, the plate B, the pipe A, the diaphragms F, G, valve E, in combination with the storing vessel X, and waste cylinder Y, substantially as herein shown and described. 6th. In safety devices for relieving excessive pressures, the double-shouldered, hollow nut C, the plate B screwed into the same, the nipple A secured thereto, the diaphragm G located between the nut C and the plate B, the said nut C provided with an opening connecting the interior thereof with the exterior atmosphere, the outlet thereof tapped by the valve E, the diaphragm F, the ring D screwed into said shouldered nut C on the upper face thereof, and the clamping the diaphragm F to nut C, in combination with the cylinders X, Y, substantially as herein shown and described.

**No. 54,052. Machine for making Screws, Nipples, etc.** (*Machine pour faire des vis, mamelons, etc.*)



The Cleveland Machine Screw Company, assignee of James Bruce Clyne, all of Cleveland, Ohio, U.S.A., 13th November, 1896; 6 years. (Filed 19th September, 1896.)

*Claim.*—In a metal working machine, a tool stock provided with a plurality of tools and suitable holders, in combination with means for intermittently rotating said tool stock through any required arc of rotation, means for reciprocating said tool stock at required intervals and means for varying the speed at different stages of such reciprocation, substantially as set forth. 2nd. In a metal working machine, the combination of a longitudinally movable and a rotatable shaft adapted to engage with a tool stock adapted to carry a plurality of tools, means for rotating and reciprocating said shaft, said means adapted to advance said shaft and tool stock during the first part of the stroke at a comparatively high rate of speed and the latter part of said stroke at a comparatively low rate of speed, and to cause said shaft and tool stock to recover at a comparatively high rate of speed, and further adapted to cause said tool stock to rotate at required intervals, substantially as set forth. 3rd. In a metal working machine, the combination of a longitudinally movable and a rotatable shaft adapted to engage with a tool stock adapted to carry a plurality of tools, means for automatically rotating and reciprocating said shaft, means for causing said shaft to communicate rotation and reciprocation to said tool stock at required intervals and means for automatically varying the velocities of said reciprocation and rotation at required points in the movements of said shaft and tool stock, substantially as set forth. 4th. In a metal working machine, the combination of a suitably-supported shaft, a suitably-actuated driving pulley or wheel, loosely mounted upon said shaft; a system of differential gearing located a suitable distance from the driving-wheel; a suitably-actuated sleeve operatively and slidably mounted upon said shaft between the driving-wheel and system of differential gearing; two clutches, one member of each clutch being operatively connected with the sleeve, and the other two members of the clutches being operatively connected with the pulley and system of differential gearing, respectively; another suitably-supported shaft, operatively connected with the system of differential gearing, and means establishing operative connection between the last-mentioned shaft and the driving-wheel, substantially as set forth. 5th. In a metal-working machine, the combination of a suitably-supported shaft, a suitably-actuated driving pulley or wheel, loosely mounted upon said shaft, a system of differential gearing located a suitable distance from the driving-wheel, two clutches interposed between the driving-wheel and system of differential gearing, one member of each clutch being operatively and slidably mounted upon the aforesaid shaft, and the other two members of the clutches being operatively connected with the driving-wheel and aforesaid system of gearing, respectively, means for rendering the two clutches operative alternately, and another suitably-supported shaft, operatively connected with the aforesaid driving-wheel and system of gearing, substantially as set forth. 6th. In a metal-working machine, the combination of an endwise-slidable tool-stock and its engaging-shaft, a rotary sleeve, loosely mounted upon said shaft a suitable distance from the tool-stock, another sleeve, loose upon said shaft and operatively connected with the tool-stock so far as endwise movement of said stock is concerned, said sleeve being provided with the peripheral groove having a trend substantially as indicated, the stationary roller-engaging said groove, means operatively connecting said sleeve with the rotary sleeve, and means for establishing operative connection between the tool-stock and said second sleeve upon the inward or receding movement of the stock, all arranged and operating substantially as indicated, of a suitably-supported shaft operatively connected with the tool-stock shaft, a suitably actuated driving pulley or wheel, loose upon said shaft, a system of differential gearing operatively connected with the driving-wheel, means for automatically establishing and interrupting operative connection between the driving-wheel and its shaft, and means for automatically establishing and interrupting operative connection between said first-named shaft

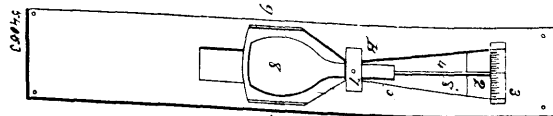
and the aforesaid system of gearing, and the parts being so arranged and timed that said system of gearing and the aforesaid driving-wheel shall be operatively connected with the shaft alternately, substantially as set forth. 7th. In a metal-working machine, the combination of an endwise tool-stock and its engaging-shaft, a rotary sleeve, loosely mounted upon said shaft a suitable distance from the tool-stock, another sleeve, loose upon said shaft and operatively connected with the tool-stock so far as endwise movement of said stock is concerned, said second sleeve being provided with a peripheral groove having a trend substantially as indicated; the stationary roller engaging said groove, means operatively connecting said second sleeve with the rotary sleeve, and means establishing operative connection between the tool-stock and said rotary sleeve, and means establishing operative connection between the tool-stock and said rotary sleeve upon the inward or receding movement of the stock, all arranged and operating substantially as indicated, of a suitably-supported shaft operatively connected with the tool-stock shaft, a suitably-actuated driving pulley or wheel, loose upon said shaft, a system of differential gearing located a suitable distance from but operatively connected with the driving-wheel, two clutches interposed between said wheel and system of differential gearing, one member of each clutch being operatively and slidably mounted upon the supporting-shaft, and the other two members of the clutches being operatively connected with the driving-wheel and aforesaid system of gearing, respectively, and means for automatically rendering the two clutches operative alternately, substantially as set forth. 8th. In a metal-working machine, the combination of a suitably-supported shaft, a suitably-actuated driving pulley or wheel, loose upon the shaft, a system of differential gearing located a suitable distance from but operatively connected with the said wheel, two clutches interposed between the driving-wheel and aforesaid system of gearing, one of the two members of each clutch being operatively and slidably mounted upon the aforesaid shaft, and the other two clutch members being operatively connected with the pulley and aforesaid system of gearing, respectively, of a suitably-supported second shaft, arranged a suitable distance from and transversely of said shaft, said second shaft being provided with an arm or lever for actuating the slidable clutch members as required to effect operative engagement between the members of one of the clutches and interrupt operative engagement between the members of the other clutch, and said second shaft having also an arm or lever provided with inclined shoulders, a pin also provided with inclined shoulders, a suitably actuated rotating drum or wheel provided with any suitable number of pins or projecting members adapted to engage the inclines on said lever to elevate and depress it, the shoulder on said pin adapted also to engage to elevate and depress said same lever, substantially as set forth. 9th. In a metal working machine, the combination of a suitably-supported shaft, a suitably-actuated driving pulley or wheel, loose upon the shaft, a system of differential gearing operatively connected with the driving-wheel, two clutches interposed between said wheel and the aforesaid system of gearing, one of the two members of each clutch being operatively and slidably mounted upon the aforesaid shaft, and the other two clutch members being operatively connected with the driving-wheel and aforesaid system of gearing, respectively, of a suitably supported shaft, arranged a suitable distance from and transversely of the first-named shaft, said second shaft being provided with an arm or lever for actuating the slidable clutch members as required to effect operative engagement between the members of one of the clutches and interrupt operative engagement between the members of the other clutch, and said second shaft having also an arm or lever provided with the inclined shoulders adapted to be operated by a suitable number of suitably supported pins to elevate and depress said lever, and means for communicating motion from the aforesaid first-named shaft to said revolving pins, substantially as set forth. 10th. In a metal-working machine, the combination of a suitably-supported shaft, a suitably actuated driving pulley or wheel, loose upon the shaft, a system of differential gearing operatively connected with the driving-wheel, two clutches interposed between said wheel and aforesaid system of gearing, one of the two members of each clutch being operatively and slidably mounted upon the aforesaid shaft and the other two clutch members being operatively connected with the driving-wheel and aforesaid system of gearing, respectively, a suitably supported shaft arranged a suitable distance from and transversely of the first-named shaft, said second shaft being provided with an arm or lever provided with a lateral hole and adapted to actuate the slidable clutch members as required to effect operative engagement between the members of one of the clutches and interrupt operative engagement between the members of the other clutch, a screw or member extending through and smaller in diameter than the aforesaid hole and operatively connected with the slidable clutch members, the arm or lever operatively connected with the aforesaid second shaft and having also an arm or lever provided with inclined shoulders, a pin also provided with inclined shoulders, a suitably-actuated rotating drum or wheel provided with any suitable number of pins or projecting members adapted to engage the inclines on said lever to elevate and depress it, the shoulder on said pin adapted also to engage to elevate and depress said same lever, substantially as set forth. 11th. In a metal-working machine, the combination of a suitably supported shaft, a tool-stock rotating sleeve operatively connected with said shaft, a suitably-actuated driving pulley or wheel loose upon the shaft, a system of differential

gearing, operatively connected with the driving-wheel, two clutches interposed between said wheel and system of differential gearing, one of the two members of each clutch being operatively and slidably mounted upon the aforesaid shaft, and the other two clutch members being operatively connected with the driving-wheel and the aforesaid system of gearing, respectively, a suitably-supported shaft arranged a suitable distance from and transversely of said shaft, said second shaft being provided with an arm or lever for actuating the slidable clutch members as required to effect operative engagement between the members of one of the clutches and interrupting operative engagement between the members of the other clutch, and said second shaft having also an arm or lever provided with one set of said first-named shoulders adapted to be operated by a suitable number of suitably supported pins to elevate and depress said lever, a pin provided with a spring and inclined shoulders adapted to engage said other set of inclined shoulders in the aforesaid shaft to also elevate and depress said shaft, substantially as set forth. 12th. In a metal-working machine, the combination of a suitably supported shaft, a suitably-actuated driving pulley or wheel loosely mounted upon said shaft, a system of differential gearing operatively connected with the driving pulley, two clutches interposed between the pulley and said system of gearing, one member of each clutch being operatively and slidably mounted upon the aforesaid shaft, and the other two members of the clutches being operatively connected with the pulley and aforesaid system of gearing, respectively, means for automatically establishing operative engagement between the companion members of both clutches alternately, and means for rendering the slidable members of both clutches inoperative and locking said clutch members in their inoperative position, substantially as set forth. 13th. In a metal-working machine, the combination of a suitably-supported shaft, a suitably-actuated driving pulley or wheel loose upon the shaft, a system of differential gearing operatively connected with the driving wheel, two clutches interposed between said wheel and aforesaid system of gearing, one of the two members of each clutch being operatively and slidably mounted upon the aforesaid shaft, and the other two clutch members being operatively connected with the driving wheel and aforesaid system of gearing respectively, a suitably-supported second shaft arranged a suitable distance from and transversely of said first-named shaft, said second shaft being provided with an arm or lever for actuating the slidable clutch members and having also an arm or lever provided with two sets of inclined shoulders, one set of said first-named shoulders adapted to be operated by a suitable number of suitably-supported pins to elevate and depress said lever, a pin provided with a spring and inclined shoulders adapted to engage said other set of inclined shoulders in the aforesaid shaft to also elevate and depress said shaft, substantially as set forth. 14th. In a metal-working machine, the combination of a suitably-supported shaft, a suitably-disposed tool stock bearing shaft, a suitably-actuated driving pulley or wheel loosely mounted upon said shaft, a system of differential gearing operatively connected with the driving wheel, two clutches interposed between said wheel and system of gearing, one member of each clutch being operatively and slidably mounted upon the aforesaid shaft, and the other two members of the clutches being operatively connected with the driving wheel and aforesaid system of gearing respectively, a suitably-supported shaft arranged at a suitable distance from and transversely of said second shaft, said shaft being provided with an arm or lever for actuating the slidable clutch members and having also an arm or lever provided with two sets of inclined shoulders, a pin operated by a spring and also provided with inclined shoulders, a suitably-supported and actuated drum provided with any required number of pins or projecting members adapted to engage one set of said first-named shoulders to depress and elevate said lever, the shoulders on said pin adapted to engage said other named shoulders to further elevate and depress said lever, and means for shifting said second shaft endwise in the direction required to move the first-named inclined shoulder out of the path of the pins in said drum, substantially as set forth. 15th. In a metal-working machine, the combination of a suitably supported shaft, a suitably-actuated driving pulley or wheel loose upon the shaft, a system of differential gearing operatively connected with the driving wheel, two clutches interposed between said wheel and system of gearing, one of the two members of each clutch being operatively and slidably mounted upon the aforesaid shaft, and the other two members being operatively connected with the driving wheel and aforesaid system of gearing respectively, a suitably-supported second shaft arranged a suitable distance from and transversely of the said first-named shaft, said second shaft being provided with an arm or lever for actuating the clutch members and with another arm or lever provided with two sets of inclines or shoulders, a pin operated by a spring and also provided with inclined shoulders, a suitably-supported drum provided with any required number of projecting members adapted to engage said one set of inclined shoulders of said lever, said other set being adapted to be engaged by the shoulders of said pin, the drum projecting members and the pin adapted conjointly to elevate and depress said lever, a stationary lug provided with a bore or hole, a third shaft provided with a cam or eccentric, a forked lever having its fork straddling the peripheral surface of said cam and being operatively connected with the aforesaid second-named shaft, whereby the machine is rendered inoperative and the second shaft locked, substantially as set forth. 16th. In a metal-working machine, the

combination of a suitably-supported shaft, a sleeve loosely mounted upon one end of said shaft, a driving pulley or wheel operatively connected with said sleeve, a friction disc formed upon or operatively connected with the outer end of the sleeve, another shaft arranged a suitable distance below and parallel with the aforesaid shaft, said second shaft extending a suitable distance beyond the friction disc bearing end of said first named shaft, a second friction disc operatively mounted upon said second shaft a suitable distance from the first-named disc and having such diameter that its inner face overlaps or extends opposite to or approximately opposite to the axis of said first-named disc, and a suitably-supported and suitably-reciprocated friction roller interposed between the opposing faces of the discs, substantially as set forth. 17th. In a metal-working machine, the combination with a suitably-supported horizontally-arranged shaft, a sleeve loosely mounted upon one end of said shaft, a driving pulley or wheel operatively connected with said sleeve, a friction disc formed upon or operatively connected with the outer end of the sleeve, another shaft arranged a suitable distance below and parallel with the aforesaid shaft, said second shaft extending a suitable distance beyond the friction disc bearing end of the upper shaft, a second friction disc operatively mounted upon the lower shaft a suitable distance from the disc on the upper shaft and having such diameter that its inner face overlaps the opposing or outer face of the disc on the upper shaft, a suitably-supported and suitably-vertically reciprocated friction roller interposed between the opposing faces of the two friction discs, and a spiral spring confined upon the lower shaft and acting to retain the disc upon said shaft in the desired frictional engagement with the friction roller, substantially as set forth. 18th. In a metal-working machine, the combination of a suitably-supported shaft, a sleeve loosely mounted upon one end of said shaft, a suitably-actuated driving pulley or wheel operatively connected with said sleeve, a friction disc formed upon or operatively connected with the outer end of said sleeve, a system of differential gearing, two clutches interposed between the driving-wheel and differential gearing, one member of each clutch being operatively and slidably mounted upon the aforesaid shaft, and the other two members of the clutches being operatively connected with the driving-wheel and aforesaid system of gearing respectively, means for rendering the slidable clutch members operative alternately, another suitably-supported shaft arranged a suitable distance from and parallel with the aforesaid driving-wheel bearing shaft and operatively connected with the aforesaid system of gearing, said shaft extending a suitable distance beyond the friction disc bearing end of the driving-wheel bearing shaft, a friction disc operatively connected with said shaft a suitable distance from the disc on the driving-wheel bearing shaft and overlapping said last-mentioned disc, substantially as indicated, and a suitably-supported and suitably-adjusted friction roller interposed between and engaging the opposing surface of the two friction discs, substantially as set forth. 19th. In a metal-working machine, the combination of a suitably-supported shaft, a sleeve loosely mounted upon one end of said shaft, a driving pulley or wheel operatively connected with said sleeve, a friction disc formed upon or operatively connected with the outer end of the sleeve, another shaft arranged a suitable distance below and parallel with the driving-wheel bearing shaft, the lower end extending a suitable distance beyond the friction disc bearing end of the upper shaft, a second friction disc operatively mounted upon the lower shaft a suitable distance from the disc on the upper shaft and having such diameter that its inner face overlaps the opposing face of the upper disc, and a suitably-supported and automatically-actuated vertically-movable friction roller interposed between and engaging the opposing surfaces of the two friction discs, substantially as set forth. 20th. In a metal working-machine, the combination of a suitably-supported shaft, a sleeve loosely mounted upon one end of said shaft, a driving pulley or wheel operatively connected with said sleeve, a friction disc formed upon or operatively connected with the outer end of the sleeve, another shaft arranged a suitable distance below and parallel with the driving-wheel bearing shaft, the lower shaft extending a suitable distance beyond the friction disc-bearing end of the upper shaft, a second friction disc operatively mounted upon the lower shaft a suitable distance from the disc on the upper shaft and having such diameter that its inner face overlaps the opposing face of the upper disc, an upright stationary post provided with the shoulder or collar, a sleeve mounted upon and adapted to slide up and down said post, the spring-bearing upon said sleeve, a friction roller suitably supported from said sleeve and engaging the opposing faces of the two friction discs, and means for actuating the sleeve against the action of the aforesaid spring, substantially as set forth. 21st. In a metal-working machine, the combination of a suitably-supported shaft, a sleeve loosely mounted upon one end of said shaft, a driving pulley or wheel operatively connected with said sleeve, a friction disc formed upon or operatively connected with the outer end of the sleeve, another shaft arranged a suitable distance below the driving-wheel bearing shaft, a second friction disc operatively mounted upon the lower shaft a suitable distance from the disc on the upper shaft and having such diameter that its inner face overlaps the opposing or outer face of the upper disc, an upright stationary post provided with the shoulder or collar, a sleeve mounted upon and adapted to slide up and down said post, the spring-bearing down upon said sleeve, a friction roller suitably supported from said sleeve and engaging the opposing faces of the two friction discs, a suitably-actuated cam wheel, and lever mechanism for actuating the aforesaid roller-bearing

sleeve against the action of the aforesaid spring and adapted to be actuated by said cam wheel, substantially as set forth. 22nd. In a metal-working machine, the combination with a suitably-supported shaft, a sleeve loose y mounted upon one end of said shaft, a driving pulley or wheel operatively connected with said sleeve, a friction disc formed upon or operatively connected with the outer end of the sleeve, another shaft arranged a suitable distance below the driving-wheel bearing shaft, a second friction disc operatively mounted upon the lower shaft a suitable distance from the disc on the upper shaft and having such diameter that its inner face overlaps the opposing or outer face of the upper disc, an upright stationary post, a sleeve mounted upon and adapted to slide up and down said post, a spring bearing down upon said sleeve, friction roller suitably supported from said sleeve and engaging the opposing faces of the two friction discs, a rack formed upon said sleeve, a suitably supported bell-crank lever, a segmental rack formed upon the outer end of one arm of said lever, the other arm of said lever being provided with a roller, a suitably-actuated cam wheel engaging said last mentioned roller and arranged and constructed to actuate the bell crank lever in the direction required to effect the movement of the aforesaid roller-bearing sleeve against the action of the aforesaid spring, substantially as set forth. 23rd. In a metal-working machine, the combination of a rotary tool stock actuating sleeve, a horizontally arranged shaft operatively connected with said sleeve, a sleeve loose upon said shaft, a driving pulley or wheel and a friction disc operatively connected with said last mentioned sleeve, another shaft arranged below and parallel with the driving-wheel bearing shaft, a friction disc operatively connected with the lower shaft and located a suitable distance from and having its inner face overlapping the outer or opposing face of the upper friction disc, and a suitably supported and suitably adjusted friction roller interposed between and engaging the opposing faces of the friction discs, a system of gearing operatively connected with the lower shaft, means for establishing and interrupting operative connection between said gearing and upper shaft, and means for establishing and interrupting operative connection between the driving-wheel and ing machine, the combination of a rotary tool stock actuating sleeve, a horizontally arranged shaft operatively connected with said sleeve, a sleeve loose upon said shaft, a driving pulley or wheel and a friction disc operatively connected with said last mentioned sleeve, another shaft arranged a suitable distance from and parallel with the driving-wheel bearing shaft, a friction disc operatively connected with said second shaft and located a suitable distance from and having its inner face overlapping the outer or opposing face of the disc on the driving-wheel bearing shaft, a friction roller interposed between and movable radially or approximately radially of and engaging the overlapping portions of the discs, means acting to move said roller in the one direction, mechanism for actuating said roller in the opposite direction, and means operatively connected with the tool stock actuating sleeve for actuating said mechanism, gearing operatively connected with the aforesaid second shaft, means for establishing and interrupting operative connection between said gearing and the driving-wheel bearing shaft, and means for establishing and interrupting operative connection between said shaft and the driving-wheel, substantially as set forth. 25th. In a metal-working machine, the combination of a rotary tool stock actuating sleeve, a sleeve E<sup>2</sup> loose upon said shaft, a driving pulley or wheel and a friction disc operatively connected with said last mentioned sleeve, another shaft H arranged a suitable distance from and parallel with the driving-wheel bearing shaft, a friction disc operatively connected with said shaft H, and located a suitable distance from and having its inner face overlapping the outer or opposing face of the disc on the driving-wheel bearing shaft, a friction roller interposed between and movable radially or approximately radially of and engaging the overlapping portions of the discs, means acting to move said roller in the one direction, mechanism for actuating said roller in the opposite direction, and means operatively connected with the tool stock actuating sleeve for actuating said mechanism, gearing operatively connected with the aforesaid shaft H, means for establishing and interrupting operative connection between said gearing and the driving-wheel bearing shaft, and means for establishing and interrupting operative connection between said shaft and the driving-wheel, substantially as set forth.

No. 54,053. Plumb. (Niveau.)

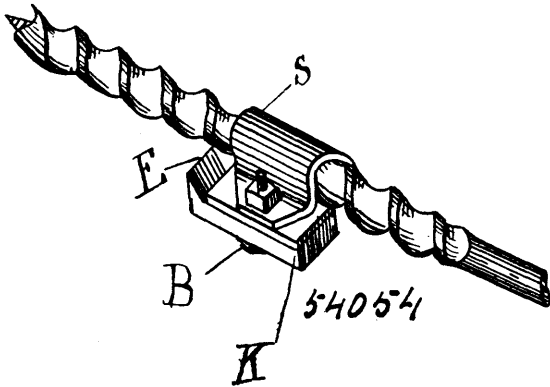


Frank Gladwin Juney, Rochester, New York, U.S.A., 13th November, 1896; 6 years. (Filed 21st September, 1896.)

Claim.—A plumbing implement, comprising a stock or plate formed with an interior chamber, oppositely disposed sight apertures provided with graduated scales, a weight pivotally hung in the chamber of the stock, a pointer on the upper end of the weight above the pivotal support thereof, oppositely disposed springs seated in the chamber of the stock, and elastic push-buttons pro-

jected through the sides of the stock and secured in the arches of the springs, whereby the weight may be clamped between the inner ends of the push-buttons, substantially as and for the purpose specified.

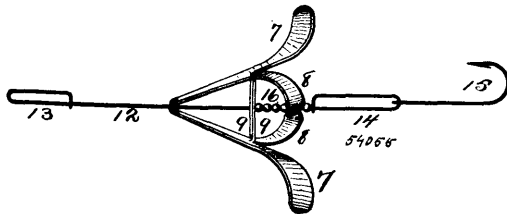
**No. 54,054. Tool for Tapping Maple Trees.**  
(*Outil pour entailler les érables.*)



Alonzo M. Foster, Cabot, Vermont, U.S.A., 13th November, 1896; 6 years. (Filed 23rd September, 1896.)

*Claim.*—An attachment for auger-bits consisting of a metal clamp formed by a tube open at one side, with clamping-flanges at the edges of the opening in combination with the knife K having a flat shank laid along the flange of the clamp-tube and having a cutting portion with its front edge projected at right angles from the shank and lying in a plane perpendicular to the axis of the auger, and a securing bolt passed through said shank and flange and nut.

**No. 54,055. Spoon-Bait.** (*Cuiller-appât.*)



Elias Oliver Pealer, Sayre, Pennsylvania, U.S.A., 13th November, 1896; 6 years. (Filed 28th September, 1896.)

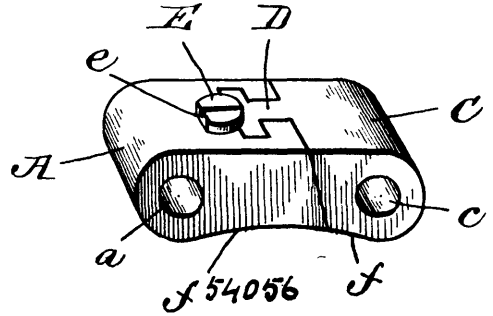
*Claim.*—1st. A flier for a spoon-bait consisting of a piece of sheet metal of substantially V shape, having spirally bent wings at the extremities of the sides of the V, and a cross bar connecting the sides of the V, substantially as shown and described. 2nd. A flier for a spoon-bait consisting of a piece of sheet metal cut or stamped out into a blank having re-entrant angles 2, creating a neck 3, wings 7, 8, with an intermediate bar 9, then bent centrally across said neck into V shape, said bars being bent inwardly overlapping and secured together, and having the wings spirally twisted substantially as shown and described. 3rd. A flier for a spoon-bait consisting of a piece of sheet metal of V shape, having spirally bent wings of unequal length upon the ends of the arms of the V, and a cross bar between said arms to hold them in position. 4th. A spoon-bait consisting of a piece of sheet metal of V shape, having spirally bent wings upon the arms of the V, and a cross bar connecting said arms, in combination with a suitable draw-wire inserted through the apex of the V, and through said cross-bar, and a suitable hook connected to said wire.

**No. 54,056. Coupling Block for Sprocket Chains.**  
(*Poulie d'accouplement pour chaînes dentées.*)

Otis J. Merritt, Senegautteen, and John J. Costello, Cœur-d'Alaine, both in the State of Idaho, U.S.A., 13th November, 1896; 6 years. (Filed 8th August, 1896.)

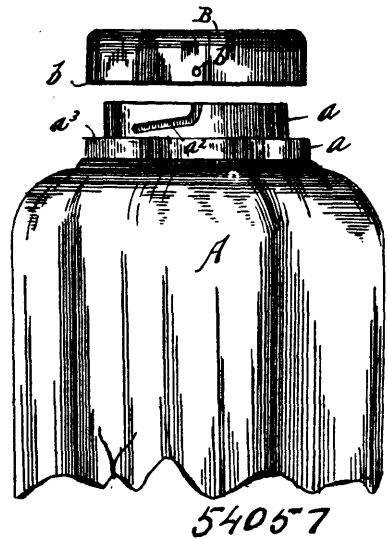
*Claim.*—1st. A block link coupling for sprocket chains, comprising a half link having a T-shaped vertically disposed slot and a corresponding half link having a T-shaped projection fitted to said slot, substantially as described. 2nd. A block link coupling for sprocket chains, comprising a half link having a T-shaped vertically disposed slot and a corresponding half link having a T-shaped projection fitted to said slot, and a screw in the one part having a head adapted to engage over said projection, substantially as described. 3rd. A block link coupling for sprocket chains, comprising a half link having a T-shaped vertically disposed slot and a corresponding half link having a T-shaped projection fitted to said slot, and a screw in the one part having a head adapted to engage over said projection, the adjacent faces being bevelled, substantially as described. 4th.

A block link coupling for sprocket chains, comprising a half link having a T-shaped vertically disposed slot and a corresponding



half link having a T-shaped projection fitted to said slot, and a screw in the one part having a head adapted to engage over said projection, the adjacent faces being bevelled, the said slot having a bottom wall upon which the projection rests, substantially as described.

**No. 54,057. Closure for Fruit Jars.**  
(*Fermeture pour jarres à fruits.*)



Henry B. Burns and Charles E. Carnes, both of Eau Claire, Wisconsin, U.S.A., 13th November, 1896; 6 years. (Filed 2nd January, 1896.)

*Claim.*—1st. In a combination with a fruit jar having a neck with a reduced portion to present a shoulder, and a cap adapted to cover the reduced portion of the neck and bear upon the shoulder, of a rubber gasket adapted to lie over the joint between the cap and neck of the jar, and a clamping band having outwardly projecting portions, with which a thumb-screw engages, one end of the band projecting beyond the part which carries the thumb-screw, substantially as shown, and for the purpose set forth. 2nd. In combination with a fruit jar having a neck with a reduced upper portion provided with inclined grooves or slots, of a cap or cover having pins which engages with the inclined grooves or slots, the lower edges of the cap or cover bearing upon the shoulder framed by the reduced portion of the neck, together with a gasket C placed over the joint between the cap and neck of the jar, a clamping band or ring placed over the gasket, the band having outwardly projecting portions *d* and *D*<sup>1</sup>, and a thumb-screw carried by the portion *D*<sup>1</sup>, and engaging a threaded aperture in the portion *d*, substantially as shown and for the purpose set forth.

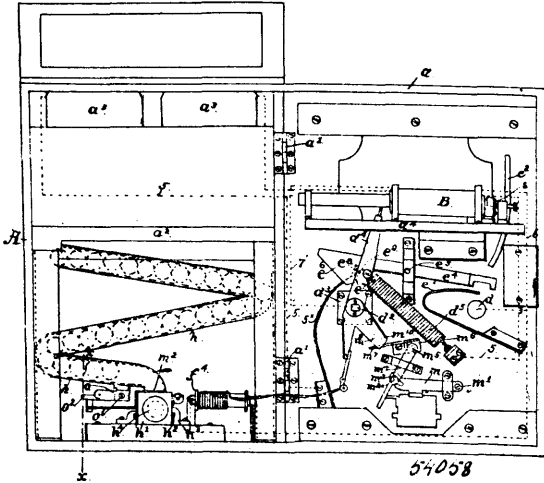
**No. 54,058. Coin-controlling Machine.**  
(*Machine actionnée par une pièce de monnaie.*)

John B. Carr, Boston, Massachusetts, U.S.A., and Charles A. Sullivan, Windsor, Ontario, Canada, 13th November, 1896; 6 years. (Filed 16th September, 1896.)

*Claim.*—1st. In a machine of the class described, the combination with an inclosing box, provided at its front with a sight opening, of two electrodes, one of which is rotatable and arranged adjacent said sight opening, an induction coil within the box containing a core, and provided with a movable shield having a movement past said sight opening, an arm fixed on said rotatable electrode and having a vibrating movement back of and exposed through said opening and directly connected with and to move said shield, whereby the oper-



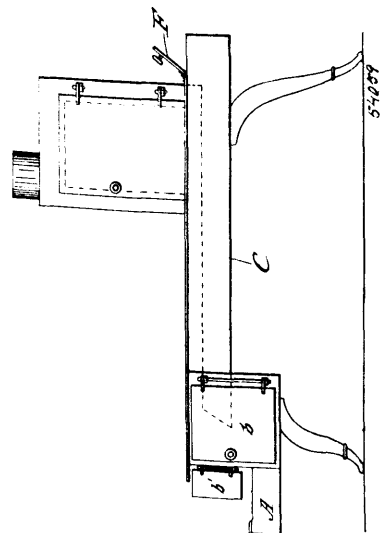
ating devices for the core shield are visible and thereby indicate at all times to the operator the strength of the current, substantially



as described. 2nd. In a machine of the class described, the combination with an inclosing box, provided at its front with a sight opening, of two electrodes, one of which is rotatable and is arranged adjacent said sight opening, an induction coil within the box containing a core, and provided with a movable shield having a movement past said sight opening, said shield being marked with a scale to indicate the strength of current corresponding to the withdrawal of the shield, an arm fixed on said rotatable electrode and having a vibrating movement back of said opening and directly connected with and to move said shield, whereby the operating devices for the core shield are visible and thereby indicate at all times to the operator the strength of the current, substantially as described. 3rd. In a machine of the class described, a source of electricity, a plurality of electrodes, one of which is movable and another of which is removable, a flexible conductor connecting said removable electrode with said source of electricity, a lock normally locking this latter electrode, and means whereby movement of said movable electrode unlocks the said removable electrode, substantially as described. 4th. In a machine of the class described, a source of electricity, a circuit therefrom normally broken, a plurality of electrodes, one of which is movable and another of which is removable, a flexible conductor connecting said removable electrode with said source of electricity, a lock normally locking this latter electrode, and means whereby movement of said movable electrode unlocks the said removable electrode and also completes the circuit, substantially as described. 5th. In a machine of the class described, a source of electricity, a circuit therefrom normally broken, a plurality of electrodes, one of which is movable and another of which is removable, a flexible conductor connecting said removable electrode with said source of electricity, a lock normally locking this latter electrode, and means whereby movement of said movable electrode unlocks the said removable electrode and also completes the circuit, while further movement thereof regulates the strength of the current, substantially as described. 6th. In a machine of the class described, an article receiver, a deliverer therefor, a locking device for said deliverer, coin-controlled starting mechanism to unlock the same, a trip operated by the outward movement of said deliverer to set said locking device in operative position, an automatic means for returning said deliverer to its normal position and locking the same, substantially as described. 7th. In a machine of the class described, an article receiver, a deliverer therefor, an escape connected with said receiver, the same being automatically operated by the movement of said deliverer, coin-controlled starting mechanism to unlock the same, a trip operated by the outward movement of said deliverer to set said locking device in operative position, and automatic means for returning said deliverer to its normal position and locking the same, substantially as described. 8th. In a machine of the class described, an article receiver, a deliverer therefor, an escape connected with said receiver, two arms thereon alternately moving across the path of said receiver, mechanism connected with said deliverer, whereby a definite amount of the contents of said receiver is retained between said arms on the movement of said deliverer in one direction, and the same is deposited in said deliverer on the movement thereof in the opposite direction, a locking device for said deliverer, coin-controlled starting mechanism to unlock the same, a trip operated by the outward movement of said deliverer to set said locking device in operative position, and automatic means for returning the deliverer to its normal position and locking the same, substantially as described. 9th. In a machine of the class described, an article receiver, a deliverer therefor, a locking device for said deliverer, a slot in the

locking device terminating in one end in a pocket, a pin movable in said slot, a movable lever, connecting devices between said lever and pin whereby the extent of movement of said lever varies the position of the pin in its slot, and coin-operated starting mechanism controlling said lever, substantially as described. 10th. In a machine of the class described, an article receiver, a delivery therefor, a locking device for said deliverer, a slot in the locking device terminating in one end in a pocket, a pin movable in said slot, a movable lever, means whereby increasing resistance is offered to the progressive movement of said lever, connecting devices between said lever and pin whereby the extent of movement of said lever varies the position of the pin in its slot, and coin-operated starting mechanism controlling said lever, substantially as described. 11th. In a machine of the class described, a source of electricity, a plurality of electrodes, one of which is removable, a flexible conductor connecting said removable electrodes with said source of electricity, a lock normally locking said removable electrode, an externally-operated lever to unlock the same, and coin-operated starting mechanism controlling said lever, substantially as described. 12th. In a machine of the class described, a source of electricity, a plurality of electrodes, one of which is removable, a flexible electric conductor between the said movable electrode and said source of electricity, and an automatic device independent of and unaffected said source of electricity within the machine for automatically withdrawing within the machine and permitting the drawing out therefrom of the said flexible conductor, substantially as described. 13th. In a machine of the class described, an article receiver, a deliverer therefor, a locking device for said deliverer, a slot in the latter terminating in one end in a pocket, a pin movable in said slot, two electrodes, one of which is movable, and connecting devices between said movable electrode and pin, whereby the extent of movement of the electrodes varies the position of said pin in its slot, substantially as described. 14th. In a machine of the class described, an article receptacle, a movable delivering receptacle therefor, and the forked locking mechanism moved by said deliverer and operating substantially as described. 15th. In a machine of the class described, a source of electricity, a circuit therefrom normally broken, a plurality of electrodes, one of which is movable, a lock normally locking said movable electrode, coin-operated starting mechanism controlling said lock, and means whereby movement of said movable electrode opens the dash pot, automatically detaches and allows same to close gradually, shutting off current, substantially as described. 16th. In a machine of the class described, the combination with an inclosing box, provided at its front with a sight opening, of two electrodes, one of which is movable and arranged adjacent said sight opening, an induction coil within the box containing a movable part for varying the current, said part having a movement past said sight opening, an arm rigidly fixed on said movable electrode and directly connected with and to move said movable part, whereby the said operating devices for the induction coil are visible within the box, and thereby perform the additional function of and constitute an indicator to indicate at all times to the operator by their movement the strength of the current, substantially as described.

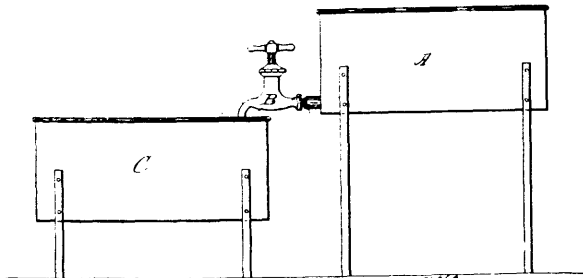
No. 54,059. Stove. (Poêle.)



Ophni Louis Gadoury, Saint-Placide, Québec, Canada, 13 novembre 1896; 6 ans. (Déposé le 2 octobre 1896.)  
 Résumé. — 1° Un poêle à l'intérieur duquel est construit un réservoir à eau, tel que décrit. 2° Un poêle comprenant un foyer B, un réservoir E et un fourneau à doubles-parois G, le tout tel que décrit et pour les fins indiquées.

No. 54,060. Apparatus for Warming Milk.

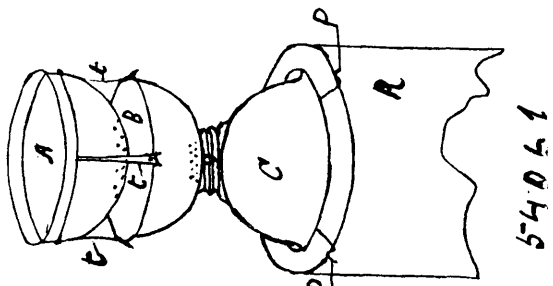
(Appareil pour réchauffer le lait.)



Achille Baribault, Saint-Casimir, Québec, Canada, 13 novembre 1896 ; 6 ans. (Déposé le 29 septembre 1896.)

Résumé.—Un appareil pour réchauffer le lait, constitué par un bassin F pourvu d'augets f, f', f'', et disposé dans un bassin plus grand E, un tuyau G servant à conduire le lait aux centrifuges et une chantepierre B munie d'un régulateur D, le tout tel que décrit et pour les fins indiquées.

No. 54,061. Milk Strainer. (Couloir pour le lait.)



Sévère Langlois et Philippe Angers, tous deux de Saint-François, Québec, Canada, 16 novembre 1896 ; 6 ans. (Déposé le 3 février 1896.)

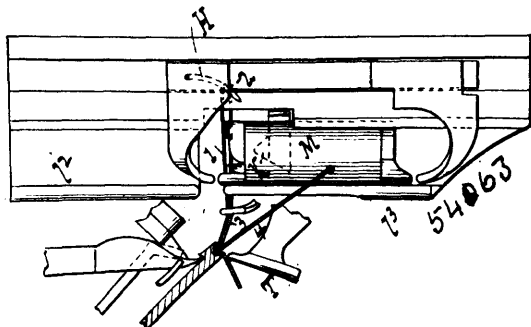
Résumé.—La combinaison et disposition des bassins A et B, les tiges t, t, le tube t, la calotte sphérique C et les pattes p, p, le tout tel que ci-dessus décrit et pour les fins indiquées.

No. 54,062. Process for Separating Clover from Grain. (Art ou procédé de battre le trèfle.)

Jean-Baptiste Deslandes, Saint-Dominique, et Pierre Lajeunesse, Saint-Pie, Québec, Canada, 16 novembre 1896 ; 6 ans. (Déposé le 5 octobre 1896.)

Résumé.—Je réclame et désire faire breveter un procédé pour battre le trèfle afin d'en recueillir la graine, consistant à passer d'abord le trèfle dans un moulin à battre ordinaire pour séparer les caboches, ensuite à faire sécher ces caboches, puis à les battre au fléau dans des sacs, le tout tel que décrit et pour les fins indiquées.

No. 54,063. Sewing Machine. (Machine à coudre.)

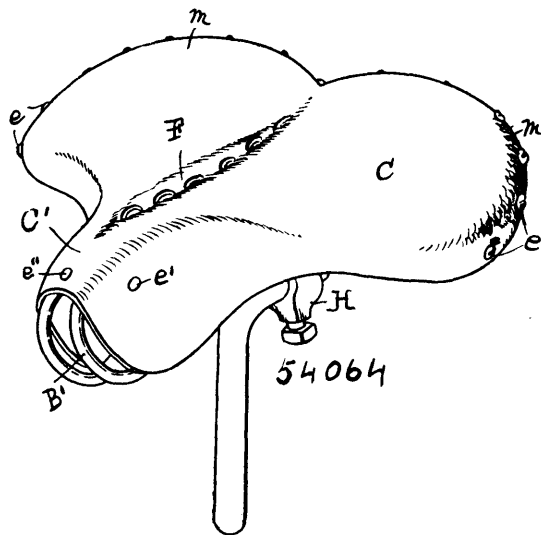


The Goodyear Shoe Machinery Company, Boston, Massachusetts, assignee of Christian Dancel, Brooklyn, New York, both in the U.S.A., 16th November, 1896 ; 6 years. (Filed 18th September, 1896.)

Claim.—A work support combined with a needle-driving mechanism and a spreader located at one side of the work support, and a shuttle race made to extend along past the same side of the work support on which the needle-driving mechanism and spreader are located, said needle-driving mechanism being provided with a hooked circular needle and said shuttle race being provided with a shuttle, and said spreader and shuttle being combined with actuating

means, substantially as described, and timed with relation to the needle-driving mechanism, as set forth, so that the needle draws out a loop of needle thread and the shuttle passes along outside of said loop, the loop is then spread across the shuttle path, and the shuttle returns or passes through said spread loop for looping or twisting the shuttle thread about a shank of the needle thread loop, substantially as described.

No. 54,064. Bicycle Saddle. (Selle de bicyclette.)

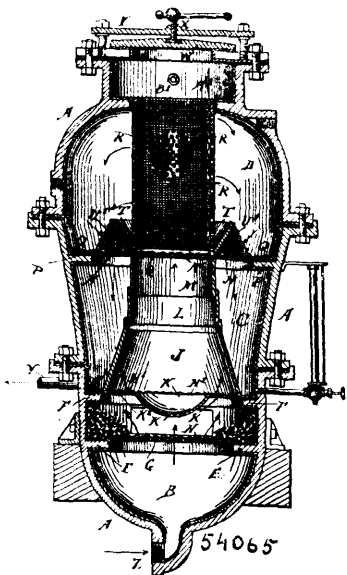


The Wheeler Saddle Company, assignee of Benjamin F. Wheeler, both of Detroit, Michigan, U.S.A., 16th November, 1896 ; 6 years. (Filed 8th October, 1896.)

Claim.—1st. In a bicycle saddle, the combination of the integral frame extending under the whole seating surface of the saddle, said frame having a depression in the rear edge thereof, and the leather, conforming to the contour of the frame, mounted thereon. 2nd. In a bicycle saddle, the combination of the integral concavo-convex frame extending under the whole seating surface of the saddle, said frame having a depression in the back thereof and the outwardly curved extensions m, the front of said frame being curved inward on each side, which curves converge and terminate in a reduced neck, and the leather mounted on said frame standing adjacent to the surface thereof. 3rd. In a bicycle saddle, the combination of the frame A, the spring mounted on said frame having a coil at the forward end thereof and the curved portions near the rear end, and the leather mounted on said frame and spring. 4th. In a bicycle saddle, the combination with the wooden cantle or frame having the curved back and side portions, and the converging forward curves terminating in a reduced neck, said frame extending under the area of the seating surface of the saddle, and being concavo-convex in form, and the leather mounted on said frame. 5th. In a bicycle saddle, the combination of the broad wooden frame A having the curved back and the forwardly curved portions at the front, the spring mounted on said frame having the forwardly extending coil, and the leather mounted on said frame and spring. 6th. In a bicycle saddle, the combination of the wooden frame built up of thin layers of wood glued together and pressed into a concavo-convex form, said frame describing the contour of the saddle and extending under the seating area thereof, and the leather mounted over said frame. 7th. In a bicycle saddle, the combination with the broad integral frame, the leather mounted on the frame and lying adjacent thereto, the pad interposed between said frame and leather. 8th. In a bicycle saddle, the combination of the wooden frame having the curved back and the forwardly extending neck portion, the spring mounted on said frame and extending forward adjacent to the neck thereof and the clamping plate embracing said neck and spring. 9th. In a bicycle saddle, the combination with the cantle, the spring mounted thereon having a loop at its forward end, the leather secured at the back to said cantle, the two part nose piece, one of which parts is riveted in the nose of the leather and is provided with a longitudinal slot and with a tapped aperture in a cross piece at the end thereof, the complementary portion of said nose piece consisting of a part which engages the loop of said spring and which is provided with an extended neck portion which engages freely in the slot of the part attached to the leather, and the screw passing freely through one of said parts and screwing into the other part, substantially as set forth. 10th. In a bicycle saddle, the combination of the cantle, the spring attached thereto and having a forwardly extended loop, the leather attached at the rear of said cantle, the nose piece consisting of the part D which is riveted to the nose of the leather and is provided with a longitudinal slot therein, the complementary portion of said nose piece consisting of the part D' which is engaged by the loop of said spring and which is movably engaged in the slot of the part D, and the screw passing

freely through the part D<sup>1</sup> and screwing into part D. 11th. In a bicycle saddle, the combination of the wooden frame presenting a broad surface and having a depression in the centre of the back thereof, the spring mounted on said frame and provided with a forwardly extending loop or coil, the leather secured to the back of said frame with screws and adjustably attached at its forward end to the coils of said spring, said leather having a depression in the rear thereof to conform to said frame, and with a depressed central channel extending to the nose of the saddle. 12th. In a bicycle saddle, the combination of the frame, the leather mounted over the frame, and the pad interposed between said frame and leather. 13th. In a bicycle saddle, the combination of the wooden frame built up of layers glued together and pressed into concavo-convex form, and the pads mounted upon the upper face of said frame. 14th. In a bicycle saddle, the combination of the wooden frame having the curved rear portion and the reduced forwardly extending neck portion, the curved spring mounted on said frame being attached at its rear end to the body and at its forward end to the neck portion of the frame, substantially as set forth. 15th. In a bicycle saddle, the combination of the wooden frame, the spring having the parallel curved portions, said spring being attached to the frame at the extremities of said curved portions thereof and having the portion extending beyond said frame, the leather mounted on said frame and spring, and the pads interposed between the frame and leather.

**No. 54,065. Filter. (Filtre.)**

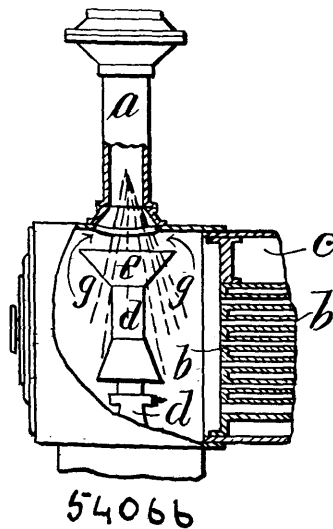


Charles A. Kunzel, jr., Chicago, Illinois, U.S.A., 16th November, 1896; 6 years. (Filed 17th August, 1896.)

*Claim.*—1st. A filter having a casing with an inlet, upper and lower perforated diaphragms connected with said casing, forming a filtering-chamber, the upper one of said diaphragms having a perforated rim with an imperforated convex portion projecting into said chamber, forming a deflector, a vessel within said casing, receiving the fluid from said filtering chamber, an upper filtering-chamber connecting with said filtering-chamber, and a discharge-pipe in communication with said upper filtering-chamber, said parts being combined substantially as described. 2nd. A filter having a casing with an inlet, a vessel J, with the pipes L M thereon open to said inlet, diaphragms above and below said pipes and vessel, and a perforated pipe supported on the upper diaphragm, said perforated pipe having communication with the space in the casing outside of and adjacent to said vessel J, substantially as described. 3rd. A filter having a casing with inlet upper and lower diaphragms, the vessel J, with pipes L M between said diaphragms, the perforated pipe above said diaphragms, the cup T surrounding the pipe R, and the strainer U connected with the cup T and the upper diaphragm, said parts being combined substantially as described. 4th. A filter formed of compartments with diaphragms between the same, inlet and outlet pipes, the vessel J above the intermediate diaphragm, with the communicating pipes L M, a perforated pipe above the upper diaphragm which is in communication with said conveying-pipes and with the compartment surrounding the same, and a deflector with a perforated rim below said vessel, said parts being combined substantially as described. 5th. A filter, consisting of sections having flanges on their inner walls, diaphragms forming a filtering-chamber connected with the flanges on the lower section above an inlet thereon, a conical vessel upon the upper one of said diaphragms, a perforated diaphragm above

said conical vessel, a perforated pipe on said perforated diaphragm, and communicating with said vessel, a cup surrounding said perforated pipe, a strainer secured to said cup and perforated diaphragm, and a discharge-port in the casing of the filter adjacent to the base of the said conical vessel, said parts being combined substantially as described.

**No. 54,066. Locomotive. (Locomotive.)**



Charles A. Couch, Boston, Massachusetts, U.S.A., 16th November, 1896; 6 years. (Filed 30th August, 1895.)

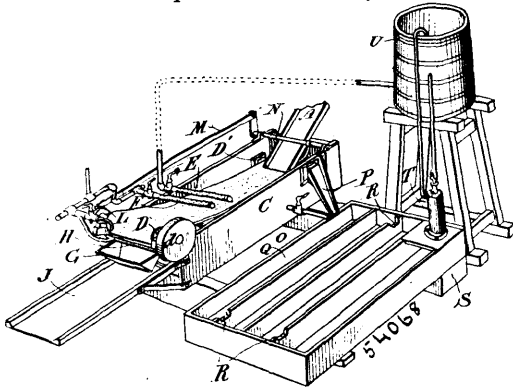
*Claim.*—1st. In a locomotive, a hollow heat deflector located at the top of the exhaust flue *d*, having its sides inclined inwardly and downwardly, interposed and supported between the boiler tubes and the smoke stack, substantially as described. 2nd. In a locomotive, in combination with the exhaust flue *d*, the hollow, inverted conical-shaped heat deflector *c*, located at the top of the said exhaust flue *d*, interposed and supported between the boiler tubes and the smoke stack, substantially as described and for the purpose set forth. 3rd. In a locomotive, in combination with the exhaust flue *d*, the hollow, inverted, conical-shaped heat deflector *c*, located at the top of the said exhaust flue *d*, and interposed and supported between the boiler tubes and the smoke stack, having its upper diameter greater than the lower diameter of the smoke stack, substantially as described.

**No. 54,067. Ore Separator. (Séparateur de minéral.)**

Nathaniel Shepard Keith, Hawarden, Chester, England, 16th November, 1896; 6 years. (Filed 6th February, 1895.)

*Claim.*—1st. Dissolving gold or silver from auriferous or argentiferous rocks or materials by the combination of either bromide or cyanide of mercury with a solution of cyanide of potassium. 2nd. In the treatment of auriferous or argentiferous materials, rocks or ores for the extraction of gold or silver, the use of a solution of bromide of mercury. 3rd. In the electrolytic recovery of gold or silver from its solutions the use of an electrolyte for the anode of the bath, which electrolyte is a solution of an ammonium salt such as the chloride, bromide, iodide, or sulphate, and is kept in a porous vessel immersed in the solution of gold or silver. 4th. In the electrolytic recovery of gold or silver from its solutions the use of a zinc anode in a separate electrolyte consisting of a solution of an ammonium salt such as the chloride, bromide, iodide or sulphate. 5th. In the electrolytic recovery of gold or silver from its solutions the use of an iron anode in a separate electrolyte. 6th. In the electrolytic recovery of gold or silver from its solutions the use of an iron anode in a separate electrolyte consisting of a solution of sulphate of ammonia. 7th. In the electrolytic recovery of gold or silver from its solutions the use of a mercury anode. 8th. In the electrolytic recovery of gold or silver from its solutions the use of an electrolyte containing a solution of bromide of mercury combined with the gold or silver solution. 9th. In the electrolytic recovery of gold or silver from its solutions the use of an electrolyte containing a solution of cyanide of mercury combined with the gold or silver solution. 10th. The process of separating gold or silver from its solutions which consists in electrolytically depositing them simultaneously with mercury upon a cathode to form an amalgam. 11th. The process of extracting gold or silver from auriferous or argentiferous materials, rocks or ores, which consists in submitting the materials, rocks or ores to the solvent action of a solution of cyanide of potassium containing a solution either of cyanide of potassium containing a solution of cyanide of mercury, or both, and then the mercury, from the solution so obtained, by means of electricity upon a cathode as an amalgam.

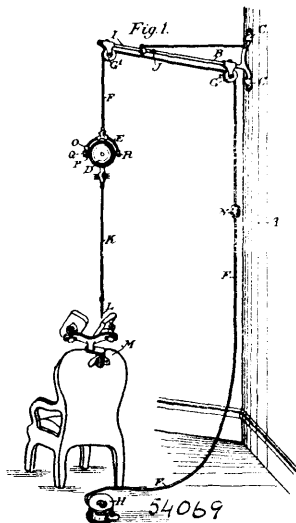
**No. 54,068. Devices for Saving Valuable and Precious Metals.** (*Appareil pour préserver des métaux précieux et de valeur.*)



James Albert Bouk and Charles Rogers Bushnell, both of Santa Cruz, California, U.S.A., 16th November, 1896; 6 years. (Filed 18th August, 1896.)

*Claim.*—An improved organized apparatus for saving valuable and precious metals, consisting of a water-containing tank, an endless travelling belt having one end submerged therein, with means for delivering the ore upon the submerged end of the belt, spray pipes delivering water upon the belt after it has emerged from the tank to cleanse the heavier portions and leave the slimes and soluble portions remaining within the tank, settling tanks, and connections whereby the solution and slimes are delivered directly and continuously from the main tank to the settlers, a filter whereby the insoluble portions are arrested within the settling tanks and the solution allowed to pass therefrom, a pump, a tank into which the solution is elevated, and pipes whereby the solution is delivered both upon the endless travelling belt and also into the ore which is being delivered thereto, whereby the solution is retained and circulated until sufficiently charged with soluble matter for further treatment.

**No. 54,069. Dental Apparatus.** (*Appareil dentaire.*)

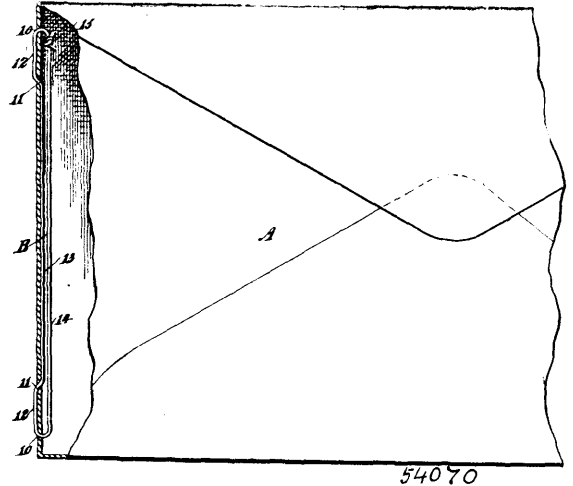


Oscar H. Pieper and Alphonse F. Pieper, both of San José, California, U.S.A., 16th November, 1896; 6 years. (Filed 9th December, 1895.)

*Claim.*—1st. In dental apparatus, a suspended and adjustable electric motor and spindle for operating rotary dental implements, counterweighted and arranged for adjustment vertically, axially and in all planes, in the manner substantially as shown in the drawings. 2nd. In dental apparatus, an electric motor enclosed in a containing case, having axes in a gimbal frame, suspended by a rope and counterweight, substantially in the manner described. 3rd. In dental apparatus, a suspended electric motor and spindle, adjustable in all planes, and therewith electric-controlling apparatus, suitably connected, portable, and adapted to stand on the floor, substantially as shown. 4th. In dental apparatus, a counterweighted electric motor and operating spindle, vertically adjustable by means of a suspending rope, the latter containing or including conducting wires connecting to the electric motor, substantially as shown and specified. 5th. In dental apparatus, an electric-impelling apparatus and controlling mechanism therefor, the

latter contained in a portable case, or adapted to stand on the floor; a pedal moving in a horizontal plane, that can be moved either way without the operator raising his foot or removing his weight therefrom. 6th. In dental apparatus, an electric-controlling device having an oscillating stem, pedal and brush bar L, as shown in figures 3, 4 and 5 of the drawing, provided with integral brushes *m* and *p* and an insulated brush *n*, controlling the armature and field circuits and short-circuiting the armature Q<sup>3</sup>, in the manner and for the purposes substantially as described. 7th. In dental apparatus, an electric-controlling apparatus having an oscillating stem, pedal and brushes, in the manner described, the pedal provided with pivoted levers and stops to determine their inward range, and a spring that acts on both levers, in the manner substantially as described. 8th. In dental apparatus, a suspended and universally-adjustable impelling motor and spindle, suspending rope, counterweight and portable electric-controlling apparatus, combined, connected and operating in the manner herein set forth and specified.

**No. 54,070. Envelope.** (*Envelope.*)



Frank E. Munn, New York, State of New York, U.S.A., 16th November, 1896; 6 years. (Filed 18th October, 1895.)

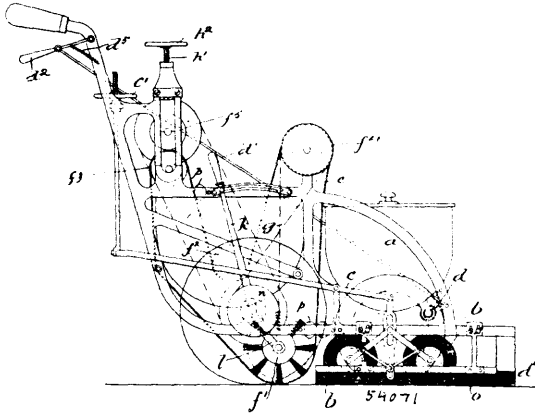
*Claim.*—1st. The combination, with an envelope, of an opener consisting of a double or an endless strand of a suitable material located for a portion of its length within the envelope, a portion of one member of the strand being passed through the material of the envelope, forming a loop on its outer face, as and for the purpose set forth. 2nd. The combination, with an envelope, of a fastener located adjacent to the edges thereof and consisting of a substantially double or endless cord, thread or wire, the inner stretch of which is located within the envelope, and the outer stretch without the envelope at different points in its length and within the envelope intermediate of its outer sections, as and for the purpose set forth. 3rd. The combination, with an envelope, of a fastener located adjacent to one of the edges thereof, consisting of a length of thread, wire or cord having the ends united to form a loop, the inner stretch of the loop being contained entirely within the envelope, and the outer stretch being without the envelope for a predetermined distance and in close contact with the outer face thereof, forming minor outer loops, as and for the purpose set forth.

**No. 54,071. Portable Machine for Washing, Scrubbing and Cleaning Floors.** (*Machine portative pour laver, nettoyer, etc., les planchers.*)

James Edwin Gee and William John Gee, both of Middleborough-Tees, County of York, England, 17th November, 1896; 6 years. (Filed 19th August, 1896.)

*Claim.*—1st. The several arrangements and combination of parts constituting a machine for washing, scrubbing and cleaning floors, which machine is portable by hand power and carries with it the water or cleansing agent for washing the floor, the means comprising a supply tank, scrubbing brushes, and regulable discharge tube with operating handle or lever for applying the cleansing agent, and in combination with these the means comprising an endless movable wiper with actuating mechanism and a slop tank, for swabbing up and collecting the slop and dirt constructed and operating as herein shown and described. 2nd. The several arrangements and combination of parts constituting a machine for washing, scrubbing and cleaning floors, which machine is portable by hand power and carries with it the water or cleansing agent for washing the floor, the means comprising a supply tank, adjustable rotating scrubbing brushes with adjustable devices, and regulable discharge tube with operating handle or lever for applying the cleansing agent, and in combination with these the means comprising an endless movable wiper with actuating mechanism and a slop tank, for swabbing up and collecting the slop and dirt, constructed and operating as

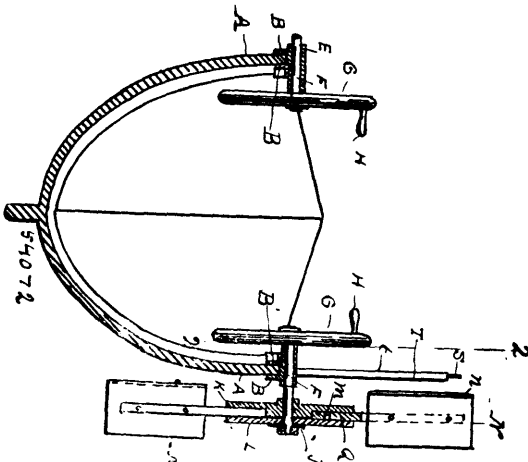
herein shown and described. 3rd. The several arrangements and combinations of parts constituting a machine for washing, scrubbing



and cleansing floors, which machine is portable by hand power and carries with it the water or cleansing agent for washing the floor, the means comprising a supply tank, scrubbing brushes, and regulable discharge tube with operating handle or lever for applying the cleansing agent, and in combination with these the means comprising an endless movable wiper with actuating mechanism, straining rollers and a slop tank, for swobbing up and collecting the slop and dirt, constructed and operating as herein shown and described. 4th. The several arrangements and combination of parts constituting a machine for washing, scrubbing and cleansing floors, which machine is portable by hand power, and carries with it the water or cleansing agent for washing the floor, the means comprising a supply tank, scrubbing brushes, and regulable discharge tube with operating handle or lever for applying the cleansing agent, and in combination with these the means comprising an endless movable wiper with actuating mechanism, and a slop tank, for swobbing up and collecting the slop and dirt, and a dirt brush in front of the machine constructed and operating as herein shown and described. 5th. In a portable machine for washing, scrubbing and cleansing floors, the combination of revolving brushes *b*, with an endless travelling slop cloth *c* passing round rollers *f*<sup>1</sup>, *f*<sup>2</sup>, *f*<sup>3</sup>, *f*<sup>4</sup>, together with a supply tank *a*, and a slop tank *g*, slop guards *o*, all operating together substantially as herein shown and described. 6th. In a portable machine for washing, scrubbing and cleansing floors, the combination of revolving brushes *b*, with an endless travelling slop cloth *c* passing round rollers *f*<sup>1</sup>, *f*<sup>2</sup>, *f*<sup>3</sup>, *f*<sup>4</sup>, together with a supply tank *a* and a slop tank *g*, slop guards *o*, and a straining roller *f*<sup>5</sup>, all operating together substantially as herein shown and described. 7th. The means for controlling and straining transversely the slop cloth of machines for washing, scrubbing and cleansing floors, and consisting of edging cords on the cloth running behind detent wheels secured to opposite parts of the machine, as and for the purpose hereinbefore described. 8th. The use of brushes as slop guards of machines for washing, scrubbing and cleansing floors, as hereinbefore shown and described.

**No. 54,072. Boat Propeller.**

(Machine pour propulser les vaisseaux.)

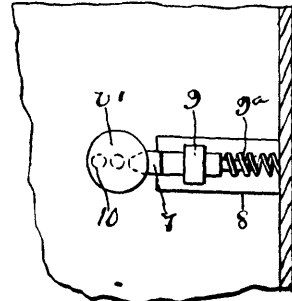


Charles D. Augur, Turin, New York, U.S.A., 17th November, 1896; 6 years. (Filed 19th September, 1896.)

*Claim.*—1st. The combination in a hand propelling device for row-boats, of the yoke parts B and B', the journal-box E integral with

the part B, the shaft carried therein, recesses D in the yoke section B', designed to be clamped over the ribs of the boat, and the screws to clamp the yoke-sections to the gunwale, substantially as shown and described. 2nd. In combination with the yoke-sections as described, the integral journal-box and shaft carried therein, the paddle-blades held between the plates K and L, the longitudinal corresponding edges of said blades turned up at an angle, substantially as and for the purpose set forth. 3rd. In combination with the yoke-sections designed to be clamped over the ribs to the gunwale of a skiff, the steel rods S secured to the yoke, and a screen T, having pockets *t* designed to receive said rods, substantially as shown and described.

**No. 54,073. Car Fender. (Défense de chars.)**

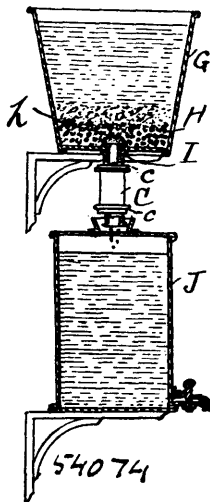


James Dominique Lamb, James Edwin Chapman, John James Durack, all of Montreal, Quebec, and Patrick John Brennan, Ottawa, Ontario, Canada, 17th November, 1896; 6 years. (Filed 25th February, 1896.)

*Claim.*—1st. In combination with a car having a bell mounted thereon, means for continuously ringing the bell. 2nd. In combination with a car having a bell mounted thereon, a fender having a forwardly projecting tilting section, means for operating said tilting section, and means for simultaneously locking same in its tilted position and for continuously ringing the bell for the purpose set forth. 3rd. A car fender having a forwardly projecting tilting section, rod and lever mechanism for operating said tilting section, the rod of said rod and lever mechanism being variable in length, for the purpose set forth. 4th. A car fender having a forwardly projecting tilting section, rod and lever mechanism for operating said tilting section, the rod of said rod and lever mechanism being variable in length and projecting vertically through the platform of the car and being provided with a laterally extending head, and a spring-operated bolt adapted to engage the laterally extending head of said rod when said tilting section is in its tilted position, for the purpose set forth. 5th. The combination of a stationary back piece secured to the front of the car, a forwardly projecting section pivotally connected to said stationary back piece, a rearward extension from said forwardly projecting section, a vertically adjustable rod carried in bearings upon said stationary back piece, the lower end of such rod being normally in contact with said rearward extension and means for retaining said rod against vertical displacement, in any position to which said rod may be adjusted, for the purpose set forth. 6th. The combination of a stationary back piece, secured to the front of the car, a forwardly projecting section pivotally connected to said stationary back piece, a rearward extension from said forwardly projecting section, a screw-threaded vertical rod taking in screw-threaded bearings formed upon said stationary back piece, the lower end of such rod being normally in contact with said rearward extension, for the purpose set forth. 7th. A car fender having a stationary back piece, an intermediate section, a forwardly projecting tilting section pivoted to said intermediate section, a lever fulcrumed to said intermediate section and adapted to engage the rear end and limit the movement of said tilting section, a coiled spring having one end bearing downwardly upon said lever and the other end thereof engaging said intermediate section, and means for operating said tilting section, for the purpose set forth. 8th. A car fender having a stationary back piece, an intermediate section, a forwardly projecting tilting section pivoted to said intermediate section, a lever fulcrumed to said intermediate section and adapted to take over and engage a pin projection upon the rear end of said tilting section, a coiled spring having one end bearing downwardly upon said lever and the other end thereof engaging said intermediate section, and means for operating said tilting section, for the purpose set forth. 9th. A car fender having a stationary back piece, an intermediate section, a forwardly projecting tilting section pivoted to said intermediate section and adapted to engage the rear end of said tilting section, a coiled spring having one end bearing downwardly upon said lever and the other end thereof engaging said intermediate section, and means for operating said tilting section and means for automatically locking said tilting section in its tilted position, for the purpose set forth. 10th. The combination of a stationary back

piece secured to the front of the car, a forwardly projecting section pivotally connected to said stationary back piece, a rearward extension from said forwardly projecting section a vertically adjustable rod carried in bearings upon said stationary back piece, the lower end of such rod being normally in contact with said rearward extension, and means for retaining said rod against vertical displacement in any position to which said rod may be adjusted, a lever fulcrumed to said intermediate section and adapted to engage the rear end of said tilting section, a coiled spring having one end bearing downwardly upon said lever and the other end thereof engaging said intermediate section, for the purpose set forth. 11th. The combination of a stationary back piece secured to the front of the car, a forwardly projecting section pivotally connected to said stationary back piece, a rearward extension from said forwardly projecting section, a vertically adjustable rod carried in bearings upon said stationary back piece, the lower end of such rod being normally in contact with said rearward extension, means for retaining said rod against vertical displacement in any position to which said rod may be adjusted, a lever fulcrumed to said intermediate section and adapted to engage the rear end of said tilting section, a coiled spring having one end bearing downwardly upon said lever and the other end thereof engaging said intermediate section, and means for automatically locking said tilting section in its tilted position, for the purpose set forth. 12th. A car fender having a stationary back piece, an intermediate section, a forwardly projecting tilting section pivoted to said intermediate section, a box or casing secured to the forward end of said tilting section and having a tapering and open bottom, a ball adapted to project partially through such open bottom and a removable retaining plate adapted to hold said ball against displacement, for the purpose set forth. 13th. A car fender having a stationary back piece formed with a roller at the upper end thereof, an intermediate section, a forwardly projecting tilting section pivoted to said intermediate section, an apron connected to the roller at the upper end of said stationary back piece by means of screw-threaded plugs adapted to be passed through such apron and take into screw-threaded openings in said roller and to said tilting section, for the purpose set forth. 14th. A car fender having a forwardly projecting tilting section, a rod and lever mechanism for operating said tilting section and a spring-operated bolt adapted to engage said rod and lever mechanism when said tilting section is in its tilted position, said rod having a head of extended width, a second rod carried adjacent to said first-mentioned rod, a lever fulcrumed to the underside of the car and connected at one end to said second rod, a U-shaped section straddling and adapted to be acted upon by the axle of the car and flexibly connected to the other end of said lever, a compound lever suspended adjacent to said lever and connected at one end to the other end of said U-shaped section, a knocker provided with a lateral extension and suspended adjacent to the other end of said compound lever, and a bell located adjacent to said knocker, for the purpose set forth.

**No. 54,074. Filter. (Filtre.)**



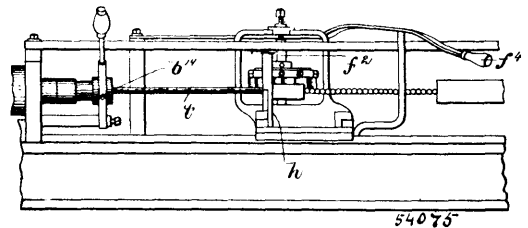
Edward J. Durant and Adolf Scharff, both of Pasadena, California, U.S.A., 17th November, 1896; 6 years. (Filed 16th September, 1896.)

*Claim.*—1st. A portable filter comprising an open-ended perforated tube provided with an impermeable partition between its ends, a containing-case, a removable tube of fabric of suitable filtering material fitted upon the outside of the perforated tube, and fitted into the containing-case and contacting with the walls of the case, and the caps respectively provided with an inlet and an outlet and removably fastened to the ends of the case, substantially as and for the purpose set forth. 2nd. The combination of the holder comprising a permeable open-ended tube and an impermeable par-

tion between the ends of such tube, filtering material in the tube, a jacket of filtering material fitted upon the permeable tube, the case fitted upon said jacket and the caps fitted on the ends of the case against the ends of the tube and against the said filtering material, and provided with a centrally-arranged inlet and outlet, substantially as set forth. 3rd. The filter set forth, comprising the hollow permeable holder having a series of compartments for holding filtering material, the filtering-jacket fitted around the holder, filtering material arranged in the several compartments, and means for introducing the liquid to be filtered into one of the compartments and means for causing it to pass another or other compartments and find its way through the filtering-jacket in its passage through the filter. 4th. The combination of the holder composed of outer and inner permeable tubes and an impermeable partition arranged across the tubes between the ends of the holder so that the partition and the tubes constitute a holder having several compartments, filtering material arranged in the compartments, a jacket of filtering material fitted around the holder, a case fitted upon such jacket, and caps for the ends of the case, provided respectively with the inlet and outlet passages. 5th. The filter set forth comprising the perforated tube having the partition between its ends and having the perforations on one side of the partition larger than those on the other side of the partition, the filtering-jacket fitted around the tube, the case inclosing the jacket, the caps on the ends of the case and provided with the inlet and outlet, respectively, and filtering material within the tube.

**No. 54,075. Wood Turning Machine.**

(Machine à tourner le bois.)



George Henry Hardman, Essex, Connecticut, U.S.A., 17th November, 1896; 6 years. (Filed 19th September, 1896.)

*Claim.*—1st. In a wood turning machine, in combination, a framework, a hollow driving shaft, a hollow feed chuck slidingly engaged therewith, a carriage mounted on said framework, a rotary circular cutter mounted on said carriage and provided with cut-off blades and arranged in a position to engage the stock held by the chuck, means for sliding said carriage, and means for rotating said cutter through the medium of said sliding means, substantially as and for the purpose set forth. 2nd. In a wood turning machine, the combination, a framework, a hollow driving shaft mounted thereon, a hollow feed chuck slidingly connected with said shaft, a carriage mounted to slide upon said framework and provided with a hollow holder, a shaft carried by said carriage, a cutter mounted upon said shaft in a position to engage stock held by said chuck and holder, a gear mounted upon said shaft, a stationary rack-bar with which said gear engages, and means for sliding said carriage, substantially as and for the purpose set forth. 3rd. In a wood turning machine, in combination, a framework, means for gripping one end of a piece of stock and rotating said stock, a holder arranged to support the free end of said stock, a rotary crown cutter provided with fashioning and with cut-off blades, arranged to engage the stock held by said holder, a carriage upon which said holder and cutter are mounted, and means for advancing said carriage, and rotating said cutter. 4th. A crown cutter, comprising in its construction a circular head, or base, a plurality of fashioning blades designed to form a pattern secured to said head in a plane parallel to the axis of the rotation of the latter, and cut-off blades similarly secured to said head between fashioning blades that constitute different or duplicate patterns.

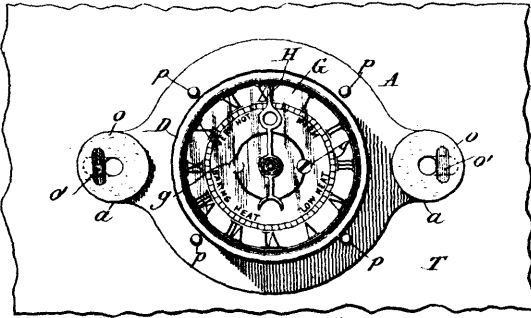
**No. 54,076. Oven Thermometer.**

(Thermomètre de fourneau.)

David Goodwin Cooper, Pequabuck, Connecticut, U.S.A., 17th November, 1896; 6 years. (Filed 28th September, 1896.)

*Claim.*—1st. In an oven thermometer, the combination of the frame plate provided with a central opening and having lateral lugs, the dial case consisting of an integral side and bottom seated in said opening, the similarly constructed movement case located on the opposite side of said frame plate, the dial bridge having out-turned flanges, and supporting the dial face, means for securing said parts together, the ornamental split ring between said dial face and the edge of the case, the pointer and means for actuating the same, substantially as and for the purpose herein set forth and described. 2nd. In an oven thermometer, the combination of the frame plate provided with a central opening and lateral lugs, the integrally formed dial case seated in said central opening, the similarly constructed movement case located on the opposite side of said frame

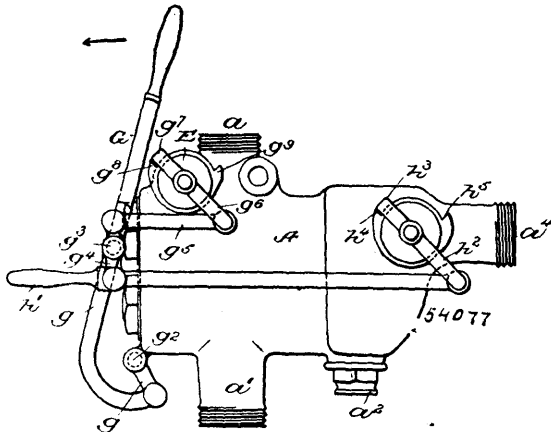
plate, the dial bridge supporting the dial face and having out-turned flanges, the stud posts or studs supporting the movement plate and



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securing the dial case to the movement case and the dial bridge thereto, whereby the several parts are securely held together, substantially as and for the purpose herein set forth and described.

No. 54,077. Steam Injector. (Injecteur à vapeur.)



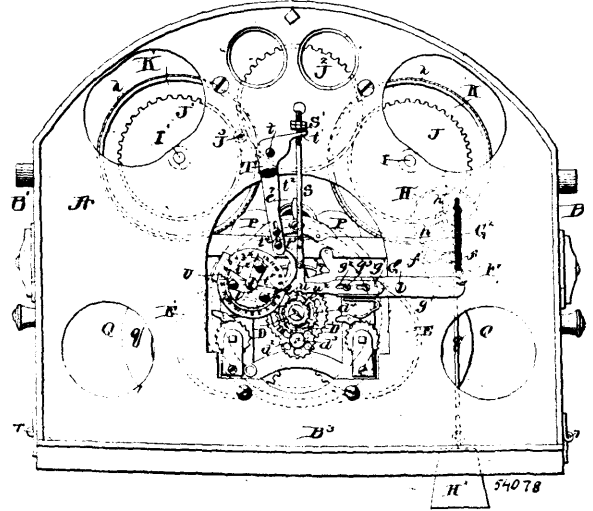
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Patrick Brownley and Francis Sticker, both of New York, New York, U.S.A., 17th November, 1896; 6 years. (Filed 5th November, 1896.)

Claim.—1st. A double-tube injector having a steam chamber common to both the lifter and forcer, and a steam inlet cock having two steam ports of different sizes, and means for turning said cock, substantially as set forth. 2nd. A double-tube injector having a steam chamber common to both the lifter and forcer and a steam inlet cock having a wide transverse port or opening and a smaller port arranged diagonally to said former port or opening, and a lever for turning said cock, as set forth. 3rd. A double-tube injector having a steam chamber common to both the lifter and forcer, a steam inlet cock located in the top of said steam chamber, a second cock for controlling the overflow and the passage to the boiler, and connections between said cocks, substantially as set forth. 4th. A double-tube injector having a steam chamber common to both the lifter and forcer, a steam inlet cock located in the top of said steam chamber, a second cock for controlling the overflow and the passage to the boiler, an operating lever, and connections between said lever and said cocks, whereby the latter may be moved in unison or independently, as set forth. 5th. A double tube injector having a steam chamber common to both the lifter and forcer, a steam inlet cock located in the top of said steam chamber, a second cock for controlling the overflow and the passage to the boiler, an operating lever, a rocking bar mounted thereon, and connections between the ends of said rocking bar and said cocks, substantially as set forth. 6th. A double-tube injector having a steam chamber common to both the lifter and forcer, a steam inlet cock located in the top of said steam chamber, a second cock for controlling the overflow and the passage to the boiler, an operating lever, a rocking bar mounted thereon, arms carried by said cocks, a pitman connecting the arm of the steam inlet cock to one end of said rocking bar, and the handled-rod connecting the other end of said rocking bar to the arm of said overflow cock, substantially as set forth. 7th. In a lifting and forcing injector having a single cock for controlling the overflow and the passage to the boiler, a steam inlet cock having ports of different capacities, and means for moving said cocks in unison and independently, as set forth. 8th. In a lifting and forcing injector having a single cock for instantly cutting off the overflow of the lifter and gradually that of the forcer, a steam inlet

cock having ports of different capacities, a lever, connections between said lever and both of said cocks, the connection between said lever and said steam inlet cock permitting the latter to be moved independently of the other cock, substantially as set forth. 10th. A lifting and forcing injector having steam inlet and overflow cocks extended transversely through the machine, arms carried by said cocks having bent ends, stops designed to be engaged by said ends, and an operating lever connected to both of said arms, substantially as set forth.

No. 54,078. Time Recorder. (Régistre horaire.)



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John W. Poler, Brooklyn, New York, U.S.A., 17th November, 1896; 6 years. (Filed 1st October, 1896.)

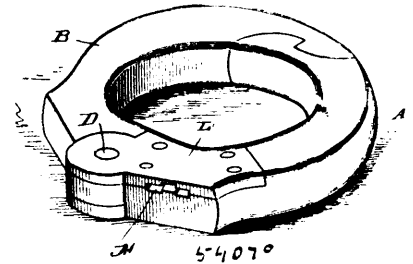
Claim.—1st. In a time recording mechanism, the combination with the clock mechanism of the automatic recording device adapted to produce a removable visual record presenting characters representing numbers increasing in arithmetical progression, and means controlled by said clock mechanism for automatically advancing said record, substantially as set forth. 2nd. The combination with the clock mechanism, of an automatic recording device, an inking mechanism, an unmarked paper or tape, means for holding the paper or tape relatively to the recording device continuously in the position for receiving record characters, and means controlled by said clock mechanism for automatically advancing said record, substantially as set forth. 3rd. The combination with the clock mechanism, of the recording device adapted to produce a series of characters upon a paper or tape, an inking mechanism, a holder for the paper or tape which is adapted to retain it continuously in the position occupied for the forming thereof of characters by the recording device, and means controlled by the said clock mechanism for automatically advancing the said record, substantially as set forth. 4th. The combination, with the recording device provided with a series of type substantially as described, an inking mechanism, and a paper holding device which retains the paper under pressure against the recording device, of two motors, one of which drives the recording device, an escapement interposed between said motors whereby one regulates the movement of the other, and means actuated by the motor for automatically advancing the paper, substantially as described. 5th. The combination, with the recording device adapted to print a series of numbers increasing in arithmetical progression, an inking mechanism, and a platen or paper presser, of a driving shaft adapted to move continuously in one direction, a motor for said shaft, and means for connecting the recording device with said shaft and disconnecting it therefrom independently of said motor, substantially as set forth. 6th. In a time-recording mechanism, the herein described recording device provided with means for producing a series of differing numeral characters, in combination with a motor for continuously moving said recording device, said recording device being detachably connected to said motor, substantially as set forth. 7th. The combination of a recording device having a series of successively acting type indicating a series of hours or fractions thereof, a motor for actuating said recording device, and means for connecting and disconnecting said motor and recording device at will, substantially as set forth. 8th. A time-recording device provided with a series of type adapted to print characters indicating in arithmetical progression a series of hours or fractions thereof, a clock mechanism for actuating said record device, and means for disconnecting them at will, substantially as described. 9th. In a time-recording mechanism, a rotary power shaft and a recording wheel rotatable thereby, and mounted thereon, and detachable therefrom, at will, substantially as described. 10th. In a time-recording mechanism, a motor, a power shaft rotated thereby, and a time-recording wheel detachably mounted loosely thereon and means independent of the motor for connecting said wheel positively to said shaft at will, substantially as described. 11th. The combi-

nation with the slotted recording wheel, of means stationarily secured thereto for permanently closing its periphery, substantially as set forth. 12th. The combination with the recording wheel having a slot extending from the periphery to the centre of the loosely-mounted hub for supporting it on the shaft, and means for automatically rotating said wheel uniformly, as described. 13th. The combination with the recording device, of the motor therefor, the stop for said motor, the motor for removing said stop, and the controlling device actuated by the second motor for preventing the said stop from being moved, substantially as set forth. 14th. The combination with the type-carrying wheel detachably engaging with a power shaft, whereby said wheel can be stopped or started at will, of the paper support adapted to hold the paper stationary when said wheel is stationary, and the ink roll, substantially as set forth. 15th. The combination with the type-carrying wheel, the motor and the means for detachably connecting the wheel to the motor at will, of the inking roll and the paper support and platen adapted to be moved away from the type wheel, substantially as set forth. 16th. The combination with the type-carrying wheel mounted in a casing, of the inking mechanism, the paper support or platen mounted in a movable carrier, the door in the casing and the means connecting said door with the said movable carrier, substantially as set forth. 17th. The combination with the type-carrying wheel and the motor adapted to be detachably connected thereto, of the inking mechanism and the paper support or platen, both mounted in a movable carrier, whereby both may be withdrawn from the type-carrying wheel, substantially as set forth. 18th. The combination with the recording wheel, the motor, and the means for detachably connecting them together, of means for automatically preventing the action of the motor, substantially as set forth. 19th. The combination of the motor, the stop therefor, the second motor, means whereby the second motor removes the stop from the first aforesaid motor, and a series of independent duplicate time-recording devices actuated by said motor, and means for connecting the recording devices with and disconnecting them from said motor, whereby they are adapted to be actuated separately or simultaneously, substantially as described. 20th. The combination with the type wheel, the motor, the means for detachably connecting the wheel and the motor at will, the inking mechanism, the paper support and means for automatically advancing the paper uniformly, of the tube or passageway extending to a point adjacent to the paper, whereby characters may be formed thereon supplemental to those produced by the type wheel, substantially as set forth. 21st. The combination with the recording mechanism and the clock mechanism, of the lever G adapted to be actuated by the clock mechanism and to permit the action of the recording mechanism, and the spring  $\Gamma^2$ , substantially as set forth. 22nd. The combination of the recording mechanism, its motor, the escapement disc F having the pins  $f^2$ , the clock mechanism having the cam D<sup>1</sup>, and the lever G adapted to be engaged by said cam and having stops for engaging said pins  $f^2$ , substantially as set forth. 23rd. The combination with the recording mechanism and the clock mechanism, of the lever G formed in two adjustable parts  $g^1$ , and adapted to be actuated by the clock mechanism, substantially as set forth. 24th. The combination with the type wheel, the inking mechanism, the presser roll, the unmarked paper or record strip, and the intermittingly rotating shaft of the clutch connecting the wheel to the shaft, the lever for moving the clutch and the key-operated lock for moving the lever, substantially as set forth. 25th. The combination with the recording wheel K, of the clutch, having a loosely-mounted clutch pin for engaging with the wheel and a spring bearing against the said pin, substantially as and for the purpose set forth. 26th. The combination with the recording wheel K, of the clutch M having the slotted arm M<sup>1</sup>, the pin M<sup>2</sup> mounted in the slot, and the spring M<sup>3</sup> bearing against the pin, substantially as set forth. 27th. The combination with the recording mechanism, the clock mechanism and the lever G adapted to be actuated by the clock mechanism to permit the movement of the recording mechanism, of a stop for said lever G, and a wheel or disc actuated by the clock mechanism for moving said stop in and out of its operative position, substantially as set forth. 28th. The combination with the recording mechanism, and the clock mechanism, of a controlling device interposed between them and actuated by the clock mechanism to permit the movements of the recording mechanism, a lever for supporting said controlling device and an adjustable stop, movable by the clock mechanism and adapted to hold said lever in or out of its operative position, substantially as set forth. 29th. In a time-recording mechanism, the combination with the power shaft, of the recording wheel, having a series of type indicating a series of hours or fractions thereof, and also a series of type indicating a corresponding series of sums of money due as wages at the ends of each of said series of hours or fractions thereof, of means for connecting said wheel with said power shaft and disconnecting it at will, substantially as set forth. 30th. In a time-recording mechanism, the combination of the recording wheel having a series of record-producing devices, and a motor therefor, of connecting devices adapted to permit said wheel to be engaged at will with said motor, at points corresponding in number to the said record-producing devices on said wheel, substantially as set forth.

**No. 54,079. Lock. (Serrure.)**

Woodbury D. Roberts, Portland, Oregon, U.S.A., 17th November, 1896; 6 years. (Filed 2nd October, 1896.)

*Claim.*—1st. An improved lock, consisting of the semicircular jaws or members hinged together at one end and provided with en-

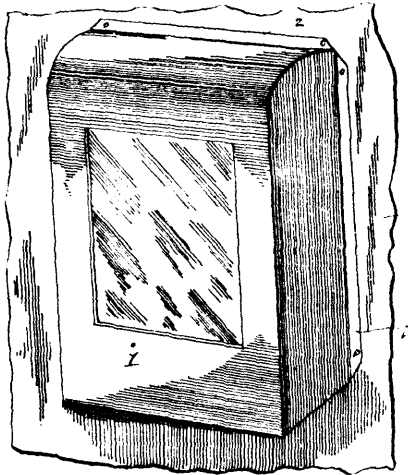


gaging heads at the other end, the pivotal aperture of one of the jaws being elongated, and means for securing the jaws and holding the heads in contact when brought together, substantially as shown and described. 2nd. An improved lock, consisting of the semicircular jaws or members pivoted at one end and having interlocking heads at the other end, the pivoted opening of one member being elongated, the major axis of said opening being at an angle to the line passing through the centre ring, substantially as shown and described. 3rd. An improved lock, consisting of the semicircular jaws pivoted at one end and having the interlocking heads at the opposite end, the sliding bolt carried by one of the members and adapted to engage a shoulder carried by the opposite member, substantially as shown and described. 4th. An improved lock, consisting of the jaws or members pivoted at one end and having the interlocking heads at the opposite end, one of the members having an elongated pivotal opening, and the locking shoulder adjacent to said opening, and the sliding bolt carried by the opposite member and adapted to engage the locking shoulder, substantially as shown and described. 5th. An improved lock, consisting of the semicircular jaws or members having the interlocking heads, one of said heads having a longitudinal groove and the opposite head having a longitudinal tongue adapted to engage said groove and prevent lateral movement, substantially as shown and described. 6th. An improved lock, consisting of the semicircular jaw or members, and the pivotal bolt, the pivotal opening of one jaw being elongated, a locking shoulder carried by said jaw, a spring-actuated sliding bolt carried upon the opposite jaw and adapted to engage the said shoulder when the jaws are brought together, substantially as shown and described. 7th. An improved lock, consisting of the semicircular jaws, one of which has an elongated pivotal opening, a recess formed in the opposite jaw, a locking bolt sliding in said recess, a cap piece adapted to cover said recess and bolt, and the locking shoulder carried by the opposite member and adapted to engage the locking bolt when the jaws or members are brought together, substantially as shown and described. 8th. In a lock of the kind described, the combination with the jaws pivotally connected in the manner set forth, one of said jaws having a recess therein, the sliding bolt arranged in said recess, the recessed cap plate adapted to cover the said recess and bolt, and the spring arranged beneath the bolt and adapted to project the same into the recess in the cap plate, substantially as shown and described. 9th. In a lock of the kind described, the combination with the jaws pivotally connected as set forth, one of said jaws having a recess therein, the sliding bolt arranged in said recess, one end of said bolt being bevelled, a leaf spring arranged beneath the opposite end of the said bolt, and the cap plate having a recess upon the inner side, all arranged substantially as shown and described. 10th. In a lock of the kind described, the combination with the jaws connected as set forth, one of said jaws having a recess, a sliding bolt located in said recess, said bolt having a series of wards, the wards produced in the sides of the jaws, the cap plate having a recess upon the inner face and also provided with wards, the spring arranged beneath the sliding bolt, and the key having wards to correspond with wards in the jaws, bolt and cap piece, substantially as shown and described. 11th. In a lock of the kind described, the combination with the recessed jaw, of the recessed cap plate, the sliding bolt, and the spring for projecting the said bolt into the recessed plate, the wards in the jaw plate and bolt, the key having wards to correspond with the wards in the jaw, key and bolt, the end of said key being oblique, and the end of the first ward being bevelled, substantially as shown and described. 12th. In a lock of the kind described, the key having wards upon both faces, the bottom of said key being inclined or oblique and the end of the first ward on one face being bevelled, substantially as shown and described. 13th. In a lock of the kind described, the combination with the jaws, one of which has an elongated pivoted opening, a spring carried by said jaw and resting adjacent said opening, the pivotal bolt having a stud or pin against which the spring bears a locking shoulder carried by said jaw, and the locking bolt carried by the opposite jaw and adapted to engage the said shoulder, all arranged substantially as shown and described. 14th. In a lock of the kind described, the combination with the jaws, one of the jaws having an elongated opening, the spring carried by the jaw adjacent to said opening, a locking shoulder also carried by said jaw, a locking bolt arranged in a recess in the opposite jaw, a spring arranged beneath said bolt, a spring arranged at one end of said bolt for sliding the same, the cap



plate and the key, the pivotal bolt having a stud pin, all arranged substantially as shown and described. 15th. In a lock of the kind described, the combination with the semicircular-shaped jaws having the interlocking ends, the pivotal bolt for uniting said jaws, said pivotal bolt having a stud or pin intermediate its ends, one of said jaws having an elongated pivotal opening, and the spring arranged adjacent to said opening and adapted to bear upon the stud or pin, the locking shoulder carried by said jaw, the locking bolt carried by the opposite jaw, the cap plate, the spring arranged beneath the bolt, the spring arranged at the end of the bolt, and the key for operating the said bolt, all constructed and arranged substantially as shown and described.

**No. 54,080. Newspaper Holder. (Porte-journal.)**

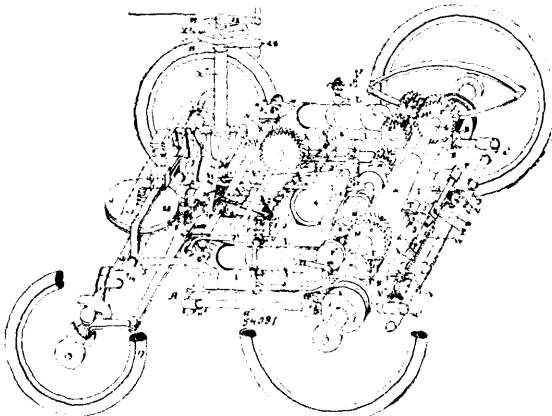


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Linley G. Wade, Holly, Michigan, U.S.A., 17th November, 1896; 6 years. (Filed 2nd October, 1896.)

*Claim.*—As an improved article of manufacture, a newspaper holder having a shell or casing open at its bottom and rear side and adapted to be secured to a vertical supporting-surface, a holding spring arranged within the shell or casing to bear toward said supporting-surface, said holding-springs consisting of a wire-blank looped at its centre and having lateral extensions fitted in rolls formed in the lower edge of the front side of the shell or casing to constitute a strengthening-bead, and a transparent plate or medium arranged in an opening in the front of the shell or casing and adapted to bear advertising matter, substantially as specified.

**No. 54,081. Motor Carriage. (Voiture à moteur.)**



Thomas Drill, Toronto, Ontario, Canada, 17th November, 1896; 6 years. (Filed 16th September, 1896.)

*Claim.*—1st. In a motor carriage, a cylinder, two oppositely moving pistons within the cylinder, a piston rod for each piston, a rocking arm, links connected to the rocking arm and to the piston rods, substantially as specified. 2nd. In a motor carriage, a cylinder, two oppositely moving pistons within the cylinder, a piston rod for each of the pistons, a pivoted rocking arm, links connected to the rocking arm and to the piston rods, and a spark creator within the cylinder to ignite the gas on the return stroke of the pistons, substantially as specified. 3rd. In a motor carriage, a cylinder, two oppositely moving pistons within the cylinder, a piston rod for each piston, a reservoir, and an automatically

controlled feed from the reservoir to the cylinder, substantially as specified. 4th. In a motor carriage, a cylinder, two oppositely moving pistons within the cylinder, a piston rod for each piston, a reservoir, an automatically controlled feed from the reservoir to the cylinder, consisting of a valve divided into two compartments, an opening between the compartments, and a spring-controlled valve to normally close the said opening, the said valve so arranged as to be opened by the suction created by the working of the pistons, substantially as specified. 5th. In a motor carriage, a piston rod for each piston, a reservoir, an automatically controlled feed from the reservoir to the cylinder, consisting of a valve divided into two compartments, an opening between the compartments, and spring controlled valve to normally close the said opening, the said valve so arranged as to be opened by the suction created by the working of the pistons, one of the compartments serving as a reservoir for the oil, and the other compartment communicating directly with the cylinder, and a needle valve to regulate the admission of the oil into the reservoir, substantially as specified. 6th. In a motor carriage, the combination of the axle of the driving-wheel, a shaft parallel with the said axle, oppositely arranged cones mounted on the said shaft and axle, a belt passing around one of the said cones, capable of being moved from end to end of the same, to increase or diminish the speed of the axle, and means for imparting motion to the said shaft, substantially as specified. 7th. In a motor carriage, the combination of the driving axle, a shaft mounted in the framework parallel with the driving axle, oppositely arranged cones mounted on the said shaft and axle, a shifting bar mounted in the framework, a shifting head slidably mounted on the shifting bar, a pulley mounted in the shifting head, a belt passing around the said pulley and around one of the said cones, substantially as specified. 8th. In a motor carriage, the combination of the driving axle, a shaft mounted in the framework parallel with the driving axle, oppositely arranged cones mounted on the said shaft and axle, a shifting bar mounted in the framework, a shifting head slidably mounted on the shifting bar, a pulley mounted in the shifting head, a bolt passing around the said pulley and around one of the said cones, and means for moving the shifting head into any predetermined position, substantially as specified. 9th. In a motor carriage, the combination of the driving axle, a shaft mounted in the framework parallel with the driving axle, a shifting bar mounted in the framework, a shifting head slidably mounted on the shifting bar, a pulley mounted in the shifting head, a belt passing around the said pulley and around one of the said cones, means for moving the shifting head into any predetermined position, consisting of two sprocket-wheels journaled in the framework, a sprocket chain passing around the said sprocket-wheels and connected to the said shifting head, a bevel gear mounted on one end of the shaft of one of the pinions, meshing with a bevel gear on the end of the controlling lever extending into the body of the carriage, substantially as specified. 10th. In a motor carriage, a reversing gear, consisting of a crank shaft, a pinion loosely mounted on the crank shaft, a clutch member connected to the pinion, a sleeve, a clutch member connected to one end of the sleeve, a washer interposed between the clutch members, means for holding the clutch members and washer independently revoluble together, and a shifting lever for moving the pinion and clutch members on the shaft, substantially as specified. 11th. A reversing gear for a motor carriage consisting of a crank shaft, a pinion loosely and slidably mounted on the crank shaft, a stop to arrest the outward movement of the pinion, a clutch member connected to the inner end of the pinion, an annular T-groove formed in the side face of the clutch member, a sleeve, a clutch member mounted on the sleeve, a washer interposed between the clutch members, having an annular groove, T-bolts having their heads located in the said T-grooves projecting through the annular groove in the washer and through the second clutch member, a shifting lever for moving the clutch members and pinion on the said crank shaft, substantially as specified. 12th. A reversing gear for a motor carriage consisting of a crank shaft, a pinion loosely and slidably mounted on the crank shaft, a stop to arrest the outward movement of the pinion, a clutch member connected to the inner end of the pinion, an annular T-groove formed in the side face of the clutch member, a sleeve, a clutch member mounted on the sleeve, a washer interposed between the clutch members, having an annular groove, T-bolts having their heads located in the said T-grooves projecting through the annular groove in the washer and through the second clutch member, a shifting lever for moving the clutch members and pinion on the said crank shaft, and a controlling lever to operate the shifting lever, substantially as specified. 13th. In a motor carriage, a motor consisting of a cylinder, two oppositely moving pistons in the cylinder, a piston rod for each piston, two crank shafts located at opposite ends of the cylinder, crank discs connected to the crank shafts, the said piston rods connected to the crank discs, a rocking arm pivotally connected to the piston rod, and a spark creator in the cylinder to ignite the gas after the pistons have completed their return stroke, substantially as specified. 14th. In a motor carriage, a motor consisting of a cylinder, two oppositely moving pistons in the cylinder, a piston rod for each piston, two crank shafts located at opposite ends of the cylinder, crank discs connected to the crank shafts, the said piston rods connected to the crank discs, a rocking arm pivotally con-

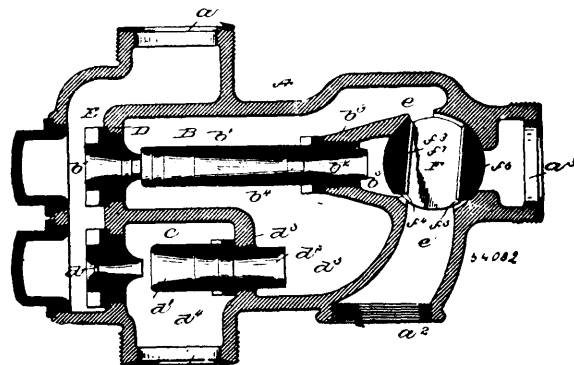
nected to the cylinder, links connected to the rocking arm and to the piston rod, and a spark creator in the cylinder to ignite the gas after the pistons have completed their return stroke, in combination with the axle of the driving wheels, and means for imparting motion to the said axle from one of the said crank shafts, substantially as specified. 15th. In a motor carriage, the combination of the main frame, a steering axle connected to the main frame in such a manner as to have a vertically rocking action, substantially as specified. 16th. In a motor carriage, the combination of the main frame, an axle connected to the main frame, and an axle arm connected to each end of the axle, capable of turning independently of the axle, substantially as specified. 17th. In a motor carriage the combination of the main frame, an axle connected to the main frame, and an axle arm connected to each end of the axle, capable of turning independently of the axle, an arm connected to each of the axle arms, and a lever-controlled link coupling the said arms, substantially as specified. 18th. In a motor carriage, the combination of the main frame, an axle pivotally connected to the main frame so that its ends can swing vertically, each end of the axle bifurcated, an axle arm pivotally connected to each bifurcated end of the axle, a steering arm rigidly connected to each axle arm, and a lever-controlled link connected to each steering arm, substantially as specified. 19th. In a motor carriage, the combination of the main frame, an axle pivotally connected to the main frame so that its ends can swing vertically, each end of the axle bifurcated, an axle arm pivotally connected to each bifurcated end of the axle, a steering arm rigidly connected to each axle arm, a lever-controlled link connected to each steering arm, and plates connected to the axle to sustain the steering arms when turned, substantially as specified. 20th. In a motor carriage, the combination of the main frame, an axle pivotally connected to the main frame so that its ends can swing vertically, each end of the axle bifurcated, an axle arm pivotally connected to each bifurcated end of the axle, a steering arm rigidly connected to each axle arm, a lever-controlled link connected to each steering arm, and plates connected to the axle to sustain the steering arms when turned, and guide plates connected to the main frame to guide the vertical movement of the axle ends, substantially as specified. 21st. In a motor carriage, the combination of the main frame, an axle connected to the main frame, each end of the axle bifurcated, an axle arm pivoted in each bifurcated end, a steering arm connected to each axle arm, a link connecting the steering arms, a sprocket wheel journaled in the frame, a bracket connected to the sprocket wheel, a ball and socket joint connecting the link to the bracket, a steering lever, a sprocket-wheel connected to the steering lever, and a sprocket chain passing around the said sprocket-wheels, substantially as specified. 22nd. In a motor carriage, a cylinder, two oppositely moving pistons within the cylinder, a piston rod for each of the pistons, a pivoted rocking arm, links connected to the rocking arm and to the piston rods, a spark creator within the cylinder to ignite the gas on the return stroke of the pistons, a dynamo, and an electric circuit between the dynamo, the spark creator and the cylinder, substantially as specified. 23rd. In a motor carriage, a cylinder, two oppositely working pistons within the cylinder, and a spark creator consisting of a projection on the end of one of the pistons, a spring-operated pin working laterally into the cylinder to engage the said projection, a dynamo, and an electric circuit between the said pin and cylinder, substantially as specified. 24th. In a motor carriage the combination of the axle of the driving wheels, a shaft mounted in the framework contiguous to the said axle, oppositely opposed cones mounted on the said shaft and axle, a shiftable belt to impart motion from the cone on the shaft to the cone on the axle, and increase or diminish the ratio of speed, substantially as specified. 25th. In a motor carriage the combination of the axle of the driving wheels, a shaft mounted in the framework contiguous to the said axle, oppositely opposed cones mounted on the said shaft and axle, a shiftable belt to impart motion from the cone on the shaft to the cone on the axle, and increase or diminish the ratio of speed, spur wheels mounted on the said shaft, a crank shaft, means for imparting motion to the crank shaft, a pinion slidably and loosely mounted on the crank shaft, engaging with the spur wheel of one end of the said shaft, a clutch member connected to the said pinion, a sleeve, a clutch member connected to the sleeve engaging with the clutch member of the pinion, a counter shaft, two pinions mounted on the counter shaft, one pinion engaging with the spur wheel at the opposite end of the said shaft, a second pinion mounted on the crank shaft engaging with the second pinion on the counter shaft, a clutch member connected to the said pinion, a second sleeve, a clutch member connected to the said sleeve, engaging with the clutch member of the said second pinion, a sleeve mounted on the said sleeves, a shifting sleeve mounted on the sleeves of the said clutch member, a shifting lever engaging the shifting sleeve, a link connected to the shifting lever and to a controlling lever, substantially as specified.

**No. 54,082. Steam Injector. (Injecteur à vapeur.)**

Patrick Brownley, New York, State of New York, U.S.A., 17th November, 1896; 6 years. (Filed 5th November, 1896.)

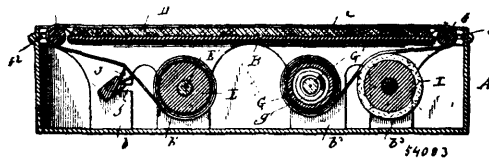
*Claim.*—1st. A double-tube injector having direct communications for the forcer and lifter, with the overflow opening, and a single steam chamber common to both said lifter and forcer, whereby steam is supplied simultaneously thereto in starting the injector, as set forth. 2nd. A double-tube injector having separate

overflows for the lifter and forcer, a cock for quickly closing the overflow of the lifter, and gradually closing that of the forcer, and



a steam chamber for supplying steam simultaneously to both the lifter and forcer, and starting the injector, whereby the forcer will also act as a lifter, as stated. 3rd. A steam injector of the character herein specified, having overflow passages for the lifter and forcer, and a cock intercepting said overflows having three ports, one of said ports allowing of the gradual closing of the overflow of the forcer after the overflow of the lifter is closed, as stated. 4th. A steam injector of the character herein specified, having overflow passages for the lifter and forcer, and a cock having a main opening or port extending transversely therethrough, and two smaller ports for the overflow from the forcer, as set forth. 5th. A steam-injector of the character herein specified, having overflow passages for the lifter and forcer, and a cock having a main opening or port extending transversely therethrough, and two opposite cut-aways forming ports for the overflow from the forcer, as set forth. 6th. The herein described steam injector having two sets of tubes forming a forcer and a lifter, a steam chamber for supplying steam to both of said sets of tubes simultaneously, an overflow passage from said lifter, and the delivery chamber of said forcer intercepting one another, a cock located at such interception and having a main port, and two additional overflow ports, and a lever for operating said cock, substantially as set forth.

**No. 54,083. Inking Pot. (Encrier.)**



William W. Hammond, assignee of William Hinman Keeler, both of Buffalo, New York, U.S.A., 17th November, 1896; 6 years. (Filed 25th September, 1896.)

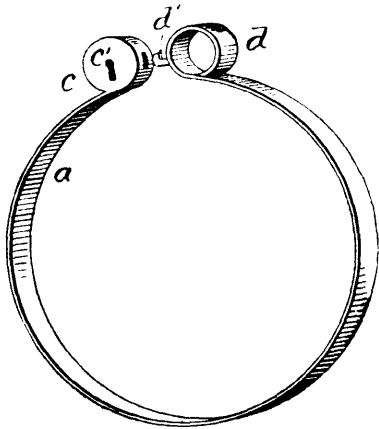
*Claim.*—1st. The combination with the enclosing case or box, of a table arranged therein, a platen secured to said table, a spring roller arranged underneath said platen, a take-up roller also arranged underneath said platen and having a shaft which projects through the walls of the case or box, and which is provided at one end with a screw thread, and a clamping nut applied to the threaded end of the roller shaft and bearing against said table, substantially as set forth. 2nd. The combination with the enclosed case or box, of a table removably arranged to said case and having supporting legs provided with open bearing, a platen arranged upon said table, a spring roller and a take-up roller supported in the open bearings of the table legs, and an ink ribbon passing over said platen and secured at its ends to the spring roller and take-up roller respectively, substantially as set forth.

**No. 54,084. Bicycle Lock, etc. (Serrure de bicyclette, etc.)**

Henry A. Rauert and Robert Swain, both of Portland, Oregon, U.S.A., 17th November, 1896; 6 years. (Filed 21st October, 1896.)

*Claim.*—1st. A combined bicycle lock and pants-guard, comprising a metallic spring curved in substantially circular form, its ends lying adjacent to each other when said spring is not under tension, one of said ends carrying a tongue and the other a spring lock, the latter being provided with an aperture to receive said tongue, said tongue and aperture being so arranged on the opposite ends of the spring that the tongue will enter the aperture when said ends are brought together, and so lock said ends together, substantially as described. 2nd. A combined bicycle lock and pants-guard, comprising a metallic spring curved in substantially circular form, its ends curved in reverse circles as shown, one of said circles enclosing a spring lock and the other carrying a tongue, said circular ends lying

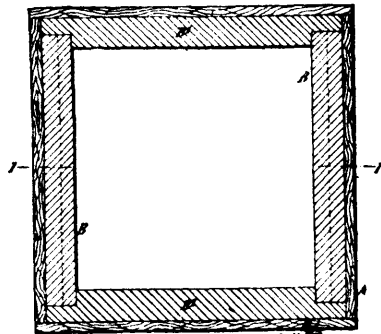
adjacent to each other when the spring is not under tension, the lock being provided with an aperture for the tongue arranged



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relatively to the tongue, so that the latter will enter the aperture when the curved ends are brought together, and so lock said ends together, substantially as described.

**No. 54,085. Box or Package for the Transport of Butter, etc.** (*Boîte ou paquet pour le transport du beurre, etc.*)



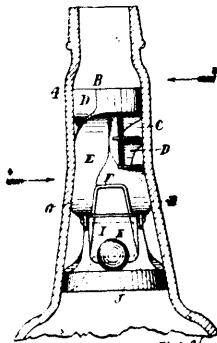
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Pontin's Patent Butter Box Company, London, England, assignee of George Pontin, Williamstown, Victoria, Australia, 17th November, 1896; 6 years. (Filed 2nd November, 1896.)

*Claim.*—1st. A box or package having a lining composed principally of asbestos shale mixed with a binding agent, substantially as and for the purpose specified. 2nd. The lining composition consisting of asbestos shale, cow-hair and wood-ash or ground bark, with or without the addition of pumice stone and lake-flour, mixed together in substantially the proportions described and for the purpose specified.

**No. 54,086. Non-Refillable Bottle.**

(*Bouteille ne pouvant être remplie.*)



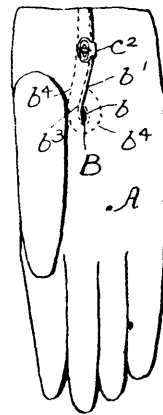
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The Eclipse Nonrefilling Bottle Company, Newark, New Jersey, assignee of Ernesto Sassenhoff, New York, State of New York, both in the U.S.A., 17th November, 1896; 6 years. (Filed 2nd November, 1896.)

*Claim.*—1st. The bottle containing the device B for preventing the refilling, which device contains the grooves C D, the chamber E

to which said grooves lead, the hood F at the lower portion of said chamber, the hinged gate or valve I below said hood and arranged to close or open the aperture L, and the ball K arranged to close the said gate or valve, substantially as set forth. 2nd. The bottle containing the device B for preventing the refilling, the latter having the aperture L at its lower portion, the automatic gate or valve to close and open said aperture, and an irregular groove leading upward from the space about said gate or valve, substantially as and for the purposes set forth. 3rd. The bottle containing the device B, the latter having the aperture L adjacent to its lower end, the hinged gate or valve adapted to close said aperture, the hood above said gate or valve, the ball adapted to close said valve, and an irregular groove extending from the upper end of said device to a point adjacent to said hood, substantially as set forth. 4th. The bottle containing the device B, the latter having the chamber M at its lower end, the transverse aperture L communicating with said chamber, the hinged gate or valve adapted to close said aperture, the base J at the front of said gate or valve, the ball on said base, the chamber or space above said gate or valve, and an irregular groove extending from the upper end of said device into said space or chamber, substantially as set forth. 5th. The bottle containing the device B having the automatically closing gate or valve, combined with the cord, wire or other flexible means for holding said gate or valve normally open to permit the first filling of the bottle, substantially as set forth.

**No. 54,087. Glove Fastener.** (*Attache de gants.*)



54087

William W. Whitaker, Gloversville, New York, U.S.A., 18th November, 1896; 6 years. (Filed 29th October, 1896.)

*Claim.*—1st. A glove fastener, having the member C formed of the inner and outer plates  $c, c^1$  stamped from a single sheet of metal and each having an elongated buttonhole formed therein, and the flanged eyelet  $c^2$  extending through said buttonholes in the plates  $c, c^1$ , and the member D having a rotatable button with the elongated head, adapted to pass through the buttonholes in the member C when lying in line therewith, and the neck adapted to engage with the sides of the buttonhole when the elongated head is turned transversely thereto, substantially as set forth. 2nd. A glove fastener, having the members C and D, the member C being formed of a single plate of sheet metal having the parts  $c, c^1$  lying on opposite sides of the glove, and the neck  $c^2$  extending across the adjacent edge of the glove, said part  $c, c^1$  being provided with elongated apertures, and the riveted eyelet  $c^2$  extending through such apertures and binding the parts  $c, c^1$  together, and the part D having the base formed of the plates  $d, d^1$  integral together, and the button having the pivot stem  $d^2$ , the elongated head, and the intermediate neck  $d^3$  adapted to contact with the sides of the buttonhole when the elongated head lies transverse to such hole, substantially as set forth. 3rd. The herein-described glove fastener having in combination the members C and D, the member C being a metallic buttonhole with a plate inside and a plate outside the glove formed from the same blank and integral with the inside plate, and a reinforcing eyelet extending through and connecting the said plates, and the member D having a rotatable button adapted to pass through the said metallic buttonhole, substantially as set forth.

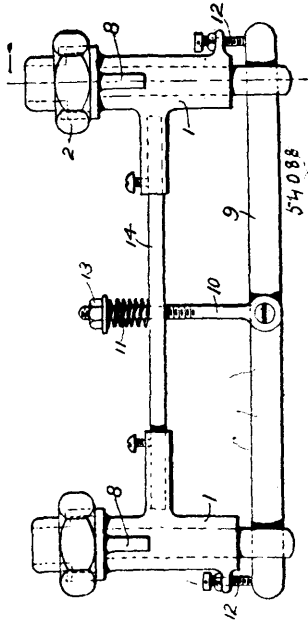
**No. 54,088. Automatic Drip-Cock for Steam Engines.**

(*Robinet à gouttes automatique pour machines à vapeur*)

John Albert Wright, Borough of Wilkesburg, Pennsylvania, U.S.A., 18th November, 1896; 6 years. (Filed 29th October, 1896.)

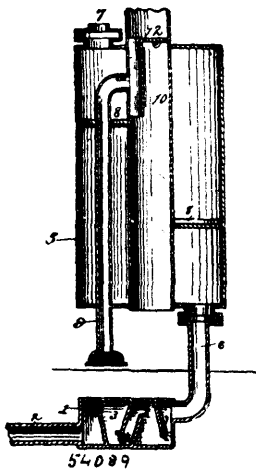
*Claim.*—1st. In a drip device for steam engines, the combination with the drip-cocks having cylindrical bores, the valve chambers at the upper ends, the valve seats and the outlets just below the valve seats, of the vertically reciprocating valve rods working in said bores provided with valves at their upper ends and with slots at their lower ends, the lever passing through said slots, the hanger to which said lever is pivoted at its centre, and the connecting bar to which

the lever is secured, substantially as described. 2nd. In a drip device for steam engines, the combination with the drip-cocks having



cylindrical bores and valve chambers and valve seats at the upper ends thereof, and an outlet below the valve seats, of the vertically-reciprocating valve rods, the slots in their lower ends, the rod connecting said cocks, the hanger passing through said slots, the lever pivoted to said hanger and its ends passing through the slots in the lower ends of the valve rods, the coiled spring bearing against the nut and connecting rod and the set screws to adjust the stroke of the valves, substantially as described. 3rd. In a drip device for engines, the combination with the drip-cocks having cylindrical bores and a valve chamber and valve seat at the upper ends thereof, and an outlet below the valve seats, and the vertically reciprocating valve rods provided with valves, of the rod connecting said cocks, and with rectangular slots in their lower ends, the rod connecting the cocks, the vertically adjustable hanger passing through a hole in the same, the coiled spring tending to raise the same by pressing a nut on its end, the lever pivoted to lower end of said hanger, its ends passing through the slots in the valve rods, and the set screws at lower end of cocks for regulating valve stroke, all substantially as and for the purpose described.

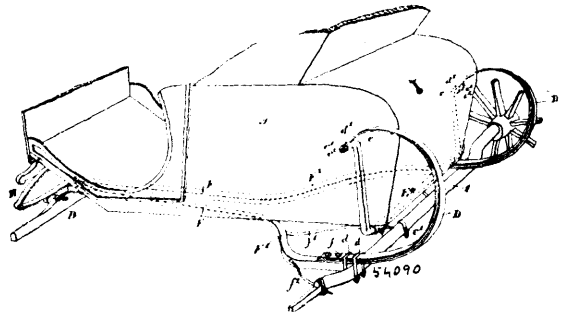
**No. 54,089. Stove-Pipe Ventilator.**  
(Ventilateur de tuyaux de poêles.)



Hezekiah Howe, Olean, New York, U.S.A., 18th November, 1896; 6 years. (Filed 30th October, 1896.)

*Claim.*—An air equalizer for stoves, heaters, or heating drums, comprising the box formed with supply and outlet openings at the ends, and the alternately arranged inclined partitions extending partly across the box and provided at their free ends with strips at right angles thereto, substantially as described.

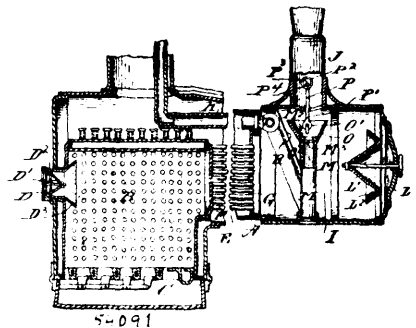
**No. 54,090. Carriage Gear.** (Train de voiture.)



William James Brown, Toronto, Ontario, Canada, 18th November, 1896; 6 years. (Filed 3rd November, 1896.)

*Claim.*—1st. The combination with the body, of the C-springs having the lower end secured in position above the rear axle, and a U-shaped axial support extending underneath the body, and means for flexibly connecting the upper end of the axial support to the upper end of the C-springs, as and for the purpose specified. 2nd. The combination with the body, of the C-springs having the lower end secured in position above the rear axle and eyes formed at the upper end of the C-springs, and a U-shaped axial support extending underneath the body, stems formed at the upper end of the axial support and extending through the eyes at the upper end of the C-spring, as and for the purpose specified. 3rd. The combination with the body, of the C-springs having the lower end secured in position above the rear axle, of a U-shaped axial support, the journal brackets for journaling the base of such support, which extends underneath the body, and means for flexibly connecting the upper end of the axial support to the upper end of the C-spring, as and for the purpose specified. 4th. In combination the body, the C-springs secured at the bottom above the rear axle and extending forwardly of the same, the U-shaped axle support suitably connected to the top of the C-springs, the double reaches secured to the forwardly extending portion of the C-springs at the rear, the fifth wheel having the top portion secured to the front portion of the double reach and the spring supporting the front of the body upon the fifth wheel, as and for the purpose specified.

**No. 54,091. Locomotive.** (Locomotive.)



Charles A. Couch, Boston, Massachusetts, U.S.A., 18th November, 1896; 6 years. (Filed 5th November, 1896.)

*Claim.*—1st. In a locomotive, a hollow heat deflector located at the top of the exhaust flue and interposed and supported between the boiler tubes and the smoke-stack and having its sides inclined inwardly and downwardly, and means for varying the position of the said deflector with relation to the bottom of the smoke-stack. 2nd. In a locomotive, in combination with an exhaust flue, the hollow, inverted, conical-shaped heat deflector located at the top of the said exhaust flue and interposed and supported between the boiler tubes and the smoke-stack, and means for varying the position of the said deflector with relation to the bottom of the smoke-stack. 3rd. In a locomotive, in combination with an exhaust flue, the hollow, inverted, conical-shaped heat deflector located at the top of the said exhaust flue and interposed and supported between the boiler tubes and the smoke-stack, and having its upper diameter greater than the lower diameter of the smoke-stack, and means for varying the position of the said deflector with relation to the bottom of the smoke-stack. 4th. In a locomotive, a heat deflector interposed and supported between the boiler tubes and smoke-stack, and having its upper diameter greater than the lower diameter of the smoke-stack, and means for varying the position of said heat deflection with relation to the bottom of the smoke-stack. 5th. In a locomotive, a hollow heat deflector located at the top of the exhaust flue and interposed and supported between the boiler tubes and the smoke-stack, and having its upper diameter greater than the lower diameter of the smoke-stack, and means for varying the position of said deflector with relation to the bottom of the smoke-stack.

**No. 54,092. Knife for Reapers, etc.**

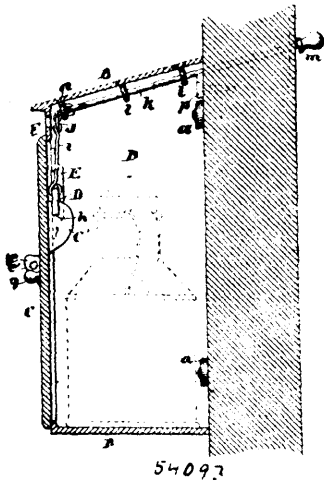
(*Couteau pour faucheuses, etc.*)



William Brenton, St. Germans, England, 18th November, 1896; 6 years. (Filed 5th November, 1896.)

*Claim.*—1st. In a knife for mowing or reaping machines, sections having a flange or flanges designed to engage with the bar to which the said sections are attached, substantially as described. 2nd. In a knife or sickle for mowing or reaping machines, sections having flanges designed to enter a groove in the bar to which the sections are attached, substantially as described. 3rd. In a knife or sickle for mowing or reaping machines, sections recessed to form shoulders fitting against the front of the knife-bar with or without flanges upon the rear edges, substantially as described.

**No. 54,093. Milk Safe.** (*Garde-lait.*)



Frank Steele Twombly, Melrose, Massachusetts, U.S.A., 18th November, 1896; 6 years. (Filed 6th November, 1896.)

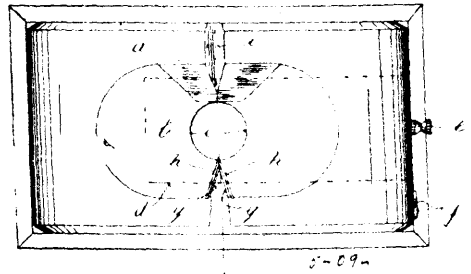
*Claim.*—1st. A safe for milk cans comprising the following elements, viz.; a receptacle or casing secured to exterior surface of a building and provided with a hinged outwardly opening door, means for holding said door closed by friction at certain times without locking the same, a catch upon the inside of said door, a latch to engage said catch and located within said casing, means connected to said latch and extending through the wall of the building, whereby said latch may be raised or lowered by persons within the building. 2nd. A safe for milk cans, comprising a metal casing secured to the outer wall of a building, and having an opening through its wall, a door hinged to one side of said opening, a hook or hooks on the inner side of said door constructed and arranged to engage the inner surface of the wall of said casing at the hinge side of said opening, a device upon the outside of said casing for holding the door shut by friction without locking the same, a locking device upon the inside of said casing and inaccessible to parties outside of the building when locked by key or otherwise, means connecting said locking device with the interior of the building and adapted to be operated therefrom, and a friction device for maintaining the locking device in unlocked position until moved by force. 3rd. In a safe for milk cans, the combination of a receptacle or casing to be secured to the outside of a building, and provided with a door opening in its wall, a door hinged to one side of said opening, a device upon the exterior of said receptacle for holding said door closed by friction when not locked, a locking device upon the inside of said casing and inaccessible to parties outside of the building by key or otherwise when locked, a rod mounted in suitable bearings and extending from the interior of the building to the interior of said receptacle, and a flexible connection between said rod and said locking device whereby the locking latch may be raised by closing the door and fall by gravity into engagement with the door catch without moving the operating rod.

**No. 54,094. Crayon Sharpener.** (*Taille-crayon.*)

James Thomas Price, Rhoudda, Wales, 18th November, 1896; 6 years. (Filed 5th October, 1896.)

*Claim.*—In sharpeners of the class herein described in combination, a base piece having a conical well in same, two sharpening

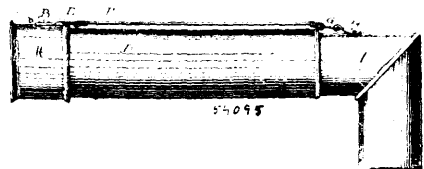
knives set at an angle, a sliding drawer or receptacle under said well, a pivoted catch piece for securing said drawer in position, a



groove or slot for the reception of the chalk or crayon when not in use, substantially as described.

**No. 54,095. Stove-Pipe Fastener.**

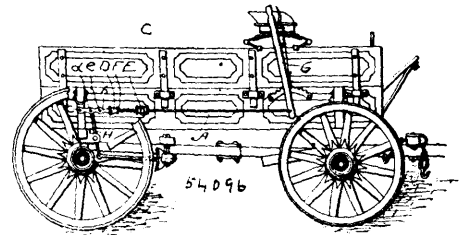
(*Attache de tuyau de poêle.*)



John C. Stone, Harrietta, Michigan, U.S.A., 18th November, 1896; 6 years. (Filed 23rd October, 1896.)

*Claim.*—A thimble adapted to be inserted in a hole in the chimney and provided with a strip extending in the direction of the length thereof, one end being bent at a right angle and passed through an opening in the thimble to serve as a stop, and the other end in the form of a hook, the stove pipe inserted into said thimble and engaging said stop, a ring engaging the hook of said strip, a wire fast at one end of said ring, an elbow, a clamp secured thereto, and a ring held by said clamp and having the other end of said wire connected therewith, said wire extending parallel with the stove pipe, and all constructed, arranged and operating substantially as herein shown and described.

**No. 54,096. Brake-Rod.** (*Tige de frein.*)

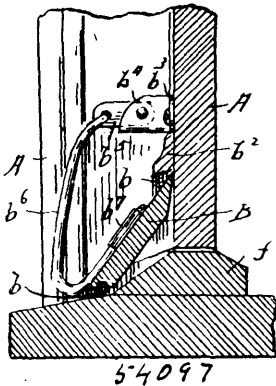


John Wesley Cook and Charles Scott, both of Woodburn, Oregon, U.S.A., 18th November, 1896; 6 years. (Filed 29th October, 1896.)

*Claim.*—1st. An attachment for brake-rods, comprising two plates or jaws, one of which is provided with studs and the other with apertures to receive the studs, means for locking the plates or jaws together, and a coupling for connecting the plates or jaws to a brake-rod, substantially as described. 2nd. An attachment for brake-rods, comprising two plates or jaws, one of which is provided with studs and the other with apertures to receive the studs, means for locking both ends of the plates together, and a coupling nut on the shank of one of the plates or jaws, substantially as described. 3rd. An attachment for brake-rods, comprising two plates or jaws, each provided with a shank, one of the plates or jaws being provided with studs and the other with apertures to receive the studs, and a sleeve on said shank for locking the parts together, substantially as described. 4th. An attachment for brake-rods, comprising a plate provided with a shank and with studs, one of which has a hook-shaped end, a second plate provided with apertures to receive the said studs and with a shank resting upon the shank of the first-named plate, and a sleeve on the said shanks, substantially as described. 5th. An attachment for brake-rods, comprising a plate provided with a shank and studs, one of which has a hook-shaped end, a second plate provided with apertures to receive the studs and with a shank resting upon the shank of the first-named plate, and a sliding and spring-pressed sleeve on the shanks, substantially as described. 6th. An attachment for brake-rods, a cylindrical shank having a cut-out portion and with studs, comprising a plate provided

with studs, one of which has a hook at its end, a second plate provided with apertures and a half-round shank fitting in the cut-out portion of the first-named shank, and a spring-pressed sleeve on the said shanks, substantially as described. 7th. An attachment for brake-rods, comprising a plate provided with a cylindrical shank having a cut-out portion and with studs, one of which is provided with a hook at its end, a second plate provided with apertures and a half-round shank fitting in the cut out portion of the first-named shank, a sleeve on the shanks, a coupling-nut on the shank of the first-named plate, and a coiled spring on the said shank between the sleeve and nut, substantially as described. 8th. The combination with a brake-rod, of an attachment adjustably secured to the rod to form an extension therefor, said attachment being provided with two plates locked together, one plate being provided with studs and the other with apertures to receive the studs, substantially as described.

**No. 54,097. Weather Strip. (Bourrelet de porte.)**

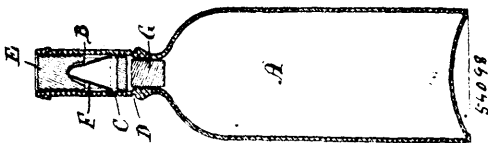


Leon Depp and Moses Schlatter, both of Inman, Kansas, U.S.A., 18th November, 1896; 6 years. (Filed 2nd November, 1896.)

*Claim.*—1st. The combination with a door, of a weather strip hinged thereto, a link pivoted on said door and a spring connecting said link and said strip whereby the latter may be sprung into either a raised or lowered position and remain so under spring pressure, substantially as described. 2nd. The combination with a door, of a weather strip hinged thereto, and provided at its outer edge with a rubber or like packing-strip, a link hinged to said door, and a bowed spring connecting said weather strip and link, the construction and operation being such that the link is thrown to the rear of its pivotal point when the weather strip is elevated and *vice versa* when it is depressed and held so by the spring thus holding the weather strip either up or down under spring pressure, substantially as described. 3rd. The combination with a door, of weather strip hinged thereto, a link pivoted on said door, a spring connecting said link and said strip whereby the latter may be sprung into either a raised or lowered position and remain so under spring pressure, a door sill for forcing said weather strip upward, and door stiles having under-cut portions adapted to force said strips down, substantially as described. 4th. The combination with a door of a weather strip hinged thereto, a link pivoted on said door, a spring connecting said link and said strip whereby the latter may be sprung into either a raised or lowered position and remain so under spring pressure, and means for automatically raising and lowering said strip as the door opens or closes, substantially as described.

**No. 54,098. Non-Refillable Bottle.**

(Appareil pour empêcher le remplissage des bouteilles.)

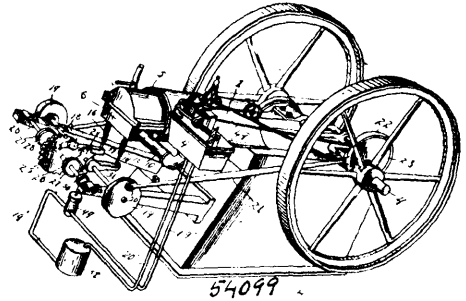


Archie Randolph Hay, Lower Woodstock, and Guy Stanley Moore, assignees of Elisha Moore, both of Meductic, all of New Brunswick, Canada, 18th November, 1896; 6 years. (Filed 22nd August, 1896.)

*Claim.*—1st. The combination with a bottle having a neck provided with an internal circumferential groove, of the cylinder A, having a diametrical slot or aperture H, between the ends, and a bent wire V or U-shaped spring F, inserted in the slot, said spring provided with outwardly turned ends engaging said groove, as set forth. 2nd. In a bottle stopper, the combination of the cylinder E, having a diametrical slot H between the ends and an inverted V or U-shaped bent wire spring F inserted in said slot and having the ends outwardly turned, as and for the purpose set forth.

**No. 54,099. Gas Engine and Governor.**

(Machine à gaz et gouverneur.)



George W. Lamos and George W. Yerington, both of Fort Madison, Iowa, U.S.A., 18th November, 1896; 6 years. (Filed 23rd September, 1896.)

*Claim.*—1st. In a gas-engine, the combination with the cylinder carrying at one end a valve-box having a valve-opening, of a spring-depressed valve-stem projecting below the valve-box and having a valve working over said valve-opening, a suitable rotated counter-shaft arranged below the valve-box, an oscillating bell-crank lever loosely mounted on said counter-shaft and having one of its extremities working under and against the lower extremity of said valve-stem, a valve-controlling shaft geared with the counter-shaft and having a slower rotation than the same, an eccentric fitted on the valve-controlling shaft, an eccentric-strap encircling said eccentric and provided with a short strap-arm pivotally connected at one extremity of the oscillating bell-crank lever, substantially as set forth. 2nd. A vaporizer for gas-engines consisting of a vaporizer-box having a section discharge-pipe connection at its bottom, an air-supply tube projecting inwardly within the box and communicating with the outer air, a vertically movable valve fitted within the upper end of said tube, an adjustable stop arranged above said valve, an inwardly extending oil-jet pipe fitted at one end to one side of the box and provided at its opposite end with a cap having a jet-orifice, an oil-feed pipe connection with said jet-pipe, a rounded spray-bulb arranged in the box directly beyond and in line with the jet-pipe, and an oil drain or return pipe connection with the bottom of said box, substantially as set forth. 3rd. In a gas-engine, the combination with the cylinder carrying at one end a valve-box having a valve-opening, of a spring-depressed valve-stem projecting below the valve-box and having a valve working over said valve-opening, a suitably rotated counter-shaft arranged below the valve-box, the valve-controlling shaft geared with said counter-shaft, an eccentric fitted on the valve-controlling shaft, and a pivotally supported lever having an operative connection with said eccentric and having one of its extremities working under and against the lower extremity of said valve-stem, substantially as set forth. 4th. In a gas-engine governor, the combination with the main suction supply-pipe of the engine, of a vaporizer-box having an air inlet and separate oil feed and drain pipe connections therewith, an upright pipe extension arranged within the vaporizer-box and communicating with said main suction supply-pipe, said upright pipe extension having a valve-seat at its upper end within the box, a vertically movable valve-stem working through the top of the vaporizer-box and carrying within the same a valve-disc working over and onto the said pipe extension, adjusting mechanism for said valve-stem, and a partition-plate fitted within the vaporizer-box at one side of said pipe extension and provided at its lower edge with a gauze covered circulating opening, substantially as set forth. 5th. In a gas-engine governor, the combination with the main suction supply-pipe of the engine, having a valve-seat, of a vertically movable valve-stem carrying a valve-disc working over and onto the valve-seat of said suction supply-pipe, a suitably supported shaft, an adjustable spring coiled on said shaft, a valve-adjusting lever loosely mounted on said shaft and connected at one end with said valve-stem, said valve-adjusting lever being engaged and normally elevated by said spring, and a suitably operated governor supported above the valve-adjusting lever and having a vertically movable stem working above and onto the upper end of said valve-stem, substantially as set forth. 6th. In a gas-engine governor, the combination with the suction supply-pipe of the engine, having a valve-seat, of a vertically movable valve-stem carrying a valve-disc working over said seat, a normally spring-elevated valve-adjusting lever supported at one side of the valve-stem and loosely connected therewith, and a suitably operated governor supported above the valve-adjusting lever and having a vertically movable stem working above and onto the upper end of said valve-stem, substantially as set forth. 7th. In a gas-engine governor, the combination of the main suction supply-pipe of the engine, having a valve-seat, a vertically movable valve-stem carrying a valve-disc working over said seat, a suitably supported shaft, a valve-lever loosely mounted at one end on said shaft and loosely connected at its other end with said valve-stem, an adjustable spring coiled on said shaft and having hook extremities, one of which engages with said valve-lever, a double handled adjusting-lever, adjustably fitted on said shaft and engaging with the other hook extremity of said spring, and a

suitable operated governor supported above the valve-lever and having a vertically movable stem working above and onto the upper end of the valve-stem, substantially as set forth. 8th. In a gas-engine governor, the combination of a suction supply-pipe of a gas-engine, having a valve-seat, a movable valve-stem carrying a valve-disc working over said seat, a horizontal rock-shaft journaled in suitable bearings and provided at one end with a depending arm-extension carrying an idler pulley, a normally spring-elevated valve-adjusting lever loosely mounted at one end on said rock-shaft and loosely connected at its other end with said valve-stem, a tappet collar secured fast on the rock-shaft at one side of the valve-adjusting lever and having a lug, normally lying above and adapted to work onto said valve-adjusting lever and having a vertically movable stem working above and onto the upper end of the valve-stem, a counter-shaft geared with said governor and carrying a belt pulley, and a governor belt passing over said belt pulley and driven from one of the shafts of the gas-engine, said governor belt receiving there against the weight of said idler pulley, substantially as set forth.

**No. 54,100. Cam Cylinder for Knitting Machines.**  
(Cylindre à came pour machines à tricoter.)



John Bentley, Brooklyn, assignee of Joseph J. Adgate, Liberty, both in New York, U.S.A., 18th November, 1896; 6 years. (Filed 24th September, 1896.)

Claim.—1st. A cam cylinder for knitting machines, consisting of the cylinder A, an upper and lower series of cam plates, and intermediate adjustable cam plates, whereby the course of the cam race may be changed, substantially as and for the purposes set forth. 2nd. The combination, with the cam cylinder A, of the lower series of cam plates D, D, D, the upper series of cam plates B, B, B, a portion of said cam plates B, B, being made in two parts. C and E, substantially as and for the purposes set forth. 3rd. The combination, with the cam cylinder A, of the cam plates D, D, D, B, B, B, E, E, E, and C, C, C, substantially as and for the purposes set forth. 4th. A cam cylinder, formed of a circular ring, provided with an upper and lower series of triangular cams forming a knitting groove, and means for detachably securing them in place, said cams being uniformly interchangeable, whereby cams of one series may be raised or lowered between cams of the other series, substantially as described.

**No 54,101. Radiator. (Radiateur.)**

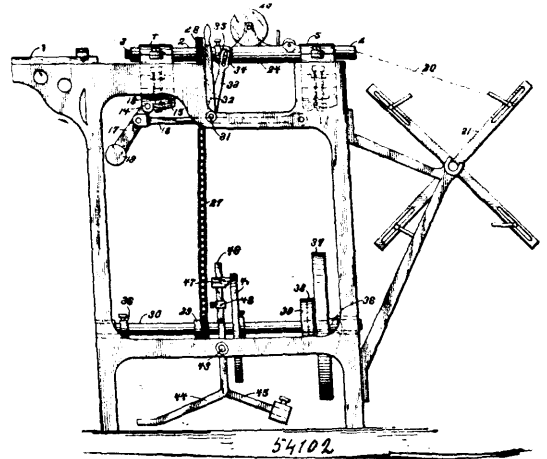


John Thomas Jackson, Sam Jackson, St. Catharines, James Albert Keys and Fergus James Travers, both of Toronto, all of Ontario, Canada, 18th November, 1896; 6 years. (Filed 16th October, 1896.)

Claim.—1st. In a radiator, a diaphragm B cast integral therewith being part of the lower end of radiator loops forming a partition by which means a positive and constant flow or circulation is attained, said diaphragm or partition B having a small aperture at the bottom thereof by which means the radiator is drained, substantially as set forth. 2nd. In a radiator, the construction of a tubular passage along the top of loop of the radiator by which stagnant air can be released or drawn off substantially as set forth. 3rd. The combination with a radiator, a flange E having matched

joint faces surrounding inlet A, and outlet D, said flange E having notches K in its outer edge I, the back faces of said flange E being inclined throughout forming the pitch of a screw thread, substantially as set forth. 4th. The combination with a radiator, a flange E having matched joint faces surrounding inlet A, and outlet D, forming grooves O, said flange E having notches K in its outer edge I, providing a passage for the inward projecting lugs T upon clamp nut F, said lugs T having inward faces inclined corresponding with the inclined faces of flange E, substantially for the purpose set forth.

**No. 54,102. Wire and Slat Weaving Machine.**  
(Machine à tisser le fil de fer.)

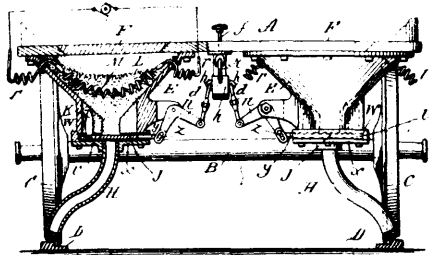


Orlando F. Matteson and Charles H. Hubbell, both of Davenport, Iowa, U.S.A., 18th November, 1896; 6 years. (Filed 2nd November, 1896.)

Claim.—1st. In a wire and slat weaving machine, the combination of a frame, a twisting-tube or tubes, a drive-shaft, a two-part clutch thereon, a disc on said shaft, said disc being provided on one of its faces with a spiral groove, a movable arm supported adjacent to said spiral groove and provided with an adjustable stop, a movable dog on said arm adapted to engage said spiral groove, and means for normally pressing the disc and dog together, as and for the purposes herein set forth. 2nd. In a wire twisting machine, the combination of a frame, a twisting-tube or tubes, a drive-shaft connected thereto, a drive-wheel and two-part clutch on the shaft, a spirally-grooved disc on the shaft, a rock-shaft carrying an upright arm adjacent to said spiral groove, an adjustable stop on said arm, a slidable dog on said arm adapted to engage said spiral groove, means for pressing said arm and dog toward the disc, and means for swinging said arm and dog away from the disc, substantially as described. 3rd. In a wire and slat weaving machine, the combination of a frame, a series of twisting-tubes, means for supporting the main wires, said main wires being adapted to pass into the rear ends of the tubes, means for driving the tubes, a sleeve 24 mounted rigidly on each tube, a reel or spool for the binding-wire carried by each tube, and a pulley journaled at the opening in the twisting-tube, substantially as described. 4th. In a wire and slat weaving machine, the combination of a frame, a series of twisting-tubes mounted slidably in said frame, a loose collar 34 on each tube, a series of upright arms engaging said collars, and a rock-shaft carrying said arms and an operating-lever, whereby the tubes may be shifted endwise simultaneously, substantially as described. 5th. In a wire and slat weaving machine, the combination of a frame, a series of twisting-tubes and means for rotating them, a pair of bearings 4 and 5 supporting each tube, a transverse rail supporting the front bearings and a similar rail supporting the rear bearings, the bearings being slidable on the rail, and means connecting each set of bearings so that they shall slide together, said means being adapted to simultaneously lock the two bearings of each set in their adjusted position, substantially as described. 6th. In a wire and slat weaving machine, the combination of a frame, a series of longitudinal twisting-tubes and means for rotating them, a set of bearings for each tube, transverse rails supporting the front and rear bearings, a bolt depending from each bearing, a friction block and movable plate carried by each bolt, an eccentric cam journaled between the plate and block, and a rod connecting each set of eccentric cams, as and for the purposes set forth. 7th. In a wire and slat weaving machine, the combination of a frame, a series of twisting-tubes and means for rotating them, bearings for the tubes, slotted rails supporting said bearings, a bolt or pin depending from each bearing, a friction-block on each bolt, a swinging plate provided with a depending arm, and a rod connecting each pair of said depending arms, substantially as described.

**No. 54,103. Device for Sanding Car Tracks.**

(Appareil à soupoudrer le sable sur les rails.)

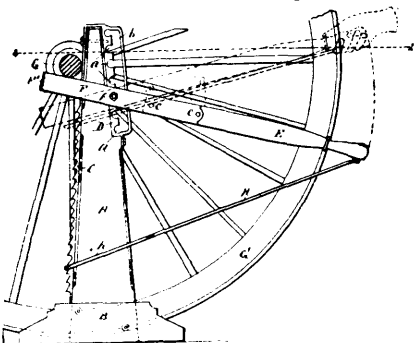


54103

James T. Porter and John E. Porter, both of Holyoke, Massachusetts, U.S.A., 18th November, 1896; 6 years. (Filed 5th November, 1896.)

*Claim.*—1st. In track-sanding devices for cars, a hopper E, the sand-delivery pipe H, secured to said hopper, the gate J, between said hopper and tube having the sand-cutting knives K, thereon, and mechanism for operating said gates from the platform of the car, combined and operating substantially as set forth. 2nd. In track-sanding devices for cars, a hopper E, the sand-delivery pipes H, secured to said hopper, the gate J, between said hopper and tube having the sand-cutting knives K, thereon, combined with the elbow levers n, connected to said gates, and a foot-operated lever N, connected with said elbow levers, substantially as set forth. 3rd. In track-sanding devices for cars, a sand-containing hopper, a sand-delivering pipe connected to said hopper, and a gate located between said hopper and tube, combined with mechanism for operating said gate from the platform of the car, an electrical resistance coil supported in the sand-containing part of said hopper, a suitable source of electricity on said car, and conductors uniting said electrical source and said resistance coil, substantially as set forth.

**No. 54,104. Wagon Jack.** (Chèvre de wagon.)



54104

John Eustace and Charles E. Naylor, both of Essex, Ontario, Canada, 18th November, 1896; 6 years. (Filed 26th October, 1896.)

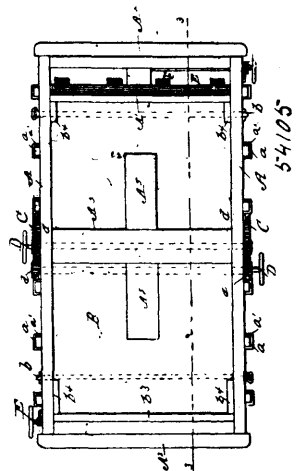
*Claim.*—1st. In a wagon jack, the combination with the vertical standard, the rack bar mounted thereon, the lever pivoted to said standard, the locking rod pivoted to the free end of said lever and having a hook or looped end adapted to engage said rack bar. 2nd. In a wagon jack, the combination of the standard, the rack mounted thereon, the plate on the upper end of said standard having a vertical slot and a series of steps or bearing notches communicating therewith, the operating lever pivoted to said plate, the fulcrum bolt of said lever passing through the slot of said plate and adapted to engage in said bearing notches, and the locking rod pivoted to the free end of said lever, and detachably engaging said rack. 3rd. In a wagon jack, the combination with the standard, the fulcrum plate mounted thereon, said plate having a vertical slot and a series of bearing notches communicating therewith, the lever provided with an open loop which embraces said standard and said bearing plate, the fulcrum bolt of said lever passing through the slot in said bearing plate and adapted to engage in the bearing notches communicating with said slot. 4th. In a wagon jack, the combination with the standard, the rack bar mounted thereon, the lever pivoted to said standard, the locking rod pivoted to the outer end of said lever at one end and having at the other end a loop which rely embraces said standard and detachably engages the teeth of said rack bar.

**No. 54,105. Dumping Car.** (Char à bascule.)

Willard F. Blake and D. B. Wineland & Company, all of Martinsburg, Pennsylvania, U.S.A., 18th November, 1896; 6 years. (Filed 2nd November, 1896.)

*Claim.*—1st. In a dumping car provided with tilting bottom sections, of hangers on each side of the car presenting horizontal rack bars,

transverse shafts D having pinions at their ends which mesh or engage with the rack bars, substantially as shown, whereby said shafts can

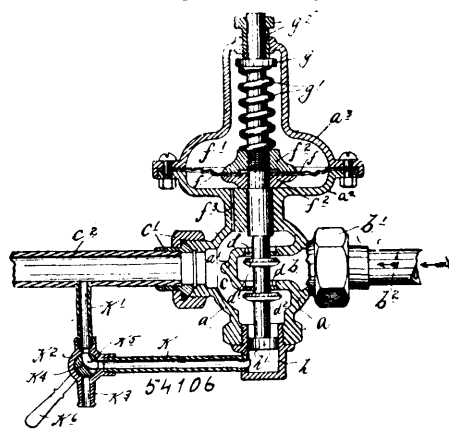


54105

be moved under the inner ends of the bottom sections by turning said shaft at one end. 2nd. In a dumping car, the combination of the frame made up of longitudinal side beams A A, central longitudinal beam A', bottom sections B supported on said rods or bars and cut away centrally at their inner ends, together with transverse shafts D having pinions, hangers attached to the car frame and presenting rack teeth with which said pinions mesh, and transverse shaft E connected to the rear ends of the bottom sections by chains or flexible connections, the parts being constructed and organized substantially as shown and for the purpose set forth.

**No. 54,106. Fluid-pressure Regulator.**

(Régulateur de pression à air.)



The General Compressed Air Company, New York, assignee of Robert Hardie, Rome, both in New York State, U.S.A., 19th November, 1896; 6 years. (Filed 3rd October, 1896.)

*Claim.*—1st. In an automatic fluid-pressure regulator, the combination with the high and low pressure chambers, reducing valve and diaphragm, of a supplemental cylinder fitted with a piston operative on said valve, with one end of the said cylinder always open to the low-pressure fluid and the other end thereof provided with valve connections operative to open the same either to the said low-pressure fluid or to the atmosphere at will, substantially as and for the purposes set forth. 2nd. In a fluid-pressure regulator, the combination with the high and low pressure chambers, the reducing valve and the diaphragm, of the casing-cap cylinder h fitted with the piston h<sup>1</sup> fixed to the lower end of the reducing-valve stem, with the upper end of the said cylinder open to the low-pressure chamber, and the valved pipe connections from the lower end of the said cylinder, comprising the pipe sections k, k<sup>1</sup> united by the hand-valve casing k<sup>2</sup>, having the outlet k<sup>3</sup> to the atmosphere, and the hand valve k<sup>4</sup> in said casing k<sup>2</sup>, provided with the two-way passage k<sup>5</sup>, all arranged and operating substantially as and for the purpose set forth.

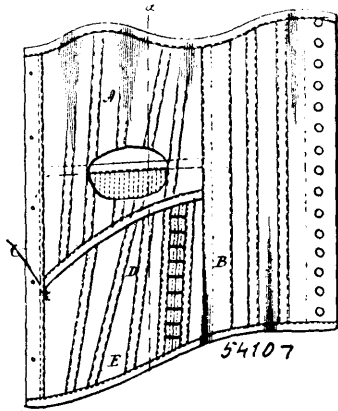
**No. 54,107. Corset.** (Corset.)

Thomas Smith Gilbert, New Haven, Connecticut, U.S.A., 19th November, 1896; 6 years. (Filed 2nd November, 1896.)

*Claim.*—1st. The herein described corset having the lower portion of its front cut away, an auxiliary section secured at its ends to the corset, and having its upper edge extended upward under the said

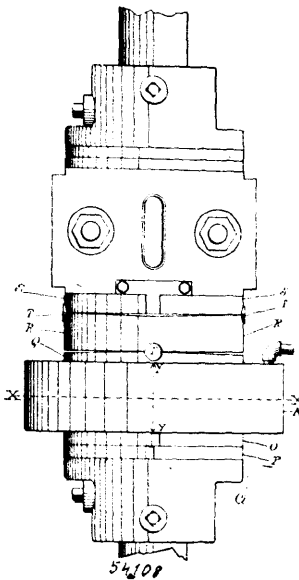


front portion, and a ligament connecting the upper edge of the said auxiliary section and the lower edge of the said cut-away front, sub-



stantially as described. 2nd. The herein-described corset, having the lower portion of its front cut away, an auxiliary section located in the said opening attached at its ends to the corset, and having its upper edge extended upward under the front of the same, and a corded or reinforced ligament connecting the lower edge of the front of the corset with the underlapped upper edge of the auxiliary section, substantially as described.

**No. 54,108. Thrust Bearing. (Butée.)**



Mikle Schmatz, Bay City, Michigan, U.S.A., 19th November, 1896; 6 years. (Filed 18th August, 1896.)

*Claim.*—1st. In a thrust bearing, the rim, and the hub, provided with boxes or bearings, and the rollers journaled therein and combined with the discs which are applied to the opposite sides of the rollers, and secured in position by suitable means, substantially as shown. 2nd. In thrust bearings, the rim, the hub, suitable boxes thereon, the rollers combined with the discs having oil spaces formed therein, the collar and nut applied to one disc and a universal collar applied to the other, and a fastening for keeping the collar and the disc in place, substantially as described. 3rd. In a thrust bearing, the universal collar consisting of the hub Q, the ring R, with its face slightly bevelled, the ring S, and the fastenings T, substantially as described.

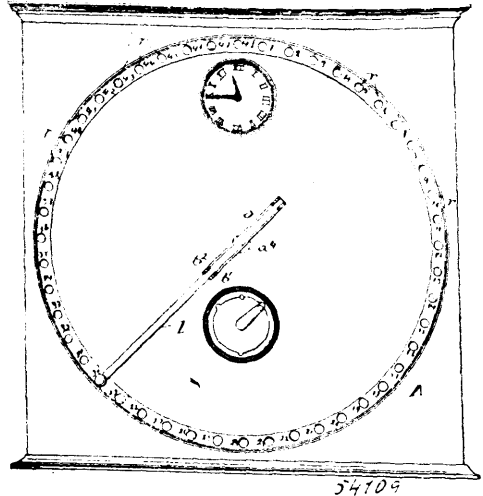
**No. 54,109. Time Recorder.**

(Appareil à enregistrer le temps.)

John Dry, Syracuse, New York, U.S.A., 19th November, 1896; 6 years. (Filed 2nd September, 1896.)

*Claim.*—1st. In a time-recorder, the combination of a time printing wheel, a revolvable impression roller, means for turning said roller, means for moving said roller toward the printing wheel, and an ink ribbon intermediate of said impression roller and printing wheel, and carried, and operated, substantially as described, for the purpose set forth. 2nd. In a time recorder, an impression roller, a

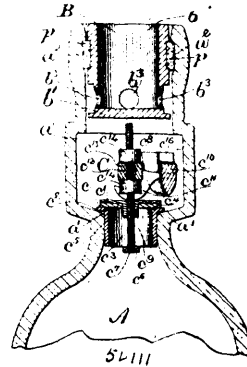
time printing wheel, inking mechanism, a rock-shaft adapted to move said impression roller toward said printing wheel, a lever



adapted to revolve said impression roller, a plunger actuating said rock-shaft and operated by said lever, as described, and for the purpose set forth. 3rd. In a time-recorder, an impression roller mounted on a shaft mounted on props, carried by and loosely connected to cranks of a horizontal crank-shaft, a time printing wheel, inking mechanism, a plunger, a lever for turning the shaft of the impression roller and actuating said plunger, and a rock-shaft operating said crank-shaft and operated by said plunger, substantially as and for the purpose set forth. 4th. In a time-recorder, a time printing wheel and inking mechanism, an impression roller mounted on a horizontal shaft carried on vertically movable supports, a horizontal shaft in line with and in close proximity to said before mentioned shaft, disks on the adjacent ends of said shaft, and having lugs on the adjacent faces thereof, said lugs being arranged on one disc in a line at right angles to that of the lugs on the other disc, and an intermediate disc interposed between the aforesaid discs and provided with slots at right angles to each other, said slots receiving the aforesaid lugs in the manner set forth. 5th. In a time-recorder, the combination of a time wheel, an impression roller, means for turning said roller, an ink-ribbon, spools carrying said ribbon, ratchet-wheels attached to the shafts of said spools, links pivoted to said shafts, pawls adapted to engage said ratchet-wheels, an operative connection between said pawls and links, rock-arms, an operative connection between said links and rock-arms, means for actuating said rock-arms, a rod connecting said two pawls to each other, means adapted to be actuated by said ink-ribbon for shifting said rod during the travel of the ribbon, for the purpose set forth. 6th. In a time-recorder, the combination with the frame, of the hollow shaft  $a^1$ , rotatably mounted in said frame, arms  $b, b$ , formed on one end of said hollow shaft, a collar F mounted loosely upon said hollow shaft, lever I fulcrumed to one of said arms, a plunger  $g$  located in said hollow shaft and adapted to be borne upon by said lever, the shaft  $a^2$  mounted on vertically movable supports and in line with said hollow shaft  $a^1$ , means for operatively connecting said collar F and shaft  $a^2$ , means for operatively connecting said collar F and shaft  $a^2$ , and means consisting of rock shaft  $e$ , operatively connected to said collar and imparting a vertical movement to said supports, discs 1 and 3 on the adjacent ends of said shafts, lugs  $d, d$ , upon said discs, intermediate disc 2 provided with slots  $c, c, c^1, c^1$ , impression roller R mounted rigidly upon said shaft  $a^2$ , the printing wheel and inking mechanism, all substantially as and for the purposes described. 7th. In combination with the printing wheel and inking mechanism, impression roller R mounted movably longitudinally on its shaft, hub  $k^3$  connected to said roller and grooved circumferentially, worm-shaft  $j^1$ , collar  $j^2$ , the arm  $k$  and tongue  $k^1$ , said tongue  $k^1$  being attached to the hub  $k^3$ , pinion  $k^2$  mounted upon said shaft  $j^1$ , shaft J provided with the handle  $J^1$ , gear-wheel  $j$  mounted upon said latter shaft and adapted to intermesh with pinion  $k^2$ , as set forth. 8th. In a time-recorder, the combination of shaft  $a^2$  mounted on vertically movable supports, hollow shaft  $a^1$ , a laterally yielding coupling connecting said shafts  $a^2$  and  $a^1$ , plunger  $g$  in said hollow shaft, lever I actuating said plunger, collar F mounted loosely upon the hollow shaft  $a^1$  and connected to said plunger, an impression roller R mounted rigidly upon the shaft  $a^2$ , the printing wheel and notched wheel D mounted upon the same shaft and above said impression roller, the inking mechanism, rock-shaft  $e$ , an operative connection between said rock-shaft and collar F, a detent  $D^1$  adapted to engage said notched wheel, an arm on said rock-shaft and a rod operatively connecting said arm and detent substantially as described. 9th. In combination with the recording plunger, impression rollers, printing wheels, ink-ribbon, spools carrying said ribbon and ratchet-wheels attached to the shafts of said spools and having their teeth pitched in opposite directions, links pivoted to said

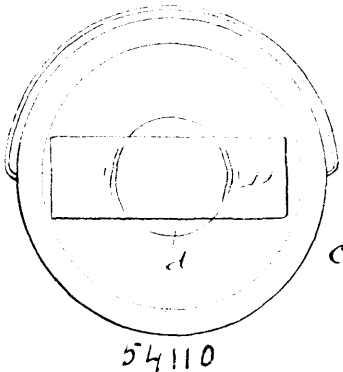
shafts, pawls pivoted to said links to engage the ratchet-wheels, pitmen connected to the aforesaid links to actuate the same rock-arms actuated by the aforesaid plunger and transmitting motion to the pitmen, a rod connecting the two pawls to each other and holding only one of said pawls at a time in engagement, a tumbler shifting said rod, a yoke actuating said tumbler, and detents on the ink-ribbon actuating the yoke during the travel of the ribbon and thereby shifting the coupling rod of the pawls to reverse the motion of the ribbon, as set forth. 10th. In combination with the ink-ribbon, spools carrying said ribbon and ratchet-wheels attached to the shafts of said spools and having their teeth pitched in opposite directions, links pivoted to said shafts, pitmen operating in unison and actuating said links, pawls pivoted to the links to engage the ratchet-wheels, a longitudinally movable rod connecting the pawls to each other and allowing only one of said pawls at a time to engage the ratchet-wheels, dogs preventing the reverse movements of the ratchet-wheels and a finger on each of said pawls throwing the companion dog out of engagement simultaneously with the thrust of the pawl from the said ratchet-wheel, as set forth. 11th. In combination with the recording plunger, printing wheels, impression roller normally out of printing position and thrown in printing position by the aforesaid plunger, spools carrying the ink-ribbon, ratchet-wheels attached to the shafts of the said spools, links pivoted to said shafts, pitmen transmitting motion from the aforesaid plunger to the links, pawls pivoted to the links, a longitudinally movable rod connecting the two pawls to each other and allowing only one of said pawls at a time to engage the ratchet-wheel, stops throwing the pawls out of engagement during the latter portion of the stroke of the plunger to allow the ribbon to remain at rest during the operation of printing on the impression-roller, mechanism for shifting the aforesaid coupling bar to the pawls, and detents on the ink-ribbon actuating said shifting mechanism, as set forth. 12th. The combination with the two spools carrying the ribbon and ratchet-wheels on said spools having their teeth pitched in opposite directions, and pawls operating said wheels, of a longitudinally movable rod connecting the pawls together and holding only one of said pawls at a time in engagement with its ratchet-wheel, the longitudinal shifting of said rod reversing the motion of the said ratchet-wheels and ribbon, as set forth.

a valve and valve seat, and a swivelling weighted cam for actuating said valve, substantially as described. 7th. In a self-sealing bottle,



a sliding valve and a cam for actuating said valve, substantially as described. 8th. In a self-sealing bottle, a stem or rod, a valve sliding thereon, and means for actuating said valve, substantially as described. 9th. In a self-sealing bottle, a tubular body portion having a valve seat at its upper end, a rod or stem supported by said body portion, a valve movable upon said rod or stem, and means to actuate said valve, substantially as described. 10th. In a self-sealing bottle, a sliding spring pressed valve and a double cam for actuating the same, substantially as described. 11th. A self-sealing bottle provided with an enlarged or chambered neck portion, a valve and valve seat therein and a swinging cam for actuating said valve, substantially as described. 12th. In a self-sealing bottle, the combination with the sealing or locking device, of a guard having a closed bottom and apertured body, substantially as described. 13th. In a self-sealing bottle, a guard comprising the tubular body having a closed bottom, and apertured in the walls of the body, substantially as described. 14th. In a self-sealing bottle, the combination with a locking or sealing device, of a tubular guard having a closed bottom, apertured side walls and an external notched flange or rib, substantially as described. 15th. In a self-sealing bottle, the rod or stem, a suitable support therefor, a valve movable upon said rod or stem, a loose collar or block upon said rod or stem, fixed collars or blocks upon opposite sides of said loose collar or block, and a pivoted cam upon said loose collar or block, for actuating said valve, substantially as described. 16th. In a self-sealing bottle, a grooved valve seat, a valve provided with a yielding face and means to force said valve in contact with said valve seat, substantially as described. 17th. In a self-sealing bottle, a valve and valve seat, a spring acting to force said valve in contact with said valve seat, a movable cam and connections between said valve and cam, substantially as described.

**No. 54,110. Fire Pail. (Seau à incendie.)**



Harry K. Martin, Montreal, Quebec, Canada, 19th November, 1896; 6 years. (Filed 15th September, 1896.)

*Claim.*—1st. A fire pail having a projecting bottom flange and portions of such flange bent inward to form hand holds, as set forth. 2nd. A fire pail having a removable cover with a central opening, a cover for said opening, a frangible strip extending across said cover of the opening and adapted to adhere at its ends to said cover of the pail, a chemical compartment communicating at its upper end with said opening and having a bottom of tin-foil or the like and said pail having a bottom flange with portions thereof bent inward, for the purpose set forth. 3rd. In a fire pail, the combination with the metal covers B and cover C, of a readily frangible adhesive strip D, extending across said cover C, and secured to same and to the cover B, for the purpose set forth.

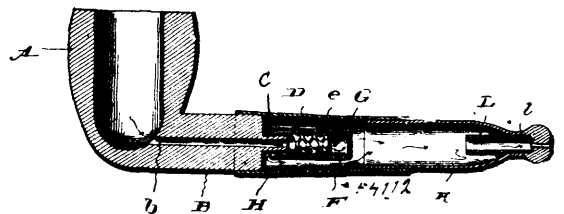
**No. 54,111. Self-Sealing Bottle.**

(*Bouteille à seau automatique.*)

William E. Foster, Lynn, Massachusetts, U.S.A., 19th November, 1896; 6 years. (Filed 26th September, 1896.)

*Claim.*—1st. In a self-sealing bottle, a valve and valve seat, and a cam for actuating said valve, substantially as described. 2nd. In a self-sealing bottle, a valve and valve seat, and a swinging cam for actuating said valve, substantially as described. 3rd. In a self-sealing bottle, a valve and valve seat, and a weighted cam for actuating said valve, substantially as described. 4th. In a self-sealing bottle, a valve and valve seat, and a swivelling cam for actuating said valve, substantially as described. 5th. In a self-sealing bottle, a valve and valve seat, and a pivoted weighted cam for actuating said valve, substantially as described. 6th. In a self-sealing bottle,

**No. 54,112. Smoking-Pipe. (Pipe.)**



George Alexander Hynds, Little Falls, New York, U.S.A., 19th November, 1896; 6 years. (Filed 8th October, 1896.)

*Claim.*—As an improved article of manufacture, a pipe having in combination with the centrally perforated portion C of the bowl, a hollow cylinder D designed to fit over the said portion C, and having intersecting spiral channels about its circumference, a cap E closed at one end and designed to fit over the said channelled cylinder, the ferrule H and mouthpiece, all substantially as shown and described.

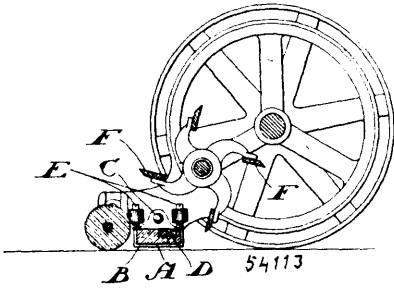
**No. 54,113. Sharpener for Lawn Mowers.**

(*Appareil pour affûter les couteaux des faucheuses.*)

Roxa Slaght, assignee of Lewis H. Slaght, both of Waterford, Ontario, Canada, 19th November, 1896; 6 years. (Filed 19th September, 1896.)

*Claim.*—1st. As a sharpener for lawn mower-knives, a bar carrying a suitable sharpening material and adapted to be connected to the mower in the place of the shear plate or lower knife, substantially as and for the purpose specified. 2nd. As a sharpener for lawn mower-knives a bar carrying a suitable sharpening material, the said bar being adapted to be connected to the mower in the place of the shear-plate or lower knife, and adjustable by the same means, substantially as and for the purpose specified. 3rd. As a sharpener for lawn mower-knives, a bar carrying a suitable sharpening

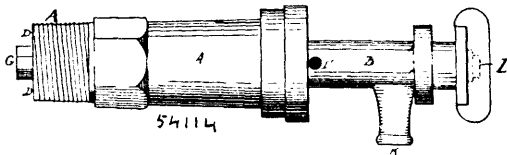
material and having its ends adapted to receive the shear-plate pivots, in combination with the mower frame, the shear-plate pivots



and the shear-plate adjusting screws, substantially as and for the purpose specified. 4th. As a sharpener for lawn mower-knives, a wooden bar carrying a suitable sharpening material and provided with metal ends adapted to receive the shear-plate pivots, in combination with the mower frame, the shear-plate pivots and the shear-plate adjusting screws, substantially as and for the purpose specified.

**No. 54,114. Steam and Water-Cock.**

(*Robinet à vapeur et eau.*)

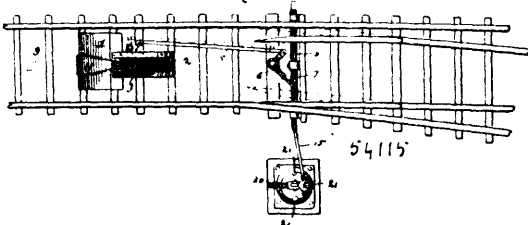


Richard Thompson, London, Ontario, Canada, 19th November, 1896; 6 years. (Filed 8th October, 1896.)

*Claim.*—1st. A steam or water-cock, in which a portion of the body is constructed so as to form a steam or water-chamber C, surrounding a metal plunger B, having the channels H, I, formed therein, which allow of the passage of the steam or water from the chamber C when plunger is pressed inwards, substantially as shown and described. 2nd. The plunger B, grooved at a, and having a central channel H passing from outer end and communicating with a cross-channel I and an outlet K, so constructed that the orifices I' of the channel I are usually outside the stuffing-box J, thus keeping the water shut off while the pressure is still on, substantially as shown and described.

**No. 54,115. Railway Switch.**

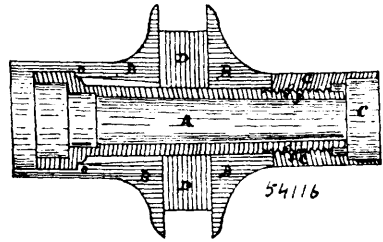
(*Aiguille de chemin de fer.*)



Heister C. Derr, Nescopeck, and Boyd R. G. Yetter, Mainville, both in Pennsylvania, U.S.A., 19th November, 1896; 6 years. (Filed 4th November, 1896.)

*Claim.*—1st. The combination of a main track, side track and switch rails, a shoe channelled, a guard-plate pivoted in the mouth of the channel and normally pressed up to close the same, a lever extending across the channel behind the guard-plate, and mechanism connecting said lever to the switch-rails, as and for the purposes set forth. 2nd. In combination with a main track and side track and switch rails, of a shoe channelled longitudinally, a guard-plate supported in the mouth of said channel and normally pressed up to close the same, devices for shifting the switch rails, and a movable part in the channel behind the guard-plate and connected to said shifting devices, substantially as described. 3rd. In combination with a main track and side track and switch rails, of a channelled shoe having a flanged mouth at its forward end, a guard-plate pivoted in the lower end of said mouth and inclining upwardly therein and bearing against said flanges, a spring normally pressing said guard-plate up to close the mouth, and devices for shifting the switch rails, a part of said devices being located in the channel behind the guard-plate, substantially as described.

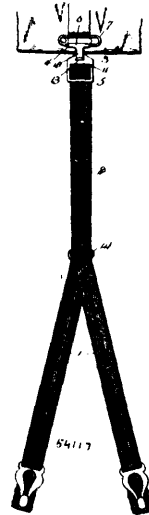
**No. 54,116. Wheel Hub.** (*Moyeu de roue.*)



Abraham Calvert Scarr, Harriston, Ontario, Canada, 19th November, 1896; 6 years. (Filed 22nd October, 1896.)

*Claim.*—The combination of the several parts, A, B, B, and C, with shoulder O, and screw f, in A, C, substantially as and for the purpose hereinbefore set forth.

**No. 54,117. Garment Clasp.** (*Agrafe de vêtement.*)

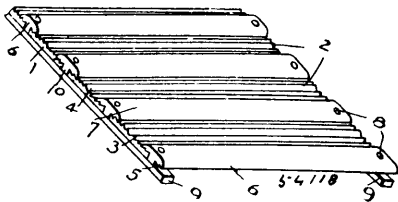


Reddin West Parramore, Ashbury Park, New Jersey, U.S.A., 19th November, 1896; 6 years. (Filed 4th July, 1896.)

*Claim.*—1st. In a supporter, a coupling or fastening comprising two parts or members, one part having a hook and the other part having an opening to receive the hook, and a guard to engage with the said hook to prevent accidental disengagement of the parts when the supporter is in active service, substantially as set forth. 2nd. In a supporter, a coupling or fastening formed of two parts, the one having a hook whose shank curves to one side of the plane of the plate comprising the member, and the other part having an opening to receive the hook, and a guard inclining to one side of the plane of the plate and adapted to engage with the curved portion of the hook so as to cause the parts to interlock and prevent their accidental separation when the device is in service, substantially as set forth. 3rd. In a supporter, the combination with ends provided with attached devices, and a fastening of an elastic tape doubled upon itself and adjustably connecting the fastening and the said ends by passing through slots in the said parts, substantially as described. 4th. In a supporter, the combination with ends provided at their terminals with attaching devices, and a slide or link at the juncture of the said ends, of an elastic tape or strap doubled upon itself and engaged with the said slide or link by passing through a slot thereof, and a fastener comprising a plate formed with parallel slots and having the end portions of the doubled elastic tape adjustably connected with the fastening by passing through the said parallel slots, substantially as described. 5th. In a separable garment clasp, the combination of a member having a headed stud, and a second member having an opening and provided with a guard having a portion to surround and interlock with the headed stud, substantially as and for the purpose set forth. 6th. In a separable garment clasp, the combination of a member having a headed stud, a second member having an opening to co-operate with the stud, and a guard carried by the said second member and having a portion to surround and interlock with the head of the stud, and provided with a lip at its free end opposite to the opening and inclining away from the plane of the member, substantially as and for the purpose set forth. 7th. In a garment clasp, the combination of a member having an opening which contracts towards one end, a said opening and dish or concave on its inner side, and a second provided with an outwardly-inclining lip at its free end, and a second

member having a headed stud, the head being of less diameter than the cap or guard, and adapted to spring behind and interlock with the said cap or guard, substantially as and for the purpose set forth. 8th. The herein-described garment fastener, comprising a frame having a slot which is enlarged at one end and gradually diminishes in width towards its opposite end, a guard at the lower end of the frame formed by bending a portion of the latter, and having the folded end of the plate curved, and having the lower end of the slot a short distance from the bottom of the guard or folded end of the plate, and a button or stud adapted to have its head come between the guard and the plate and to touch the bottom of the said guard, and to have its shank or neck touch the lower end of the said slot, substantially as set forth for the purpose described. 9th. A garment fastener comprising a frame having a loop at one end and a guard at its opposite end formed by recurving a portion of the frame, the guard curving at its lower end and inclining away from the plane of the frame to form an angular or flaring space therewith, and said frame having a slot which is enlarged at the end adjacent to the loop and which gradually diminishes in width towards the guard, and terminates a short distance from the bottom thereof, and a button or stud adapted to co-operate with the frame and to have its head wedge behind the said guard and touch the bottom thereof and its neck or shank touch the contracted end of the said slot, substantially as set forth for the purpose described.

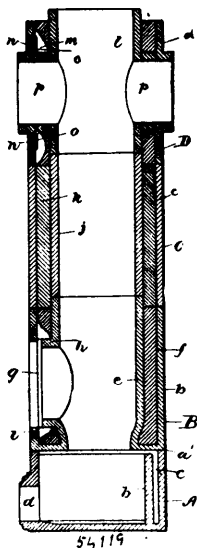
**No. 54,118. Roofing Board.** (*Planche pour toitures.*)



Shiloh Washington Durham, Bushnell, Illinois, U.S.A., 19th November, 1896; 6 years. (Filed 29th October, 1896.)

*Claim.*—A roofing batten, having a smooth parallel-sided stem for introduction between the contiguous unbroken edges of adjacent roofing boards, the stem being equal in depth to the thickness of the boards, whereby it is adapted to rest upon the timbers of the roof frame, and an integral hood or cap extended laterally beyond both side surfaces of the stem to overlap the contiguous edges of the roofing boards, and having a roughened under surface to interlock with correspondingly roughened surfaces of the boards, said battens being adapted to be secured to the roof frame by means extending through the stem between the contiguous edges of the roofing boards, and the roofing boards being adapted to be held in place solely by the battens, whereby the boards are free to contract laterally without breaking the joint or affecting the securing devices, substantially as specified.

**No. 54,119. Flue Lining.** (*Garniture de tubes.*)



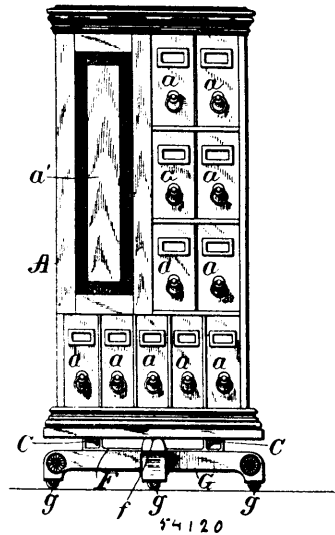
William H. Lewis and Charles J. Lewis, both of Beamsville, Ontario, Canada, 19th November, 1896; 6 years. (Filed 6th November, 1896.)

*Claim.*—1st. A flue lining, consisting of a series of independent sections, each section comprised of exterior walls, an internal flue for

the products of combustion, and means for holding the internal flue to the exterior walls in such a manner as to form an air passage between them, substantially as specified. 2nd. A flue lining, consisting of a series of independent sections, each section comprised of exterior walls, an internal flue for the products of combustion, ribs connected to the said flue and exterior walls to maintain the flue in its proper position and divide the space between the walls and flue into a series of air ducts, substantially as specified. 3rd. A flue lining, consisting of a series of independent sections, each section comprised of exterior walls, an internal flue for the products of combustion, ribs connected to the said flue and exterior walls to maintain the flue in its proper position, and a branch from the said flue through one of the exterior walls, substantially as specified. 4th. A flue lining, consisting of a series of independent sections, each section comprised of exterior walls, an internal flue for the products of combustion, ribs connected to the said flue and exterior walls to maintain the flue in its proper position and divide the space between the walls and flue into a series of air ducts, and openings through one of the exterior walls to the said air ducts, substantially as specified. 5th. A flue lining, consisting of a series of independent sections, each section comprised of exterior walls, an internal flue for the products of combustion, ribs connected to the said flue and exterior walls to maintain the flue in its proper position and divide the space between the walls and flue into a series of air ducts, openings through one of the exterior walls to the said air ducts, and dampers in connection with the said openings, substantially as specified. 6th. In a flue lining, a section comprised of exterior walls, having an open top, a shell having an open top located within the exterior walls in such a manner as to form an air duct between them, openings through one of the exterior walls into the said air ducts, and an opening into the said shell, substantially as specified.

**No. 54,120. Revolving Book-Case.**

(*Bibliothèque tournante.*)



Benjamin Micon, Anniston, Alabama, U.S.A., 19th November, 1896; 6 years. (Filed 31st October, 1896.)

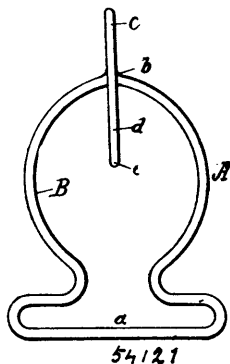
*Claim.*—1st. The combination with a case or cabinet proper, of a ring adapted to be secured to the base of the same and having a lateral flange or shoulder, and a metal base frame having lugs, one of which is extended to form a hook that engages the ring shoulder, and flanged rollers journaled in said lugs, whereon the lower edge of said ring rests and travels, substantially as described. 2nd. The combination with the flanged ring secured to the base of the cabinet proper, of the base frame having hollow anti-friction rollers, and the lugs extended upwards and forming hooks engaging said flanged ring, substantially as described. 3rd. The cruciform bearing for a revolving book-case or cabinet, having pairs of integral vertical lugs at the end of each arm adapted to form journal bearings for the rollers, one of each of which pairs of lugs is extended and shaped into a hook, substantially as described.

**No. 54,121. Hook for Harness.** (*Crochet de harnais.*)

David Bradley, Cartwright, Manitoba, Canada, 20th November, 1896; 6 years. (Filed 31st October, 1896.)

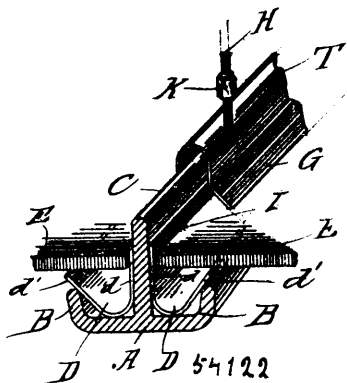
*Claim.*—1st. A harness hook provided with a loop at one end for the strap, a substantially circular body portion formed of a continuation of the ends of the said loop, and a hooked portion having its point substantially central of and in the same plane as the body portion and joining onto the top of the said body portion, substantially as set forth. 2nd. A harness hook provided with a loop at

one end for the strap, a substantially circular body portion joining onto the said loop, and hooked portion joining onto the said body



portion with a swan-neck curve and having its point recurved and arranged substantially opposite the centre of the said body portion and substantially in the same plane, as set forth.

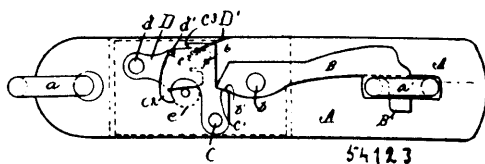
**No. 54,122. Skylight Support.** (*Support de lucarne.*)



Charles Escher, Jersey City, New Jersey, U.S.A., 20th November, 1896; 6 years. (Filed 31st October, 1896.)

*Claim.*—The combination with a T-shaped rafter A, having the side flanges B, and the central flange C, of spring-metal troughs D supported on each side of said central flange and having one side *d* thereof resting against said flange, and the other side *d*<sup>1</sup> projecting outwardly over the top of the side flange B, and the plates E resting upon the sides *d*<sup>1</sup> and against the sides *d* of said troughs, substantially as described.

**No. 54,123. Lock.** (*Serrure.*)



Charles N. Lippitt, Beloit, Wisconsin, U.S.A., 20th November, 1896; 6 years. (Filed 4th November, 1896.)

*Claim.*—The combination of a base-plate or hasp, a staple-engaging hook-bar that has pivotal connection with the plate and its rear end extended in a backward direction, a notched tumbler also in pivotal connection with said plate and provided with a shoulder engageable with the rear end of the hook-bar, and a pivotal spring-and-key-controlled keeper having a slot and notch engageable with the tumbler-pin.

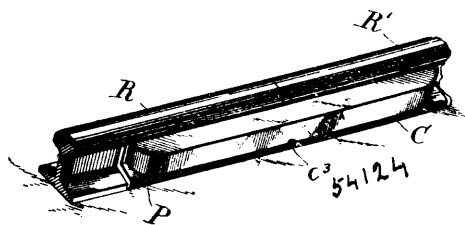
**No. 54,124. Railroad Rail Lock.**

(*Serrure de rail de chemin de fer.*)

Robert Jasper Catchings, Cincinnati, Ohio, U.S.A., 20th November, 1896; 6 years. (Filed 4th November, 1896.)

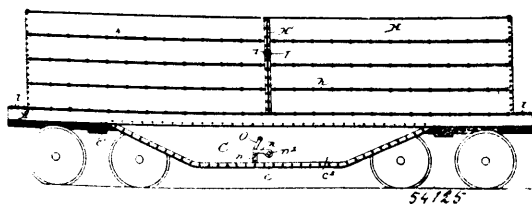
*Claim.*—1st. In a railroad rail lock, lock-casing, lock-bolt and fish-bolts provided with annular recesses in the heads thereof, circular springs taking into said recesses for the purpose specified, all combined to lock and securely hold the fish-plates to rails, substantially as described. 2nd. In a railroad rail lock, the combination of the fish-bolts with the spring, lock-bolt and lock-casing, said lock-

casing being provided with a key-hole for the reception of a key to unlock the device, substantially as described. 3rd. The combina-



tion in a railroad lock of the fish-bolts F, with the lock-casing C, provided with a hole for the reception of the key K to release the lock-bolt L, substantially as described. 4th. A railroad rail lock, having a casing provided with fish-bolt holes, slots and chambers and a lock-bolt chamber, and a lock-bolt having a fish-bolt hole in one end thereof, said lock-bolt being adapted to be fixed or moved in said chamber as described, substantially as described. 5th. In a railroad rail lock, fish-bolts having annular recesses in the heads thereof, springs taking therein, said fish-bolts having notches *f*<sup>1</sup> near one end, lock-casing having flanges *c*<sup>1</sup> taking into said notches, said lock-casing being provided with key-hole, waste-holes, fish-bolt holes, slots, chambers and lock-bolt chamber, and lock-bolt having fish-bolt hole in one end, combined and adapted to operate substantially as and for the purpose specified. 6th. In a railroad rail lock, lock-casing provided with key-hole, waste-holes, fish-bolt holes, slots and chambers and a lock-bolt chamber, and a lock-bolt having a fish-bolt hole in one end, adapted to work in said chamber, combined and operating substantially as and for the purpose specified. 7th. The combination in a railroad rail lock of the rails R, R<sup>1</sup>, fish-plates P, P<sup>1</sup>, fish-bolts F, spring S, lock-casing C, and lock-bolt L in said casing adapted to hold the device in a locked position or to be raised by key K when unlocking the device, substantially as described. 8th. In a railroad rail lock, rails R, R<sup>1</sup>, fish-plates P, P<sup>1</sup>, lock-casing C, fish-bolts F, lock-bolt L, and spring S, combined and operating substantially as and for the purpose specified. 9th. In a railroad rail lock, rails R, R<sup>1</sup>, fish-plates P, P<sup>1</sup>, lock-casing C, flanges *c*<sup>1</sup>, fish-bolts F, lock-bolt L, and spring S, combined for the purpose specified. 10th. In a railroad rail lock, the combination of the rails R, R<sup>1</sup>, with fish-plates P, P<sup>1</sup>, lock-casing C, fish-bolts F having recesses *f*, springs S taking therein, said bolts having notches *f*<sup>1</sup>, flanges *c*<sup>1</sup> adapted to take into said notches, lock-bolt L and flange-supports *c*<sup>1</sup>, substantially as described. 11th. The combination in a railroad rail lock of the rails R, R<sup>1</sup>, with fish-plate P<sup>1</sup>, fish-bolts F, spring S, lock-casing C, and lock-bolt L adapted to rest therein and hold the device in a locked position, or to be raised by key K when unlocking the device, substantially as described.

**No. 54,125. Metallic Car.** (*Char metallique.*)

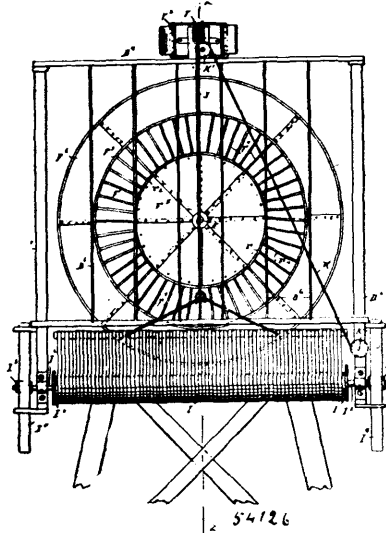


Willard Penlock, Minerva, Ohio, U.S.A., 20th November, 1896; 6 years. (Filed 4th November, 1896.)

*Claim.*—1st. A car of the class described, having a bottom provided with a substantially centrally located A-shaped portion, swinging doors one on each depending leg of the A-shaped portion, a compound lever formed of at least three links interposed between such doors and arranged to open or close the same, and a rock-shaft substantially centrally arranged between the swinging doors and carrying the central link of the compound levers for holding the compound levers in substantially a straight line when the doors are closed for transmitting the strain or load from one door to the other and for operating the levers, substantially as described. 2nd. A car of the class described, having a bottom provided with a substantially centrally located A-shaped portion, swinging doors on each of the lower depending legs of the A-shaped portion, a set of compound toggle levers interposed between such doors, the central lever of which is arranged to carry the pivotal fulcrum points of the end levers beyond a central line to lock the same and hold the compound levers in substantially a straight line when the doors are closed to transmit the strains directly from one door to the other, and a rock parts, substantially as described. 3rd. A car of the class described, having a bottom provided with a centrally located A-shaped portion, swinging doors one on the lower end of each depending leg of the A-shaped portion, a set of compound toggle levers interposed be-

tween such doors, the central lever of which is arranged to carry the pivotal fulcrum points of the end levers beyond a central line to lock and hold the compound levers in substantially a straight line when the doors are closed to transmit the strain or load from one door to the other and cause the load to assist in locking the same, a rock-shaft upon which the central lever is mounted and operated, and means for limiting the motion of the rock-shaft in one direction, substantially as described. 4th. A car of the class described, having a bottom provided with a centrally located A-shaped portion, swinging doors one on the lower end of each depending leg, a set of compound toggle levers interposed between such doors, the central lever of which is arranged to carry the fulcrum pivotal points of the end levers beyond a central line to hold the compound levers in substantially a straight line when the doors are closed to assist in locking the doors and transmit the strain or load from one door directly to the other, a rock-shaft upon which the central lever is mounted and operated, and means for locking the rock-shaft at one limit of its motion to hold the parts in their closed position, substantially as described. 5th. A car of the class described, having a bottom or floor portion and side portions formed of channel beams arranged longitudinally with respect to the length of the car and with their legs or flanges extending outwardly to present a smooth or substantially smooth interior surface, substantially as described. 6th. A car of the class described, having a bottom or floor portion and side portions formed of channel beams arranged longitudinally with respect to the length of the car and end portions formed of channel irons arranged transversely the length of the car, all of such channel beams having their legs or flanges extending outwardly to reinforce the structure and present a smooth interior surface, substantially as described. 7th. A car of the class described, having an inclined bottom or floor portion provided with a substantially centrally located A-shaped portion, and side portions formed of channel beams all arranged longitudinally with respect to the length of the car and having their leg or flange portions extending outwardly to reinforce the structure against interior pressure and present a smooth or substantially smooth interior surface, and means for tying the side portions together at the ends and central portion, substantially as described. 8th. A car of the class described, having a bottom portion formed of metallic beams extending longitudinally or lengthwise of the car, metal beams one arranged at each side of the car to form the compression member of a truss and a filling of metal interposed between the metal compression beams and the outside channel beams and secured to the same to stiffen the structure and assist in distributing the load, substantially as described.

**No. 54,126. Windmill. (Moulin à vent.)**

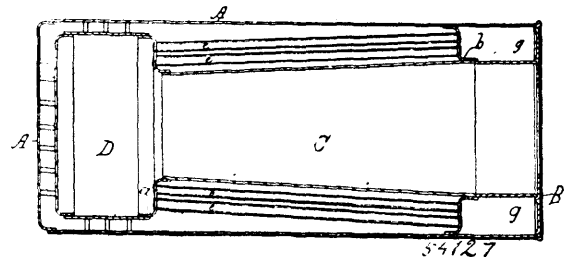


Hubert Schon and Anton Sutz, both of Allegheny, Pennsylvania, U.S.A., 20th November, 1896; 6 years. (Filed 2nd November, 1896.)

*Claim.*—1st. A windmill, comprising a shaft connected with the driven shaft, one or more wheels secured on the said shaft, each wheel comprising two concentric rims, wings between the rims, a hood for the outer rim, and a cone for closing the inner rim at the front end thereof, substantially as shown and described. 2nd. A windmill, comprising a main vertical shaft adapted to be connected with the machinery to be driven, a frame supported from the said shaft and adapted to turn thereon, a wind wheel journaled in the said frame, a gearing for connecting the two shafts with each other, and one or more wind wheels secured on the said wind wheel shaft, substantially as shown and described. 3rd. A windmill, comprising a main vertical shaft adapted to be connected with the machinery to be driven, a frame supported from the said shaft and adapted to turn thereon, a wind wheel journaled in the said frame,

a gearing for connecting the two shafts with each other, one or more wind wheels secured on the said wind wheel shaft, and a vane supported from the shaft and extending in alignment with the said wind wheel shaft from the rear end thereof, substantially as shown and described. 4th. A wind wheel comprising an outer rim, obliquely arranged blades within the same, and an annular cone-shaped hood surrounding said rim and adapted to gather the air and direct it against said blades, substantially as set forth. 5th. In a windmill, the combination of a frame, a wind wheel, a roller, an apron secured to and adapted to be wound on said roller and when unwound being adapted to shield said wind wheel, and means connected to said apron actuated by the variation in the wind for unwinding and winding up said apron, substantially as set forth. 6th. In a windmill, the combination of a frame, a wind wheel, a roller, an apron secured to and adapted to be wound on said roller and when unwound being adapted to shield said wind wheel, means actuated by variation in the wind for unwinding said apron, and a tension device connected to said roller and adapted to be placed under tension when the same is rotated to unwind said apron, said tension device being arranged to rotate the roller in a direction to wind up the apron, substantially as set forth. 7th. In a windmill, the combination of a frame, a wind wheel, a roller, an apron secured to and adapted to be wound on said roller and when unwound adapted to shield said wind wheel, means actuated by the variations in the wind for unwinding said apron, a gear connected to said roller and adapted to be turned by the movement thereof, and a rack bar geared to said gear and adapted to be raised by the rotation of the roller when the apron is unwound, substantially as set forth. 8th. In a regulating device for windmills, the combination of a frame, guide rods mounted thereon parallel to each other, a box mounted to slide on said guide rods and adapted to be moved by the pressure of the wind, a wind wheel, an apron adapted to shield the same, means for holding said apron normally out of operative position, and a connection between the said box and the said apron adapted when the box is moved by the wind to move the apron into its operative position, substantially as set forth. 9th. In a windmill, the combination of a frame having a vertical arm, a horizontal frame rotatably mounted on said frame, a wind wheel on said shaft, a collar on said shaft, and a vane having a tubular boss loosely mounted on said shaft inside said collar, said boss being connected to the vertical arm of the frames, substantially as set forth.

**No. 54,127. Steam Boiler. (Chaudière à vapeur.)**



Gardner Clish, Duncan McDonald and Silas R. Tupper, assignees of Robert Smallwood, all of Truro, Nova Scotia, Canada, 20th November, 1896; 6 years. (Filed 31st October, 1896.)

*Claim.*—1st. A boiler of the class herein described, having tubes diverging towards the circumference of the shell from their connection with the tube sheet of the combustion chamber to their connection with the tube sheet of the boiler at points the least possible distance from the circumference of the boiler, and having a conical fire-box with its surface approximately corresponding to the divergence of the tubes, substantially as and for the purpose hereinbefore set forth and described. 2nd. In a boiler of the class herein described, the combination of the diverging tubes, the conical fire-box C, the tube sheet of the combustion chamber a, and the boiler tube sheet b, with the supplementary feed door c, and the spring f, substantially as and for the purpose hereinbefore described and set forth. 3rd. The combination of the supplementary feed door c, opening upwards or sidewise with the coiled spring f, or other device for the purpose of holding the door either closed or open, substantially as and for the purpose hereinbefore described and set forth. 4th. The supplementary feed door c, substantially as and for the purpose hereinbefore set forth. 5th. The combination of the supplementary feed door c, with the feed door d, substantially as and for the purpose hereinbefore set forth.

**No. 54,128. Pump. (Pompe.)**

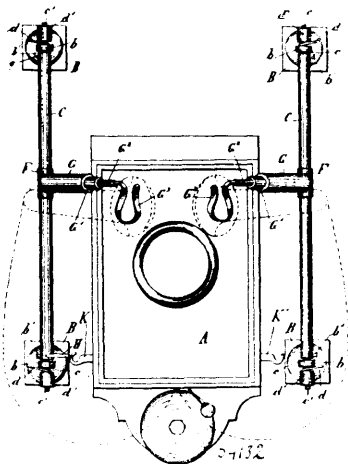
Karl August Klose and William K. Seward, both of Butte City, Montana, U.S.A., 20th November, 1896; 6 years. (Filed 26th October, 1896.)

*Claim.*—1st. The pump barrels having the bottom closing plate provided with the inlet aperture and the vertical marginal internally threaded flange, said barrels having the division wall cut away at its lower end as shown, in combination with the valve yoke l, composed of the ring or annulus secured between said plate and the lower edge of the barrels, and a skeleton frame rising therefrom, and



grooves for the reception of the sash cord, substantially as described. 2nd. A ventilator, comprising a perforated box, and sockets to support the same, and adjustable bottoms for the sockets, substantially as described. 3rd. A ventilator, comprising a perforated box, sockets to receive the ends of the same, said sockets being open at their ends, and separate bottoms projecting inwardly at the open ends of the sockets to support the ends of the box, said bottoms being removably connected to the sockets, substantially as described. 4th. A ventilator, comprising a perforated box formed of separable half sections, a screen held within the box, end sockets to receive the box, adjustable bottoms for the said sockets, and means for securing the sockets in the frame of the window, substantially as described. 5th. A ventilator, comprising a perforated screen containing box, a screen held within the box, end sockets to support the box, adjustable bottoms for the sockets, and cleats carrying the sockets and adapted to be fastened in a window frame, substantially as described.

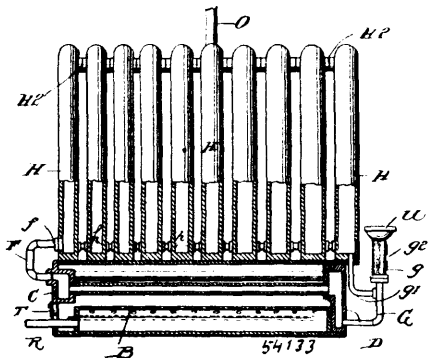
**No. 54,132. Telephonic Apparatus.**  
(Appareil téléphonique.)



Philipp Johann Böse, Bremen, Germany, 20th November, 1896; 6 years. (Filed 6th November, 1896.)

*Claim.*—In telephonic apparatus of that kind in which a hook or equivalent device is usually employed for suspension of the receiver so that its weight operates in the manner herein described; on one or both sides of the apparatus vertical rotary rods with laterally projecting arms adapted to hold the receiver or receivers in combination with springs or equivalent devices tending to turn said arms inwards, and an arm movable therewith for depressing the said hook or equivalent device when said arms are turned inwards as aforesaid and for releasing the same when the arms are turned outwards for applying the receiver or receivers to the ears, substantially as set forth.

**No. 54,133. Steam Generator.** (Générateur de vapeur.)

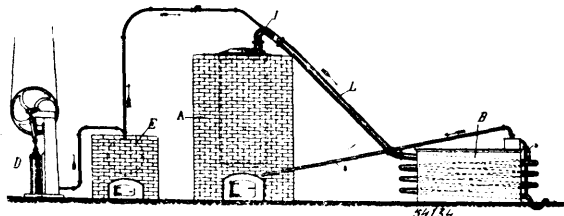


John Ellison Dame, Brooklyn, New York, U.S.A., 20th November, 1896; 6 years. (Filed 4th November, 1896.)

*Claim.*—1st. A heater, comprising a fire-box, a burner located therein and removable therefrom, and detachable hollow heads approximately rectangular in form connected with said fire-box, a plurality of tubes forming a communication between said heads, a radiator composed of separate radiator sections or tubes located above said fire-box, and said radiator sections or tubes being in communication at their lower ends, and said heads forming portions of the end walls of the apparatus and being also in communication with said radiator sections or tubes, substantially as shown and

described. 2nd. A heater, comprising a fire-box, a burner located therein and removable therefrom, and detachable hollow heads approximately rectangular in form connected with said fire-box, a plurality of tubes forming a communication between said heads, a radiator composed of separate radiator sections or tubes located above said fire box, and said radiator sections or tubes being in communication at their lower ends, and said heads forming portions of the end walls of the apparatus, and being also in communication with said radiator sections or tubes, the communication between one of said heads, and the adjacent radiator section or tube being made by a pipe which communicates with the upper part of said head, and the communication between the other head, and the adjacent radiator section or tube being made by a pipe which communicates with the lower part of said head, substantially as shown and described. 3rd. A heater, comprising a fire box, a burner connected therewith, a number of tubes located in said fire-box and communicating with hollow heads at each end thereof, said heads being also in communication with a radiator composed of separate sections or tubes located above said fire-box and the lower ends of which are in communication, said fire-box being also provided with a backwardly-directed extension, through which pass vertical tubes which communicate with the spaces between said radiator sections or tubes, and said extension being also provided with an air drum which communicates therewith and through which extend air tubes, substantially as shown and described. 4th. A heater, comprising a fire-box, a burner connected therewith, a number of tubes located in said fire-box and communicating with hollow heads at each end thereof, said heads being also in communication with a radiator composed of separate sections or tubes located above said fire-box and the lower ends of which are in communication, said fire-box being also provided with a backwardly-directed extension, through which pass vertical tubes which communicate with the spaces between said radiator sections or tubes, and said extension being also provided with an air drum which communicates therewith and through which extend air tubes, said drum being also provided with a flue for the escape of the hot air or the products of combustion after the same have passed through said extension and through said drum, substantially as shown and described. 5th. A heater, comprising a fire-box, a burner connected therewith, a number of tubes located in said fire-box and communicating with hollow heads at each end thereof, said heads being also in communication with a radiator composed of separate sections or tubes located above said fire-box and the lower ends of which are in communication, said fire-box being also provided with a backwardly-directed extension, through which pass vertical tubes which communicate with the spaces between said radiator section or tubes, and said extension being also provided with an air drum which communicates therewith and through which extend air tubes, said drum being also provided with a flue for the escape of the hot air or the products of combustion after the same have passed through said extension and through said drum, and said drum being also provided with means for carrying off the products of condensation, substantially as shown and described. 6th. A heater constructed as herein described and as shown in figures 1, 2 and 3 of the drawing.

**No. 54,134. Dry Distillation of Wood.**  
(Distillation sèche du bois.)



Adolf Schmidt, 49 Kollnische Strasse, Prussia, Germany, 20th November, 1896; 6 years. (Filed 11th May, 1896.)

*Claim.*—1st. In connection with processes for the dry distillation of wood, the step which consists in introducing into the outlet pipe of the retorts a current or jet of heated air, substantially as described. 2nd. In combination with the outlet pipe of a dry distilling retort, the arrangement of an injector nozzle I for the injection of heated air, substantially as described and shown.

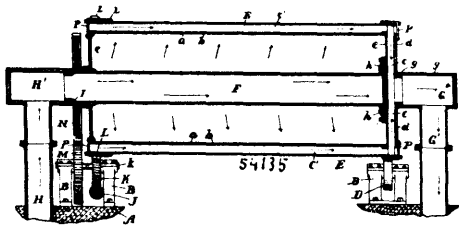
**No. 54,135. Malting Apparatus.** (Appareil de maltage.)

Alois Zeckendorf and William F. Potthoff, both of Cincinnati, Ohio, U.S.A., 20th November, 1896; 6 years. (Filed 10th November, 1896.)

*Claim.* 1st. In a malting apparatus, the combination of an outer revolving cylinder having a chamber in one end and provided upon its periphery with perforated longitudinal tubes or channels closed at one end and communicating at the other end with said chamber, an inner perforated cylinder centrally arranged within the outer cylinder, said cylinders being mounted in independent bearings, means for supplying a current of air to said inner cylinder, and separate driving mechanism for each of said cylinders for driving



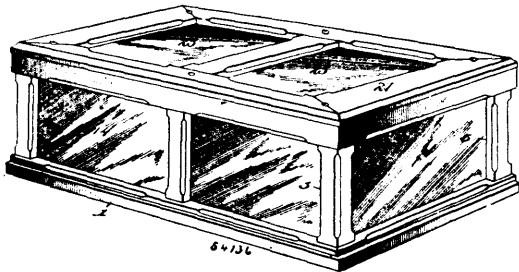
them at different speeds, substantially as described. 2nd. In a malting apparatus, the combination of an outer revolving cylinder



having a chamber in one end and provided upon its periphery with perforated longitudinal tubes or channels closed at one end and communicating at the other end with said chamber, an inner perforated cylinder centrally arranged within the outer cylinder, said cylinders being mounted in independent bearings, an air supply connected to one end of said inner cylinder, an air exit connected with said chamber, and driving mechanism for driving said cylinders at different speeds, substantially as described. 3rd. In a malting apparatus, the combination of an outer revolving cylinder having a partition in one end forming a chamber and provided upon its periphery with perforated longitudinal tubes or channels closed at one end and communicating at the other end with said chamber, an inner perforated cylinder centrally arranged within the outer cylinder and journalled at one end in said partition and at the opposite end having an independent bearing outside of said outer cylinder, means for supplying air to one end of the inner cylinder, means for discharging air from said chamber, and mechanism for driving said cylinders at different speeds, substantially as described.

**No. 54,136. Knock-Down Show Case.**

(Caisse d'étalage pliante.)



Felix Emile Mistrol, Bryan, Texas, U.S.A., 21st November, 1896; 6 years. (Filed 26th June, 1896.)

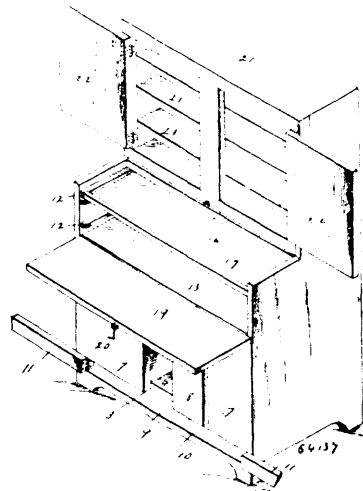
*Claim.*—1st. The combination with the base frame and top frame formed with corresponding mortises, of a series of metal sockets arranged within the mortises of said frame, and a series of uprights having end tenons removably inserted in said metal sockets, substantially as described. 2nd. A knock-down show case, comprising a base frame and a top frame, both of which are formed with mortises, uprights interposed between said frames and having end tenons removably inserted in the mortises thereof, the said frames and uprights being grooved to receive glass panels, and a metal socket for each upright, the said socket being located within one of the aforesaid mortises and provided with notches for the reception of the edges of the glass panels, substantially as described. 3rd. In a knock-down show case, the top frame thereof provided as to its inner edge with a rabbet for the reception of a glass panel, in combination with a top finishing frame overlapping the edges of said glass panels, and the cushions or packing interposed between the panel and one of said frames, substantially as described. 4th. In a show case, the combination with an open base frame, of cleats or rests arranged upon the inside of said frame, and a flush flooring supported thereon and having its upper surface arranged in the plane of the corresponding surface of the base frame, substantially as described.

**No. 54,137. Dough Raiser.** (Live pâte.)

Emanuel M. Sheneman, Pharissburg, Ohio, U.S.A., 21st November, 1896; 6 years. (Filed 8th August, 1896.)

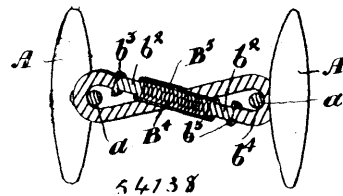
*Claim.*—A dough raiser comprising a cabinet, having a sliding dough board at its top, a hinged door adapted to be connected with the dough board, a heating chamber, compartments separated from the heating chamber by partitions, a plate supported above the heating chamber and compartments and in conjunction with the sides and back of the cabinet and the hinged door and sliding board

forming the raising chamber, said plate being supported above the heating chamber and compartments and provided with a deflecting



bottom, whereby the heat from the chamber is equally distributed against the plate and directed into the compartments, substantially as set forth.

**No. 54,138. Sleeve Link.** (Chaînon de poignets de chemise.)

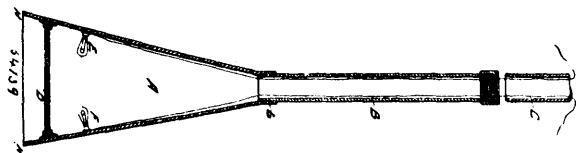


Saunders Lorie & Co., assignee of Thomas H. Gunning, both of Toronto, Ontario, Canada, 21st November, 1896; 6 years. (Filed 11th April, 1896.)

*Claim.* The combination with the end bars and staples, of a crossed link, having the inner ends of one side soldered to a sleeve centrally located and forming part of the other side, pins in each end of such sleeves with flat heads designed to abut the ends of the side opposite the sleeve, and a spiral spring within the sleeve to press the pins outwardly, the staples of the bar being arranged to closely encircle the ends of the link as and for the purpose specified.

**No. 54,139. Submarine Search Lamp.**

(Lampe à scruter sous-marine.)



Dolphis Gauthier and Alexander Gauthier, both of Montreal, Quebec, 21st November, 1896; 6 years. (Filed 8th September, 1896.)

*Claim.*—In a submarine search light, the combination of a cone A, a glass D fitted inside near its base, lamps E and F inclosed therein and connecting tube or tubes B, the whole constructed as shown and described.

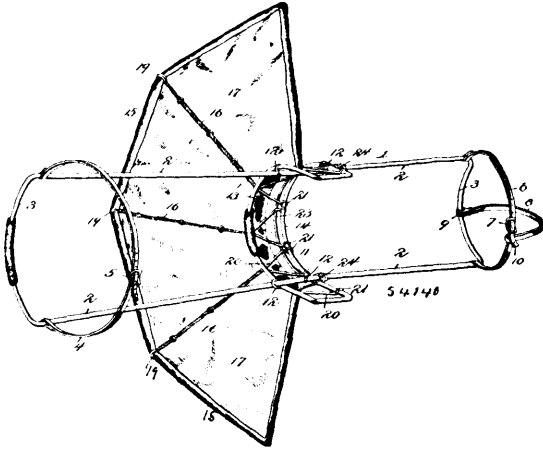
**No. 54,140. Swimming Appliance.**

(Appareil de natation.)

William Luce, Nehalem, Oregon, U.S.A., 21st November, 1896; 6 years. (Filed 1st October, 1896.)

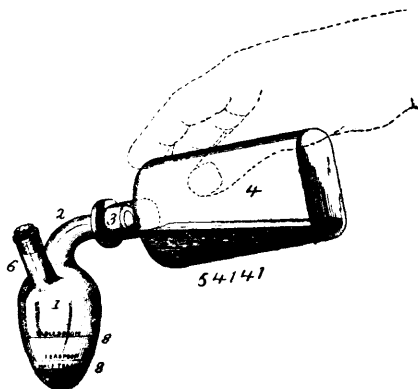
*Claim.*—1st. In a swimming appliance, the combination of an elongated leg frame having attaching means, an arched paddle supporting wire frame arranged transversely of the leg frame intermediate of its ends and having separate parallel arched bars, the rear of which bars forms a pivot bar and is provided at intervals with annular pivot grooves, and a segmental flexible folding paddle comprising a series of outwardly diverging rigid ribs and a flexible imperforate web secured to said ribs, said ribs consisting of twisted wire bodies provided at their inner ends with a pair of diverging right-angularly disposed attaching feet having terminal pivot eyes loosely engaging in the pivot grooves of said pivot bar, said right-angularly disposed attaching feet being adapted to engage against

the stop bar of the paddle supporting frame to limit the opening or expansion of the flexible paddle, substantially as set forth. 2nd. In



a swimming appliance, a wire leg frame having attaching means, an arched paddle support arranged transversely of the leg frame between its ends and secured thereto, a flexible folding paddle having a series of outwardly diverging rigid ribs pivoted or hinged at their inner ends to said pivotal support, and a spring arranged in a fixed position at one side of the paddle support and adapted to be compressed by the ribs of the paddle when the latter is folded during the forward movement of the appliance, substantially as set forth. 3rd. In a swimming appliance, an oblong wire leg frame having attaching means, an arched paddle support arranged transversely of the leg frame and secured thereto intermediate of its ends, a flexible folding paddle having rigid ribs pivoted or hinged at their inner ends to said arched paddle support, and an arched spring wire secured at its terminals to the side portions of the leg frame and arranged at one side of the paddle support and projecting beyond the latter so as to be engaged by the central ribs of the paddle when the latter is folded rearwardly by the forward movement of the appliance, substantially as set forth. 4th. In a swimming appliance, the combination of a paddle support, of a folding paddle or structure comprising a flexible imperforate web and a series of ribs having their inner ends pivotally connected with said paddle support, substantially as set forth. 5th. A rib for a folding paddle or structure of a swimming appliance formed of a single length of wire folded upon itself and coiled at the fold to provide an eye, and having the members twisted together and at their inner ends divergently spread and bent at right angles to the twisted portion, substantially as set forth. 6th. In a swimming appliance, the combination with a leg frame having attaching harness, an arched paddle support transversely connecting the side portions of the leg frame, and an approximately segmental flexible folding paddle hinged at its inner edge to said arched support, substantially as set forth.

**No. 54,141. Graduate or Measure. (Mesure ou gradué.)**

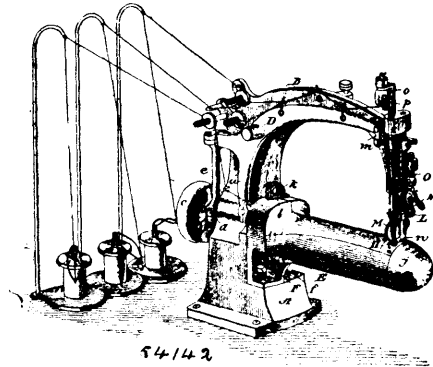


Jarvis H. Platt, Chicago, Illinois, U.S.A., 21st November, 1896; 6 years. (Filed 14th October, 1896.)

*Claim.*—1st. A graduate or measure, without moving parts, comprising a measuring bulb or chamber, having inlet or outlet necks that are connected to the sides of the chamber, in manner substantially as herein described, so that the graduate or measure is adapted to fill or empty itself by changes in its position, substantially as set forth. 2nd. A graduate or measure, without moving parts, comprising a measuring bulb or chamber, having inlet or outlet necks that are connected to the sides of the chamber, in manner

substantially as herein described, so that the graduate or measure is adapted to fill or empty itself by changes in its position, the inlet neck being adapted for attachment to a bottle or holder, or to a flexible expelling bulb, substantially as set forth. 3rd. A graduate or measure, without moving parts, comprising a measuring bulb or chamber, having inlet or outlet necks that are connected to the sides of the chamber, in manner substantially as herein described, so that the graduate or measure is adapted to fill or empty itself by changes in its position, the inlet neck being adapted for attachment to a bottle or holder, or to a flexible expelling bulb, and the outlet neck adapted for attachment to a nursing nipple, substantially as set forth. 4th. A graduate or measure, without moving parts, comprising bulb or chamber, having inlet or outlet necks that are connected to the sides of the chamber, in manner substantially as herein described, so that the graduate or measure is adapted to fill or empty itself by changes in its position, the parts being integrally formed of glass, substantially as set forth.

**No. 54,142. Sewing Machine. (Machine à coudre.)**



Union Special Sewing Machine Co., Chicago, Illinois, assignee of Lansing Onderdonk, Boston, Massachusetts, both in the U.S.A., 21st November, 1896; 6 years. (Filed 7th October, 1896.)

*Claim.*—1st. A sewing machine comprising a cylindrical casing, a main shaft extending within the same, feeding and looper shafts also arranged within the casing and oscillated from the main shaft, one of said shafts being arranged in a plane to one side of the main shaft, but parallel therewith, and the other in substantially the same vertical plane as the main shaft, a rocking feed dog carrying frame pivoted to and entirely supported by the feed shaft and operatively connected to the main shaft, and a looper connected to the looper shaft, substantially as described. 2nd. A sewing machine comprising a main shaft a cylindrical casing into which the main shaft extends, a feed operating shaft driven from the main shaft, a third shaft extending lengthwise of the casing, parallel with and below the main shaft with its forward end in advance of the forward end of the main shaft, with connections between the main shaft and the third shaft for operating the latter, and a looper connected to the forward end of the third shaft and rocked thereby, substantially as described. 3rd. A sewing machine comprising a main shaft, a cylindrical casing into which the main shaft extends, a second shaft extending lengthwise of the casing and parallel with the main shaft but the forward end in advance of the forward end of the main shaft, connections between the main shaft and the second shaft for operating the latter, a rocking feed dog frame pivotally connected to and entirely supported by the second shaft, a third shaft extending lengthwise of the casing and parallel with and below the main shaft, with its forward end in advance of the forward end of the main shaft, with connections between the main shaft and the third shaft for operating the latter, and a looper connected to the forward end of the third shaft and rocked thereby, substantially as described. 4th. In a sewing machine, suitable stitch forming mechanism, a cylindrical casing enlarged at one end, feeding and looper mechanisms contained within said casing and a rotary take up mechanism supported in the enlarged portion, substantially as described. 5th. A sewing machine comprising a cylindrical casing entirely closed on its under side, and having a plurality of standards therein, a removable top plate curved to conform to the shape of the cylinder extending throughout the length thereof, a hinged cap for said cylinder, a main shaft, looper rocker shaft and feed shaft journaled in the respective standards and extending lengthwise of and within the casing, whereby the parts are compactly arranged, easy of access, but only from the top or end, substantially as described. 6th. A sewing machine comprising a cylindrical casing, a main shaft arranged lengthwise thereof and extending within the same, a rock-shaft entirely within the casing, a looper rocker connected to said shaft and extending at right angles thereto with means for reciprocating said looper, a second rock-shaft independent of the first with connections between it and the main shaft, a feed dog carrying frame pivotally connected to the second rock-shaft and oscillated thereby with independent connections between said frame and the main shaft, said main, looper and feed shafts being arranged so that the main shaft and the pivot points of the feed dog carrying

frame and looper rocker will be in substantially the same vertical plane which passes through the longitudinal axis of the main shaft, whereby the parts may be compactly arranged within a minimum space, substantially as described. 7th. A sewing machine comprising a cylindrical casing, a main shaft extending lengthwise of and within said casing, a looper mechanism also within the same, a removable top plate for said casing, a tapering hinged end cap, a feed shaft curved at its outer end to conform to the shape of the hinged end cap and rocking feed dog carrying frame pivoted at one end with the curved portion of the feed shaft, and complementary stitch forming mechanism, substantially as described. 8th. In a sewing machine, a suitable standard and a cylindrical casing forming the bed plate of the sewing machine, resting at its inner end upon and secured to said standard and extending laterally therefrom, said cylindrical casing being provided with a removable top plate curved to conform to the periphery of the cylindrical casing, and having a conical hinged end cap, whereby the working parts within the bed plate are easy of access and tubular articles may be readily placed over the bed plate of the machine, substantially as described. 9th. A sewing machine comprising a cylindrical casing, a main shaft extending lengthwise of said casing and within the same, an under thread carrying looper provided with a guard finger, a feeding mechanism, all of said parts being contained within the casing, a throat plate, curved to conform to the shape of the casing, provided with a needle guard, complementary stitch forming mechanism, and means for reciprocating the looper and its guard finger lengthwise of the casing, substantially as described. 10th. In a sewing machine the combination with the main shaft, feed shaft, looper shaft and means for operating the same, the feed and looper shafts extending parallel with and in advance of the forward end of the main shaft, and the looper shaft carrying a conical projection at a right angle thereto, of a feed dog carrying frame supported by the feed shaft and operatively connected to the main shaft, a looper and looper carrier supported by said conical projection, and means for oscillating the looper carrier in the direction of the length of the looper, substantially as described. 11th. A sewing machine comprising a cylindrical casing having an enlarged rear portion, a stationary abutment within said enlarged portion, a looper rock-shaft extending lengthwise of and within said casing, a pair of vertical nipper springs carried by the rear end of said shaft and within said enlarged portion, and operating against said abutment, substantially as described. 12th. In a sewing machine a cylindrical casing forming a bed plate, a complementary stitch forming mechanism, said bed plate comprising the lower part within which the feeding and looper mechanisms and a portion of the main shaft are supported, an upper removable plate having an upward extension at its rear end, and the rotary take-up mechanism operating therein, a curved throat-plate secured to the lower part of the casing, and provided with openings for the passage of the needles and feed dogs, substantially as described. 13th. In a sewing machine, a cylindrical casing forming the bed plate of the machine, suitable stitch forming mechanism, said bed plate comprising a lower part within which certain parts of the stitch forming mechanism are supported, and open at its top, a removable top plate adapted to cover said opening curved to conform to the shape of the cylinder, and a cap having a cylindrical rim fitting against the end of the cylinder for closing the same, substantially as described. 14th. In a sewing machine in combination with the cylindrical casing, a main shaft extending lengthwise of the casing, a feed operating shaft arranged below and to one side the main shaft with its forward end in advance of the forward end of the main shaft, connections between the main shaft and the feed operating shaft for oscillating the latter, a feed dog rocking frame pivoted to the feed shaft with connections between said rocking frame and the main shaft, a looper rocker shaft arranged below the plane of the main shaft with its forward end in advance thereof, said looper rocking shaft being also below the plane of the feed operating shaft and extending at right angles thereto, a looper attached to said rocker and means for oscillating the looper, substantially as described. 15th. In a sewing machine and in combination, the main shaft, the cylindrical casing into which the main shaft extends, said main shaft being arranged in the upper portion of the cylindrical casing, a feed operating shaft arranged adjacent to the side of the casing and with its forward end in advance of the forward end of the main shaft, a rocking frame pivotally connected to the second shaft whereby in the movement of the second shaft the frame is rocked up and down, a feed dog carried by the rocking frame, and a connection between said rocking frame and the forward end of the main shaft whereby the feed dog is given a forward and backward movement, a third shaft arranged in the bottom part of the casing in substantially the same vertical plane as the main shaft, but with its forward end in advance of the forward end of said main shaft, a looper arranged on the inside of the casing opposite the feed shaft and pivoted to the said third shaft, with means for reciprocating said looper lengthwise of the casing, substantially as described.

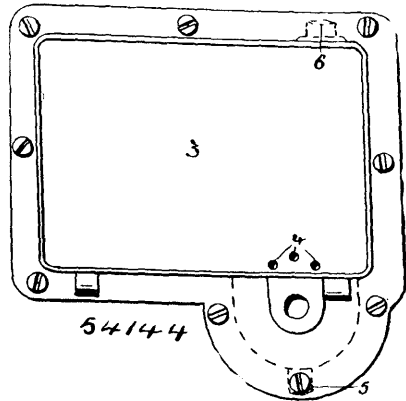
**No. 54,143. Composition for Removing Thirst for Intoxicating Liquids.** (*Composition pour détruire l'habitude des liqueurs enivrantes.*)

Warren W. Spaulding, Waterville, Maine, U.S.A., 21st November, 1896; 6 years. (Filed 9th November, 1896.)

*Claim.*—The herein described composition of matter to be used for destroying and overcoming the habit or appetite for

drinking intoxicating liquors to excess, said composition consisting of water, crypto gamma, or allosoris cryspus, commonly called rock-brake, the heart of the hornbeam tree, or carpinus Americana and sanguinaria Canadensis, commonly called blood-root, in the proportions herein specified.

**No. 54,144. Wax Pot.** (*Pot à cire.*)



Francis Joseph Freese, Montreal, Quebec, Canada, 21st November, 1896; 6 years. (Filed 7th October, 1896.)

*Claim.*—1st. In a waxer, a vertical wax heating receptacle and an open passageway by means of which the thread to be waxed may pass vertically in a straight line through same, for the purpose set forth. 2nd. In a wax pot, the combination with a vertical tubular receptacle in which the wax is heated and through which the thread passes, of a supply reservoir located at the top end of and off-set from said receptacle, feed ducts between said reservoir and receptacle, and means for heating the receptacle and the bottom of the reservoir, for the purpose set forth. 3rd. In a wax pot, the combination with a tubular receptacle in which the wax is heated and through which the thread passes, of a supply reservoir of shallow rectangular dish form located above said receptacle, feed ducts between said reservoir and receptacle and means for heating the receptacle and the bottom of the reservoir, for the purpose set forth. 4th. In a wax pot, the combination with a tubular receptacle in which the wax is heated and through which the thread passes, of a supply reservoir of shallow rectangular dish form located above said receptacle, feed ducts between said reservoir and receptacle, and the bottom of the reservoir being inclined toward said ducts, with means for heating the receptacle and the bottom of the reservoir, for the purpose set forth. 5th. In a wax pot, the combination with a tubular wax receptacle, of an inclosing cylindrical section providing a heating space around said receptacle throughout its length, a reservoir located above and off-set from said receptacle, feed ducts between said reservoir and receptacle, and the upper end of said inclosing section extended to extend said heating space beneath such reservoir, and steam inlet to and outlet from said heating space, for the purpose set forth. 6th. In a wax pot, the combination of wax receptacle 2, having suitable strippers and sealers at each end, the inclosing sections 1, 1', with inlet and outlet sleeves 7, reservoir 3 and ducts 4, all constructed and arranged substantially as and for the purposes set forth. 7th. A wax pot having a reservoir, an internal wax receptacle and an inclosing section, all cast as an integral structure, as shown and described and for the purpose set forth.

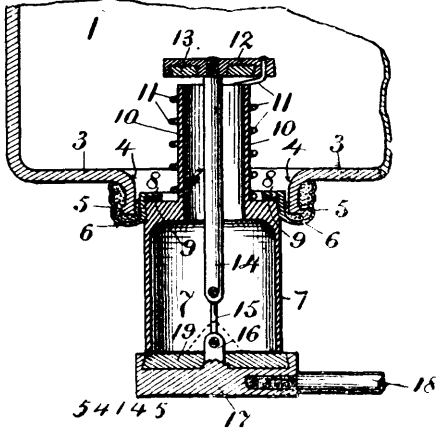
**No. 54,145. Liquid Disinfectant Distributor.**

(*Distributeur de liquide désinfectant.*)

Walter Wormley Peay and Alfred Beresford Clayton Steward, both of Toronto, Ontario, Canada, 21st November, 1896; 6 years. (Filed 3rd October, 1896.)

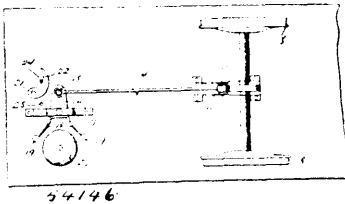
*Claim.*—1st. In a disinfectant distributor, the reservoir having a measure chamber secured liquid-tight to its lower end and communicating with the interior of said reservoir, substantially as shown and described. 2nd. In a disinfectant distributor, the combination of the reservoir having a measure chamber secured liquid-tight to its lower end, the tube connected with said chamber and extending within the reservoir, and a spring encircling said tube and supporting a disc to cover the opposite end of said tube from the measure chamber, substantially as shown and described. 3rd. In a disinfectant distributor, the combination of the reservoir having a measure chamber secured thereon at its lower end, the tube extending within the reservoir, the spring encircling said tube and supporting a disc, and the disc supported to cover the end of said tube, substantially as shown and described. 4th. In a disinfectant distributor, the combination of the reservoir having a measure chamber thereon, the tube extending from the measure chamber into the reservoir, the spring encircling said tube, the disc having a packing-ring thereon and supported by said spring, and the rod secured at one end in

said disc and extending through said tube, substantially as shown and described. 5th. In a disinfectant distributor, the combination



of the reservoir having a measure chamber thereon, the tube extending from said measure chamber into the reservoir, the spring encircling said tube, the disc having a packing-ring thereon and supported by said spring, the rod secured at the centre of said disc and extending through said tube, and the stopper flexibly connected to said rod, substantially as shown and described. 6th. In a disinfectant distributor, the combination of the reservoir having a measure chamber thereon, the tube connecting said reservoir with said chamber, the spring encircling said tube, the packed disc carried by said spring, the rod extending through said tube from said disc, the stopper having a packing-ring thereon and flexibly connected to said rod, and a lever arm on said stopper, substantially as shown and described.

No. 54,146. Alarm Bell. (Tocsin automatique.)

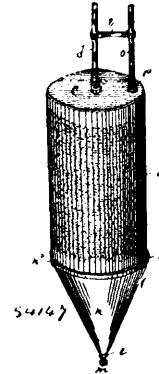


Edward de Haas, St. Paul, Minnesota, U.S.A., 21st November, 1896; 6 years. (Filed 26th October, 1896.)

Claim.—1st. An alarm device for tramway cars, comprising a gong or bell mounted beneath the platform of the car, a lever pivotally supported adjacent thereto, and provided at one end with knockers which are adapted to operate in connection with said gong or bell, said lever being pivotally connected at its opposite end with a rod which extends backwardly, and means connected with said rod and the axle of the car, for giving the rod a succession of forward and backward movements, substantially as shown and described. 2nd. An alarm device for tramway cars, comprising a gong or bell, mounted beneath the platform of the car, a lever pivotally supported adjacent thereto, and provided at one end with knockers which are adapted to operate in connection with said gong or bell, said lever being pivotally connected at its opposite end with a rod which extends backwardly, and means connected with said rod and the axle of the car for giving the rod a succession of forward and backward movements, consisting of a lever pivotally suspended in front of the axle, the upper end of which is pivotally connected with said rod, and said lever being also provided with a roller at its lower end, and with a spring which operates to draw the upper end forwardly, and an alarm operating device connected with the axle of the car, substantially as shown and described. 3rd. The herein described alarm device for tramway cars, which consists of a gong or bell supported beneath the platform of the car, a lever pivotally supported adjacent thereto, and provided with knockers, a rod pivotally connected with said lever, and projecting backwardly, devices connected with one of the axles of the car, and with the rear end of said rod for moving said rod backwardly and forwardly, as the axle revolves and means for locking the rod in its rearmost position, substantially as shown and described. 4th. The herein described alarm device for tramway cars, which consists of a gong or bell supported beneath the platform of the car, a lever pivotally supported adjacent thereto, and provided with knockers, a rod pivotally connected with said lever, and projecting backwardly, devices connected with one of the axles of the car, and with the rear end of said rod for moving said rod backwardly and forwardly, as the axle revolves, and means for locking the rod in its rearmost

position, consisting of a shaft which passes through the platform of the car, adjacent to the forward end of the rod, and which is provided with a dog at its lower end, substantially as shown and described.

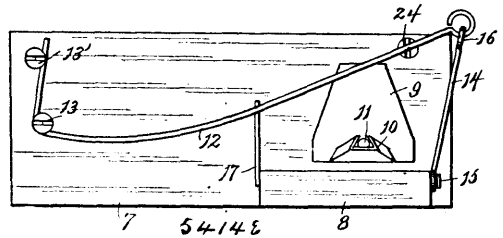
No. 54,147. Filter for Quicksand Wells. (Filtre pour sables mouvants.)



Thomas Albert Evans, Charles R. Fleming and William Nelson Gary, all of Portland, Oregon, U.S.A., 23rd November, 1896; 6 years. (Filed 9th October, 1896.)

Claim.—In a quicksand filter, in combination, the upper and lower cylinder heads *c d*, the perforated inner and outer cylinders *a b*, the suction pipe *d* extending upward through the upper cylinder head to the pump and being open at its base, the cone *n*, and attachments extending downward from the suction pipe through the lower cylinder head to the base or point of such cone *n*, lock nuts on the upper and lower extensions of the suction pipe to hold the cylinder heads on the cylinders, and the sand pipe *o*, substantially as set forth.

No. 54,148. Animal Trap. (Piège.)



Thomas Crane and Charles Huppert, both of Fort Atkinson, Wisconsin, U.S.A., 23rd November, 1896; 6 years. (Filed 7th October, 1896.)

Claim.—1st. In an animal trap, the combination of a base piece an attached spring, a clamp hinged at one end and connected at its opposite end to the spring, said clamp when turned to a set position adapted to be thrown out of alignment with its hinged or pivoted joint, whereby it is automatically held to a set position, and a trip for springing the clamp, substantially as described. 2nd. In an animal trap, the combination of a frame comprising two parts, a spring attached to one of said parts, a clamp hinged at one end to one of said parts and connected at its opposite end to the spring, said clamp when turned to a set position adapted to be thrown out of alignment with its hinged or pivoted joint, whereby it is automatically held to a set position, and a trip for springing the clamp. 3rd. In an animal trap, the combination of a frame comprising two parts, a spring attached to one of said parts, a clamp hinged at one end to one of said parts and connected at its opposite end to the spring, said clamp when turned to a set position adapted to be thrown out of alignment with its hinge or pivotal joint, whereby it is automatically held to a set position, and a trip for springing the clamp, and an adjustable gauge adapted to limit the extent to which the clamp can be thrown beyond its pivotal point. 4th. In an animal trap, the combination of a frame comprising two parts, a spring attached to one of said parts, a link hinged at one end to one of said parts and connected at its opposite end to the spring, the link in conjunction with the spring forming a clamp, and said clamp when turned to a set position adapted to be thrown out of alignment with its hinge or pivotal joint, whereby it is automatically held to a set position, and a trip for springing the clamp. 5th. In an animal trap, the combination of a frame comprising two parts, a spring attached to one of said parts, a link hinged to one of the parts and connected to the spring, said link being extended into a bail to form a clamp, said clamp when turned to a set position adapted to be thrown out of alignment with its hinge or pivotal joint, whereby it is automatically held to a set position, and a trip for springing the clamp.



machine, a rod *h*, arms *h*<sup>6</sup>, pivotally arranged on said rod, a cutting table secured to said arms, cross-cuts in the upper surface of said table, and means for normally forcing said arms and table in an operative position beneath said cutters, substantially as set forth. 13th. In a machine for cutting leather or other material into strips or laces, the combination, of a machine-frame, a horizontally moving carriage, cutters arranged in bearings on said machine, a rod *h*, arms *h*<sup>6</sup>, pivotally arranged on said rod, a cutting table secured to said arms, cross-cuts in the upper surface of said table, and a weight connected with the said arms, for normally forcing said arms and table in an operative position beneath said cutters, substantially as set forth. 14th. In a machine for cutting leather or other material into strips or laces, the combination, of a machine-frame, cutters arranged on a shaft in bearings on said frame, a rod *h*, arms *h*<sup>6</sup>, pivotally arranged on said rod, a frame *h*<sup>12</sup>, *h*<sup>13</sup> on said arms, a pivotally arranged frame *h*<sup>12</sup>, *h*<sup>13</sup> on said arms, and a cutting table, and means for normally forcing said table in an operative position beneath said cutters, substantially as set forth. 15th. In a machine for cutting leather or other material into strips or laces, the combination, of a machine-frame, cutters arranged on a shaft in bearings on said frame, a rod *h*, arms *h*<sup>6</sup>, pivotally arranged on said rod, a frame *h*<sup>12</sup>, *h*<sup>13</sup> on said arms, a pivotally arranged frame *h*<sup>12</sup>, *h*<sup>13</sup> on said arms, a cutting table, and a weight connected with said arms *h*<sup>6</sup>, for normally forcing said arms and table in an operative position beneath said cutters, substantially as set forth. 16th. In a machine for cutting leather or other material into strips or laces, the combination, of a machine-frame, a horizontally moving carriage, cutters arranged on a shaft in bearings on said machine, a rod *h*, arms *h*<sup>6</sup>, pivotally arranged on said rod, a frame *h*<sup>12</sup>, *h*<sup>13</sup> on said arms, a pivotally arranged frame *h*<sup>12</sup>, *h*<sup>13</sup> on said arms, and means for normally forcing said table or frame in an operative position beneath said cutters, substantially as set forth. 17th. In a machine for cutting leather or other material into strips or laces, the combination, of a machine-frame, a horizontally moving carriage, cutters arranged on a shaft in bearings on said machine, a rod *h*, arms *h*<sup>6</sup>, pivotally arranged on said rod, a frame *h*<sup>12</sup>, *h*<sup>13</sup> on said arms, a pivotally arranged frame *h*<sup>12</sup>, *h*<sup>13</sup> on said arms, a cutting table, and a weight connected with said arms for normally forcing said arms and the cutting table in an operative position beneath said cutters, substantially as set forth. 18th. In a machine for cutting leather or other material into strips or laces, the combination, of a machine-frame, a horizontally moving carriage, means connected therewith for attaching the one end of the material to be cut to said carriage, cutters arranged on a shaft in bearings in the frame of the machine, and a cutting table pivotally arranged beneath said cutters and provided with means for normally forcing said table in an operative position beneath said cutters, substantially as set forth. 19th. In a machine for cutting leather or other material into strips or laces, the combination, of a machine-frame, a horizontally moving carriage, means connected therewith for attaching the one end of the material to be cut to said carriage, consisting, essentially, of parallel bars *m* and *m*<sup>1</sup>, one provided with needle-points and the other with correspondingly arranged holes, and a system of levers for operating said parallel bars, cutters arranged on a shaft in bearings on the frame of the machine, and a cutting table pivotally arranged beneath said cutters and provided with means for normally forcing said table into its operative position beneath said cutters to hold the same in a fixed and stationary position during the cutting operation, and a grooved plate detachably secured on the cutting table, substantially as set forth. 21st. In a machine for cutting leather or other material into strips or laces, the combination, of a machine-frame, a shaft in bearings on said frame and having cutters, a bar *d* secured to said bearings, rollers *e*<sup>3</sup> on said shaft, plates *d*<sup>2</sup> on said bar provided with perforated ears or lugs, rollers *d*<sup>12</sup> between said ears adapted to engage with said rollers *e*<sup>3</sup>, a flat cutting table beneath said cutters, and means connected with said table for forcing it into its operative position beneath said cutters and hold it in a fixed and stationary position during the cutting operation, substantially as set forth. 22nd. In a machine for cutting leather or other material into strips or laces, the combination, of a machine-frame, a shaft in bearings on said frame, and having cutters, a bar *d* secured to said bearings, rollers *e*<sup>3</sup> on said shaft, plates *d*<sup>2</sup> on said bar provided with perforated ears or lugs, rollers *d*<sup>12</sup> between said ears adapted to engage with said rollers *e*<sup>3</sup>, and a flat cutting table pivotally arranged in said machine-frame, having a weight to normally force said table in its operative position beneath said cutters and hold the same in a fixed and stationary position during the cutting operation, substantially as set forth. 23rd. A clutching frame, comprising therein a pair of parallel bars *n* and *n*<sup>1</sup>, one having needle-points and the other correspondingly arranged holes, bars *n*<sup>6</sup> and *n*<sup>8</sup>, and connecting bars *n*<sup>9</sup>, *n*<sup>10</sup> and *n*<sup>3</sup>, a pair of levers *o* pivotally arranged on said bar *n*<sup>6</sup>, and links *o*<sup>2</sup> connecting said levers to said bar *n*<sup>6</sup>, substantially as set forth. 24th. A clutching frame, comprising therein a pair of parallel bars *n* and *n*<sup>1</sup>, one having needle-points and the other correspondingly arranged holes, bars *n*<sup>6</sup> and *n*<sup>8</sup>, and connecting bars *n*<sup>9</sup>, *n*<sup>10</sup> and *n*<sup>3</sup>, a pair of levers *o* pivotally arranged on said bar *n*<sup>6</sup>, in

combination with a travelling carriage, cutting table and cutters of a machine for cutting leather or other material into strips or laces, and belts or straps *n*<sup>1</sup> connected with said bars *n*<sup>6</sup>, passing over pulleys, and weights on the ends of said straps, substantially as set forth. 25th. A clutching frame, comprising therein a pair of parallel bars *n* and *n*<sup>1</sup>, one having needle-points and the other correspondingly arranged holes, bars *n*<sup>6</sup> and *n*<sup>8</sup>, and connecting bars *n*<sup>9</sup>, *n*<sup>10</sup> and *n*<sup>3</sup>, a pair of levers *o* pivotally arranged on said bar *n*<sup>6</sup>, and links *o*<sup>2</sup> connecting said levers with said bar *n*<sup>6</sup>, in combination with a travelling carriage, cutting table and cutters of a machine for cutting leather or other material into strips or laces, belts or straps *n*<sup>1</sup> connected with said bars *n*<sup>6</sup>, passing over pulleys, weights on the ends of said straps, and friction devices in engagement with said straps, substantially as set forth. 26th. In a machine for cutting leather or other material into strips or laces, the combination of a machine-frame, a carriage *F* movable horizontally in ways in the frame of the machine, teeth on said carriage, pinions meshing with said teeth, and means for operating the same, cutters arranged on a shaft in bearings on said machine-frame, and a cutting table pivotally arranged in said frame, and having a weight to normally force said table in its operative position beneath said cutters, substantially as set forth. 27th. In a machine for cutting leather or other material into strips or laces, the combination of a machine-frame, a carriage *F* movable horizontally in ways in the frame of the machine, teeth on said carriage, a shaft *i*, pinions *i*<sup>1</sup> meshing with said teeth, a loose pulley *i*<sup>2</sup> on said shaft, and a clutch mechanism operatively connecting said pulley with said shaft *i*, a shaft *o* in the machine-frame, cutters thereon, and a cutting table pivotally arranged in said frame having a weight to normally force said table in its operative position beneath said cutters, substantially as set forth. 28th. In combination with a cross bar *f*<sup>2</sup> of the carriage *F*, and a finger *f*<sup>5</sup> thereon, a clutching device, comprising therein a pair of parallel bars *m* and *m*<sup>1</sup>, means on said bars for clamping a piece of material therebetween, links *m*<sup>2</sup> connected with said bar *m*<sup>1</sup>, a bar *m*<sup>3</sup>, a lever *m*<sup>4</sup> pivoted to said bar *m*<sup>3</sup>, a rod *n*<sup>5</sup> provided with a hook-shaped end, and a spring *m*<sup>5</sup>, substantially as set forth. 29th. In a machine for cutting leather or other material into strips or laces, the combination with a machine-frame, cutters arranged in bearings in said frame, a reciprocally moving carriage, a tension or spreading device operatively arranged above the material secured in said carriage, comprising therein a series of vertically moving rods adapted to bear on the cut material, substantially as set forth. 30th. In a machine for cutting leather or other material into strips or laces, the combination with a main frame, cutters arranged on a shaft in bearings on said frame, a reciprocally moving carriage, and a tension or spreading device, consisting essentially of an open frame *r*<sup>1</sup>, *r*<sup>2</sup>, having holes, rods *r*<sup>3</sup> in said holes, and weights *r*<sup>4</sup> on said rods, adapted to be brought into contact with the cut portions of the material, substantially as set forth.

#### No. 54,153. Artificial Fish-Bait. (*Appât artificiel.*)

Ernest F. Pflueger, Akron, Ohio, U.S.A., 23rd November, 1896; 6 years. (Filed 3rd October, 1896.)

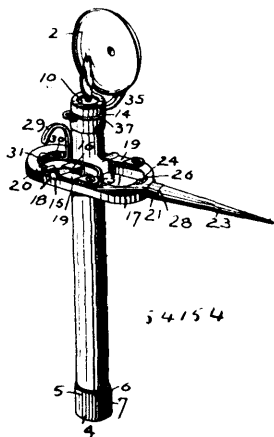
*Claim.*—As a new article of manufacture, an artificial fish-bait, comprising a flexible body portion, having thereon a layer or coating of an adhesive flexible paint or composition containing rubber, said layer or coating being of sufficient thickness to lessen its exterior working under flexure, and a superficial coating or covering of luminous material, or material possessing luminous properties, superimposed upon the layer or coating of flexible material, whereby, under flexure of said body, said superficial coating or covering is protected from flaking by the said layer or coating of flexible material, substantially as specified.

#### No. 55,154. Miner's Candlestick. (*Chandelier de mineur.*)

William Lincicum and Charles F. Lewis, both of Colorado City, Colorado, U.S.A., 23rd November, 1896; 6 years. (Filed 5th October, 1896.)

*Claim.* 1st. In a miner's candlestick, the combination with a candle-socket, provided internally with a spiral spring projector and having a suitable retaining cap at its upper end, of an oblong frame pivotally secured at the middle of its sides to the upper end of said socket, and a sharpened tang longitudinally pivoted at its inner end in one end of said frame, so as to lie in the plane of said frame at a right angle to said former pivotal axis, and said tang having a shoulder abutting against the outer end of its bearing, substantially as described. 2nd. In a miner's candlestick, the combination with a candle-socket, provided internally with a spiral spring projector and having a suitable retaining cap at its upper end, of an oblong frame pivotally secured at the middle of its sides to the upper end of said socket, a sharpened tang longitudinally pivoted at its inner end in one end of said frame, so as to lie in the plane of said frame at a right angle to said former pivotal axis, and said tang having a shoulder abutting against the outer end of its bearing, and a hook provided on one side of said frame to project over outwardly therefrom, substantially as described. 3rd. In a miner's candlestick, the combination with a candle-socket, provided internally with a spiral spring projector and having a suitable retaining cap at its upper end, of an oblong frame pivotally secured at the middle of its sides to the upper end of said socket, a sharpened tang longitudinally pivoted at its inner end in one end of said frame

so as to lie in the plane of said frame at a right angle to said former pivotal axis, and said tang having a shoulder abutting against the



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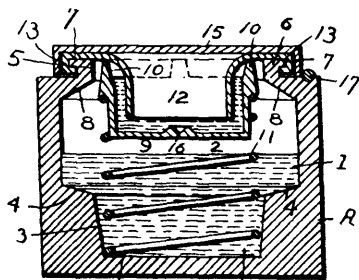
outer end of its bearing, and spring arms removably clamped to said cap so as to turn freely thereon, said arms being bent outwardly and upwardly to form a loop and provided on said loop with a reflector adjustably secured thereto by means of a horizontal set screw pivot, substantially as described. 4th. In a miner's candlestick, the combination with a candle-socket provided on its opposite sides at a point above its centre of gravity with laterally projecting trunnions, of an oblong frame provided with semi-circular bearings for said trunnions midway of the sides of said frame, and in the upper face thereof, springs secured to said sides and arched over said trunnions to hold the same in place, a longitudinally projecting bearing extending from and formed in one end of said frame, a sharpened tang provided with a spindle to fit said bearing and with a shoulder to abut against the outer end thereof, said spindle being suitably secured on the inner side of said bearing, substantially as described.

**No. 54,155. Ointment. (Onguent jaune.)**

Antonio Pene, Kamloops, British Columbia, 23rd November, 1896; 6 years. (Filed 29th September, 1896.)

Claim.—A compound composed of yolk of egg, sweet oil and brown sugar, substantially in the proportions and for the purposes set forth.

**No. 54,156. Ink Well. (Encrier.)**



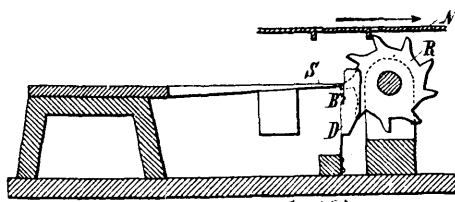
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George Daniel Spielman, Cincinnati, Ohio, U.S.A., 23rd November, 1896; 6 years. (Filed 5th October, 1896.)

Claim.—1st. An ink well consisting of a main ink reservoir, a funnel extending into the main ink reservoir and a supplemental reservoir yieldingly supported with its upper edge above the lower end of the funnel and constructed to hold a supply of ink away from and out of communication with the ink in the main ink reservoir, substantially as set forth. 2nd. An ink well comprising a main ink reservoir, a funnel extending downward into the latter, a supplemental reservoir having a closed bottom whereby to hold a supply of ink elevated above and independent of the ink in the main reservoir, said supplemental reservoir normally held at the highest point in the main reservoir with its upper edge above the lower end of the funnel, substantially as set forth. 3rd. An ink reservoir, comprising a main ink reservoir, a funnel depending into the latter, and a yieldingly supported supplemental reservoir containing a supply of ink and normally holding a portion thereof above the lower end of the funnel, substantially as set forth. 4th. An ink well, consisting of a body portion provided with a reservoir, a funnel projecting into same, a supplemental reservoir and a spring for yieldingly supporting the latter. 5th. An ink well, consisting of a body portion provided with a reservoir composed of an enlarged and a restricted chamber, a supplemental reservoir, and a spring, one end of which is in contact with said supplemental

reservoir, while the other end thereof is supported on the bottom of the restricted portion of the reservoir. 6th. An ink well, consisting of a body portion provided with a reservoir, a supplemental reservoir provided with upwardly projecting prongs, means for yieldingly supporting said supplemental reservoir within the main reservoir and a top for holding the supplemental reservoir against movement in an upward direction beyond a predetermined point, substantially as set forth. 7th. The combination, with a main reservoir, a funnel shaped top projecting into the reservoir, a movable reservoir located within the main reservoir and adapted to receive the inner end of the funnel, and a spring for yieldingly holding the supplemental reservoir in its elevated position, substantially as set forth. 8th. The combination of a main reservoir, a funnel shaped top projecting therein, a supplemental reservoir provided with prongs adapted to engage the funnel shaped top at a point above the lower end of the latter, and a spring for yieldingly holding the supplemental reservoir in its elevated position, substantially as set forth.

**No. 54,157. Damper for Mechanical Musical Instrument. (Assourdissoir pour instruments de musique.)**



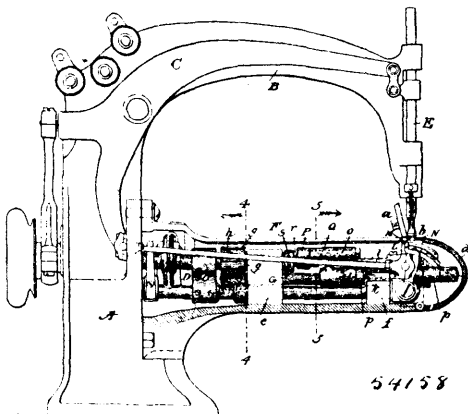
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John Riedl, Leipzig, Germany, 23rd November, 1896; 6 years. (Filed 5th October, 1896.)

Claim.—1st. The combination, with a vibrating tongue, of a damper having elastic ends adapted to catch the tongue between them and by limiting its movement prevent it from vibrating. 2nd. The combination of a series of vibrating tongues, and a series of dampers each consisting of a body D, with ears L<sup>1</sup>, L<sup>2</sup>, and a projection B, with a series of toothed wheels R adapted to operate said tongues and dampers and situated each between the ears L<sup>1</sup>, L<sup>2</sup>, of the respective damper.

**No. 54,158. Feeding Device for Sewing Machines.**

(Appareil alimentateur pour machines à coudre.)



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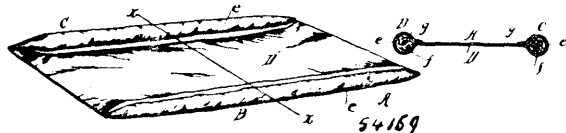
Union Special Sewing Machine Company, Chicago, Illinois, assignee of Lansing Onderdonk, Boston, Massachusetts, both in the U.S.A., 23rd November, 1896; 6 years. (Filed 5th October, 1896.)

Claim.—1st. A sewing machine, comprising a main shaft, a cylindrical casing into which the main shaft extends, a second shaft extending lengthwise of the casing and parallel with the main shaft but the forward end in advance of the forward end of the main shaft, connections between the main shaft and second shaft for operating the latter, a rocking frame pivotally connected to the second shaft, its pivot points being in substantially the same horizontal plane therewith, whereby in the movement of the second shaft the frame is rocked up and down, a transversely arranged feed dog carried by the rocking frame, said rocking frame having a longitudinal rearwardly extending part in close proximity to the forward end of the main shaft, and a direct crank connection between the forward end of the main shaft and said rearwardly extending part of the rocking frame for giving the forward and backward movement to the feed, substantially as described. 2nd. The com-

between the main shaft, of a rock shaft with connections between the same for operating the latter, a laterally extending crank on the end of the rock shaft and having also a stud in line with the stud on the first crank, a crank frame pivotally supported on said studs in substantially the same horizontal plane as the rock shaft, whereby in the movement of the rock shaft the crank frame is raised and lowered, a feed dog carried by one arm of said crank frame, the other arm having an adjustable eccentric connection with the main shaft and independent of the rock shaft, substantially as described. 3rd. A sewing machine, comprising a cylindrical casing, a main shaft extending lengthwise of and within the same, a rock shaft parallel with the main shaft with connection between the same for operating said rock shaft, a crank secured to the rock shaft and provided with a stud, a second crank on the end of the rock shaft and having also a stud, said crank being curved to conform to the shape of the casing and to bring its stud in line with the stud on the first crank, said studs being in substantially the same horizontal plane as the rock shaft, a crank frame pivotally supported on said studs, one arm of which is arranged longitudinally and carries the feed dog, the other arm having an adjustable eccentric connection with the main shaft, said parts being all located within the casing, substantially as described. 4th. The combination with the main shaft, of a rock shaft with connections between the two for rocking the latter, a lateral extension fixed on said rock shaft, a second curved extension secured thereon, a rocking crank frame pivotally connected to said extensions and having a longitudinal bar carrying the feed dog, a stud fixed to the crank frame, a crank sleeved on said stud, and an adjustable eccentric connection between said crank and the main shaft, substantially as described. 5th. A sewing machine, comprising a cylindrical casing, a main shaft extending lengthwise of and within the same and provided on its inner end with a slotted disc, a rock shaft parallel with the main shaft and carrying two cranks, a rocking frame carrying a feed dog connected with said cranks, a stud secured to one arm of said rocking frame, a crank sleeved on said stud and encircling at its opposite end a stud which is in adjustable connection with the slotted disc, all the parts being located within said casing, substantially as described. 6th. A sewing machine, comprising a main shaft, a rock shaft with connections between the two for operating the latter, a crank I secured to said rock shaft, a curved crank H also attached thereto, a rocking crank frame K having lugs *p p* adapted to be pivoted to the cranks H I and deriving vertical movement therefrom, and having also a longitudinal bar carrying the feed dog and having the parts *n* and *o*, and an adjustable eccentric connection located between the part *o* of the crank frame and the main shaft and independent of the rock shaft, substantially as described. 7th. A sewing machine, comprising a main shaft having on the inner end a slotted disc, a rock shaft with connections between the two for operating the latter, a crank I secured to said shaft, a curved crank H also attached thereto, a rocking frame K having lugs *p p* adapted to be pivoted to the cranks H I, having also a longitudinal feed bar carrying the feed dog and having the parts *n* *o*, a stud secured within said part *o*, a crank P journaled at one end on the stud O and having at its opposite end a split bearing a stud *r* fitting at one end in the slot of the disc on the main shaft and having a sleeve *q* fitting within the split bearing on the end of the crank, substantially as described. 8th. The combination with the main shaft, having on one end a slotted disc, a stud fitting at one end in said slot, a screw passing through said stud within the slot and provided with a collar, and a clamping plate embracing the screw between the collar and the head thereof, whereby longitudinal displacement of the screw is prevented, a crank encircling the stud and secured at its opposite end to a rocking frame carrying a feed dog, means for rocking the frame and giving it vertical movement, substantially as described. 9th. A sewing machine, comprising a cylindrical casing, a main shaft extending lengthwise of and lying within the same, a rock shaft extending parallel with the main shaft with operating connections between the two, a lateral crank secured to the rock shaft, a second crank on the end of said shaft curved to conform to the shape of the cylinder, a rocking crank frame pivoted to said cranks and having a longitudinal arm, a curved feed dog secured on said arm and extending at right angles to said arm, and a connection between the crank frame and the main shaft for regulating the length of throw of the feed dog, all of said parts being located within the casing, and a complementary stitch-forming mechanism, substantially as described. 10th. A sewing machine, comprising a main shaft, a cylindrical casing, a second shaft in operative connection with the main shaft and located within the casing, a frame secured to and rocked by said shaft and eccentrically connected with the main shaft and having a longitudinally extending bar, and a transversely extending curved feed bar attached thereto, substantially as described. 11th. A sewing machine, comprising a main shaft, a rock shaft arranged parallel therewith, operated thereby, a cylindrical casing within which said shafts are supported, a rocking feed dog operated from the rock shaft, the pivotal points thereof being in substantially the same horizontal plane as the second shaft and approximating the longitudinal axis of the cylinder, whereby in the oscillation of said second shaft the feed dog is raised and lowered and swings back and forth in a plane curved to conform to the plane of the cylinder, substantially as described. 12th. In a sewing machine, having a curved bed plate, a main shaft, a rock shaft extending throughout the length of the bed plate with means for operating said rock shaft from the main shaft, lugs extending laterally from said rock shaft, a

feed dog carrying frame pivoted to said lugs, the longitudinal axis of said pivot being coincident with that of the curved bed plate, and means connecting the main shaft with the feed dog carrying frame for giving lateral movement thereto, whereby in the oscillation of the rock shaft, the frame moves vertically on its pivot point, the latter acting as a fulcrum on which it also swings laterally, thus causing the feed dog to move in a curved line always, substantially as described.

**No. 54,159. Hair Curler. (Appareil à friser.)**

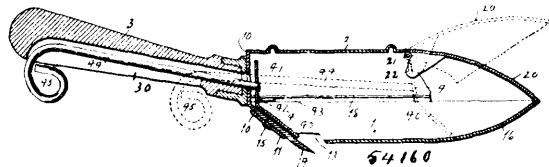


Amella Slaughter Gilmore, Elk Point, South Dakota, U.S.A., 23rd November, 1896; 6 years. (Filed 7th October, 1896.)

*Claim.*—1st. A hair curler substantially such as herein shown and described, consisting of a pliable web and longitudinal rolls arranged at the sides of the web and attached to the same, one of the rolls and web adapted to be coiled or rolled together, and both rolls and web being foldable for the purpose of holding the curler attached to the hair, as set forth. 2nd. As a new article of manufacture, a hair curler consisting of a pliable web, provided at its sides with longitudinal pockets, and rolls inclosed in the pockets, at the sides of the web, and each roll provided with a pliable wire and a filler of fibrous material, as and for the purposes described.

**No. 54,160. Ice Shaver and Scoop.**

(Râpe à glace et écope.)



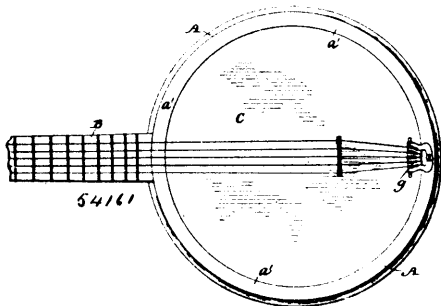
Adolph Geering, New York, State of New York, U.S.A., 23rd November, 1896; 6 years. (Filed 9th October, 1896.)

*Claim.*—1st. An ice-shaving instrument comprising a basin having an opening 13 in the bottom, a knife or cutter projecting through the opening 13, a handle on the basin, and a plunger composed of a head within the basin and a stem extending into the handle, the head of the plunger being located in front of the cutter and conforming on the back to the face of the cutter and adapted to make continuous contact with the cutter across the face of the same and just within the opening 13, whereby any of the shaved ice that enters the basin through that opening is prevented from passing up between the head of the plunger and back of the basin, substantially as described. 2nd. An ice-shaving instrument comprising a basin having an opening 13 in the bottom next to the back and having the back 10 with the lower part 11 extending forward from the upper part and the parts 12 projecting beyond the inner face of the part of the part 11, a knife or cutter 14 attached to the part 11 of the back and having its face flush with the faces of the parts 12 and projecting through the opening 13, a handle on the back, and a plunger composed of a head 4 within the basin and a stem extending into the handle, the lower part 40 of the head of the plunger conforming to the faces of the cutter and the parts 12 of the back, and the upper part 41 conforming to the upper part of the back, substantially as described. 3rd. An ice-shaver and scoop comprising a hollow body having an opening 13 in the bottom and the front section 20 of the top hinged to the main section, a knife or cutter projecting through the opening 13, a handle on the body, and a plunger whereby the contents of the body may be forced against the under side of the section 20, substantially as described. 4th. An ice-shaving instrument comprising a basin having an opening 13 in the bottom near the back and guides extending from the back past the opening 13 to the front part of the basin, a knife or cutter attached to the back and projecting through the opening 13, a handle on the back, and a plunger composed of a head within the basin and a stem extending into the handle, the head of the plunger having guide bearings adapted to engage the guides, and these guides and bearings being adapted to resist any upward pressure exerted against the plunger through or in front of the opening 13, substantially as described. 5th. An ice-shaving instrument comprising a basin 1 having an opening 13 in the bottom and grooves 18 extending from the back past the opening 13 to the front part of the basin, a knife or cutter attached to the back and projecting through the opening 13, a handle on the back, and a plunger composed of a head within the basin and a stem extending into the handle, the head of the plunger being provided with projections which slide in the grooves 18, substantially as described. 6th. An ice-shaver and scoop composed of a basin having its bottom and sides curved in cross-section from



one end of the basin to the other and its upturned edges parallel to each other behind the front portion of the basin, and having the front portion 16 curved both laterally and longitudinally and broadest next to the main part of the basin, and having an opening 13 in the bottom, and of a knife projecting through that opening, a handle on the back of the basin, and a removable cover having edges that are parallel to each other and adapted to engage the edges of the basin behind the portion 16, substantially as described. 7th. An ice-shaver and scoop, comprising the basin 1 having the back 10 and front portion 16 and opening 13, a knife fastened in the basin and projecting through the opening 13, a handle 3 on the back 10, and the cover 2 separable from the basin 1 and having in front of the main section the hinged section 20 adapted to cover the portion 16 of the basin, substantially as described. 8th. An ice-shaver and scoop, comprising a hollow body having an opening in the bottom, a knife or cutter projecting through that opening, a handle on the body, and a plunger extending into the handle and adapted to rest behind the front of the opening 13, the top of the body consisting of a cover 2 separable from the lower part and having the front section 20 thereof hinged to the main section, substantially as described. 9th. An ice-shaver and scoop, comprising a hollow body having an opening in the bottom, a knife or cutter projecting through that opening, a handle on the body, and a plunger extending into the handle and adapted to rest behind the front of the opening 13, the top of the body consisting of a cover 2 separable from the lower part and having the front section thereof hinged to the main section and having on the under side of the front section a projection 22, substantially as described. 10th. An ice-shaver and scoop, comprising the basin 1 having the back 10 and front portion 16 and opening 13, a knife fastened to the back 10 and projecting through the opening 13, a handle 3 on the back 10, the plunger composed of the head 4 within the body and the stem 44 extending into the handle, and the cover 2 separable from the basin 1 and having in front of its main section the hinged section 20 adapted to cover the portion 16 of the basin, substantially as described. 11th. An ice-shaver and scoop, comprising the basin 1 having the back 10 and front portion 16 and opening 13 and guides 18, a knife fastened to the back 10 and projecting through the opening 13, a handle 3 on the back 10, the plunger composed of the head 4 within the body and having projections adapted to slide in the guides 18 and of the stem 44 extending into the handle, and the cover separable from the basin 1 and having in front of its main section the hinged section 20 adapted to cover the portion 16 of the basin, and having on the under side of the front section a projection 22, substantially as described.

**No. 54,161. Musical Instrument. (*Instrument de musique.*)**



Neil Merrill, Oshkosh, Wisconsin, and Arthur William Jones, Pittsburg, Pennsylvania, both of U.S.A., 23rd November, 1896; 6 years. (Filed 28th April, 1896.)

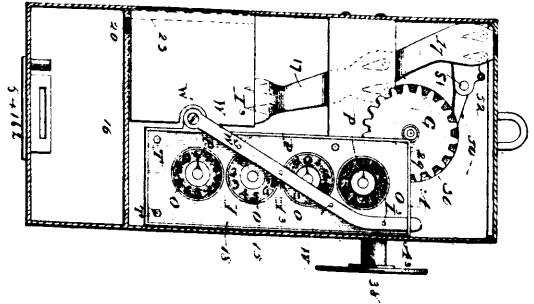
*Claim.*—1st. In a musical instrument, the combination of a rim, an independent head comprising a skin and suitable mounting and tightening devices therefor and detachable fastenings for securing the head to the rim, said head being adapted to be applied to or removed from the rim as a whole and without disturbing or loosening the skin, substantially as described. 2nd. In a musical instrument, the combination of a rim having an internal annular shoulder and an independent removable head comprising a rim having an annular projecting flange, a skin, and means for tightening the skin, the flange of the head-rim being adapted to engage the shoulder of the rim proper when the head is applied thereto, substantially as described. 3rd. In a musical instrument, the combination of a rim having an internal annular shoulder, and an inwardly extending annular flange at its upper edge, with an independent removable head comprising a rim having an annular projecting flange, a skin, a strainer-hoop, and means for tightening the strainer-hoop, the flange of the head-rim being adapted to engage the shoulder of the rim proper when the head is applied thereto, substantially as described.

**No. 54,162. Cash Box, etc. (*Boîte à argent, etc.*)**

John A. Mehling, Cleveland, Ohio, U.S.A., 24th November, 1896; 6 years. (Filed 14th October, 1896.)

*Claim.*—1st. In a coin or check collecting box, the combination with the final deposit receptacle, of a conduit provided with a series

of independent automatically interlocking dogs or blocks, substantially as described. 2nd. In a coin or check collecting box, the



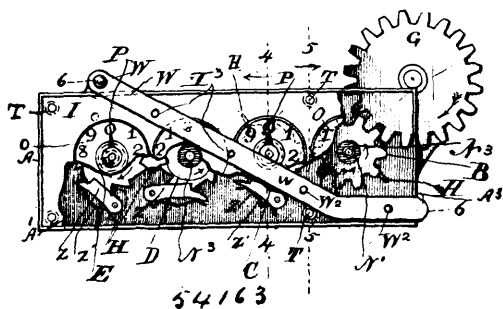
combination with a final deposit receptacle of a zigzag conduit, provided with a series of independent automatically interlocking dogs, substantially as set forth. 3rd. In a coin or check collecting box having the receiving opening in or near its upper end, and the final deposit receptacle formed in the lower part thereof, a zigzag conduit extending from said opening to said receptacle, and containing a series of automatically interlocking dogs or blocks, and a movable chute adjacent to a window, and the slotted part of said receptacle, in combination with suitable mechanism for the operation of said chute, substantially in the manner as and for the purpose set forth. 4th. In a coin or check collecting box, the combination with the final deposit receptacle, of a conduit provided with a series of independent automatically interlocking dogs or blocks, and a movable chute adjacent to a window and the slotted part of said receptacle, the said chute being operated substantially in the manner as and for the purpose set forth. 5th. In a coin or check collecting box, the combination with the final deposit receptacle, of a conduit extending in close proximity to the part containing the receiving opening and terminating in a movable chute controlling the access to said receptacle, a bell, a register, suitable mechanism in operative connection with said chute, bell and register, and a key adapted to actuate said mechanism, substantially in the manner as and for the purpose set forth. 6th. In a coin or check collecting box, the combination with the final deposit receptacle, of a conduit terminating in a movable chute controlling the access to said receptacle, a bell, suitable mechanism in operative connection with said chute and bell, and a key adapted to actuate said mechanism, substantially in the manner as and for the purpose set forth. 7th. In a coin or check collecting box, the combination with the final deposit receptacle, of a conduit comprising a movable chute, which controls the access to said receptacle, a register, suitable mechanism in operative connection with said chute and register, and a key adapted to actuate said mechanism, substantially in the manner as and for the purpose set forth. 8th. In a coin or check collecting box, a zigzag conduit containing opposite rows of pivotal independent dogs or blocks, and extending in open relation to an inspection chamber, in combination with a trap controlling communication of said chamber, the final deposit receptacle, and suitable mechanism for actuating said trap, substantially in the manner as and for the purpose set forth. 9th. In a coin or check collecting box, the combination with the final deposit receptacle, of a zigzag conduit containing opposite rows of pivotal independent dogs or blocks and terminating in an inspection chamber, a trap controlling access to said receptacle, and suitable mechanism to operate said trap, substantially in the manner as and for the purpose set forth. 10th. In a coin or check collecting box having the receiving opening in or near its upper end, and the final deposit receptacle formed in the lower part thereof, a zigzag conduit leading from said opening to an inspection chamber, and containing opposite rows of pivotal independent dogs or blocks, and containing opposite trap interposed between said chamber and said receptacle, and suitable mechanism to actuate said trap, substantially as and for the purpose set forth. 11th. In a coin or check collecting box, the combination with the final deposit receptacle, of a zigzag conduit terminating in a chamber having a transparent face and comprising a trap which controls the opening to said final deposit receptacle, and for the purpose set forth.

**No. 54,163. Register. (*Régistre.*)**

John Andrew Mehling, Cleveland, Ohio, U.S.A., 24th November, 1896; 6 years. (Filed 14th October, 1896.)

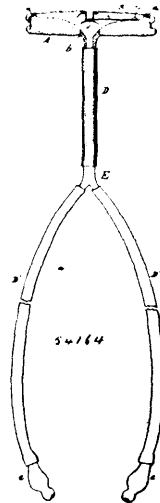
*Claim.*—1st. In a register, the combination of the registering wheels, inclosing case or box, a puncturing point upon each of said wheels, a record-receiving slip or card holder removably supported adjacent to the puncturing points and holding a slip or card which, or engaged by the puncturing points, bears dials adapted to be pierced for locking the aforesaid holder in its normal position and suitable means for retaining the locking device or mechanism in its locking position, the arrangement of parts being such that engagement between the puncturing points and the record-receiving slip or card must necessarily have been effected before the locking device or

mechanism can be actuated to unlock, substantially as set forth. 2nd. In a register, the combination of the registering wheels, in-



closing case or box, a puncturing point upon each of the registering wheels, a record-receiving slip or card holder removably supported adjacent to the puncturing points and holding a slip or card having a dial marked or printed thereon adjacent to each registering wheel, the dials on the slip or card being adapted to be pierced or engaged by the puncturing points, a bar or lever for locking said slip or card holder with the slip or card in position to be punctured or engaged by the puncturing points and suitable means for holding said arm or lever in its locking position, the arrangement of parts being such that the locking bar or lever cannot be released by the means adapted to hold it in its locking position until an engagement between the puncturing points and record-receiving slip or card is effected, substantially as set forth. 3rd. In a register, the combination of the registering wheels, a puncturing point upon each of the registering wheels, a record-receiving slip or card holder depressibly supported adjacent to the puncturing points and holding a slip or card that has a dial marked or printed thereon adjacent to each registering wheel, the dials on the slip or card being adapted to be pierced or engaged by the puncturing points, a bar or lever for locking said slip or card holder in its normal position, an arm or member overhanging and adapted to engage the outer side of said holder in the normal position of the latter, and the holder and aforesaid locking arm or lever being provided the one with one or more lugs or pins and the other with a corresponding number of holes or perforations for receiving said pins or lugs in the normal position of the holder, the arrangement of parts being such that the holder must be depressed in order to disengage said holes and pins or lugs and that, upon such depression of the holder, the aforesaid puncturing points shall perform their function, substantially as set forth. 4th. In a register, the combination of the registering wheels, a puncturing point upon each of said wheels, a record-receiving slip or card holder depressibly supported adjacent to the puncturing points and holding a slip or card which, adjacent to the registering wheels, bears dials adapted to be pierced or engaged by the puncturing points, springs acting in the direction to separate said holder from the puncturing points, suitable device or mechanism for locking the aforesaid holder in its normal position, and suitable means for retaining the locking device or mechanism in its locking position, the arrangement of parts being such that the record-receiving slip or card holder must be depressed to bring the slip or card carried thereby into engagement with the puncturing points before the aforesaid locking device or mechanism can be actuated to unlock, substantially as set forth. 5th. In a register, the combination of the registering wheels, inclosing case or box, depressible lid or cover for said box or case, a record-receiving slip or card having a dial marked thereon adjacent to each registering wheel, a puncturing point upon each registering wheel for marking upon the adjacent dial the number registered by said wheel, an arm or lever fulcrumed or pivoted at or near one end and adapted to engage the outer side of and lock the lid or cover in its closed position, and the inclosing box or case having an overhanging member the under side whereof is adapted to be engaged by said arm or lever in the locking position of the latter, and the lid or cover and said locking arm or lever being provided the one with one or more lugs or pins and the other with a corresponding number of holes for receiving said pins or lugs in the locking position of the arm or lever, the arrangement of parts being such that the lid or cover must be depressed in order to disengage said holes and pins or lugs and that, upon such depression of the lid or cover, the aforesaid puncturing points shall perform their function, substantially as set forth. 6th. In a register, the combination of the registering wheels, inclosing case or box, lid or cover for said box or case, pins or posts supporting said lid or cover, and springs supporting said posts or pins, record-receiving slip or card supported at the inner side of the lid or cover and having a dial printed or marked thereon adjacent to each registering wheel, a puncturing point upon each registering wheel for marking the number registered by said wheel upon the adjacent dial, suitable means for holding the lid or cover in its closed position, and suitable means that necessitates the depression of the lid or cover to bring the record-receiving card or slip carried thereby into contact with the puncturing points before the lid or cover can be released or removed, substantially as set forth.

No. 54,164. Stethoscope. (*Stéthoscope.*)

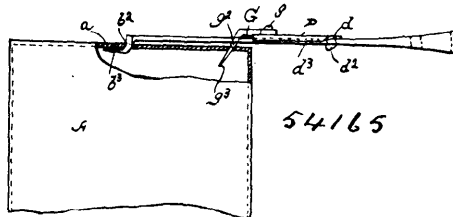


Daniel Brand Marsh, Blackheath, Ontario, Canada, 24th November, 1896; 6 years. (Filed 5th September, 1896.)

*Claim.*—1st. An apparatus for examining the condition of the heart, lungs, &c., consisting of a circular metallic disk concave on its inner surface, provided with a central opening, a pendant also concave at its inner mouth to correspond to the concavity of the disk, a flange formed on the upper edge of the disk having an outwardly bevelled edge, a diaphragm made to rest on said flange, and slightly convexed and held in that position by a bezel ring screwed down over the edge of the diaphragm and flange, the pendant being connected to the ear tips by rubber tubes, all constructed substantially as and for the purpose specified. 2nd. In combination with the disk A, the vibrating plate *b* attached to the inner surface of the disk, and to its outer end secured a convex shaped plate *j* to transmit and focus vibrations from the diaphragm B to the pendant and ear tips, substantially as specified. 3rd. In combination with the disk A and its accessories, the projection F on the diaphragm B, substantially as and for the purpose specified. 4th. In combination with the disk A and diaphragm B, the pendant C constructed concave at its large end, conforming to the concavity of the interior surface of the disk A and made to fit in the opening *b* of the said disk, substantially as and for the purpose specified. 5th. In combination with the disk and diaphragm, of the localizer *g* made secure to the centre of the diaphragm, substantially as and for the purpose specified. 6th. The combination of the disk A, having a bevelled flange on its upper edge, diaphragm B, vibrator *h* and plate *j* attached thereto, the pendant C, bezel ring securing the diaphragm in a convex shape, rubber tube D, and branches attached thereto, all constructed substantially as and for the purpose specified.

No. 54,165. Can Opener.

(*Machine à ouvrir les boîtes métalliques.*)



Daniel Hall, Locust Valley, New York, U.S.A., 24th November, 1896; 6 years. (Filed 14th October, 1896.)

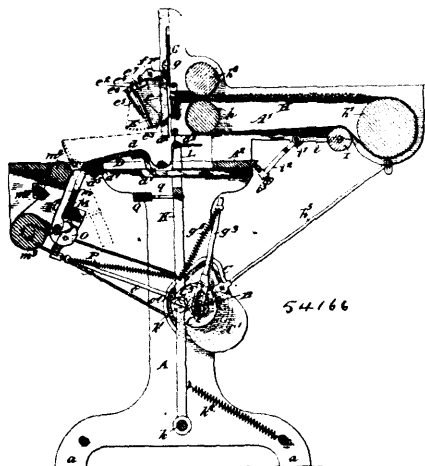
*Claim.*—An improved can opener, consisting of handle B, provided with a circular opening in its outer end, an integral depending pronged shank on the opposite end, and a longitudinal slot in the body of said handle, in which slot is fixed a sliding plate D, that is adjustably held in place by bolt and nut *d, d<sup>2</sup>* respectively, said plate D being provided with a reversible and removable arm G that is secured in place by pin or bolt *g*, and is provided with integral cutting blade *g<sup>2</sup>* that projects down through the slot in the handle B, and has fixed on it, below said handle, a cross-head *g<sup>2</sup>*, all constructed and arranged as herein shown and described.

No. 54,166. Cigarette Machine. (*Machine à cigarettes.*)

Hermann Handelbaum, assignee of James Henry Dunn, both of New York, State of New York, U.S.A., 24th November, 1896; 6 years. (Filed 22nd October, 1896.)

*Claim.*—1st. The combination with the feeding and rolling mechanism, the knife for severing the filler from the supply as it is fed and

means for operating the feeding and rolling mechanism and the knife, of a temporary receptacle for the filler, the said receptacle

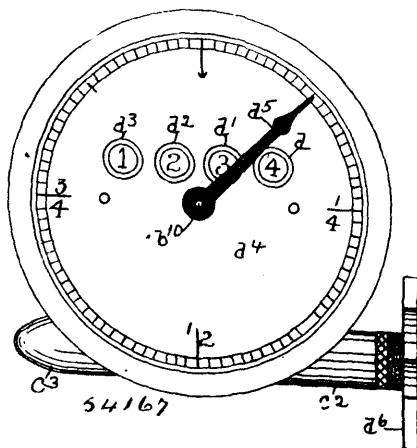


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having a stationary front and a swinging bottom and means under the control of the knife for swinging the bottom along the lower edge of the stationary front to crowd the filler against the stationary front and finally permit it to drop into engagement with the rolling mechanism, substantially as set forth. 2nd. The combination with the feeding and rolling mechanism, the knife for severing the filler from the supply as it is fed and means for operating the knife, of a temporary receptacle for the filler, comprising a permanent front plate, a swinging bottom, sides and top hinged to the front plate, a forwardly extended arm carried by the swinging parts, a spring between the said arm and the permanent front plate for normally holding the swinging bottom closed, a rearwardly extended arm, an operating nose carried by the knife and a trip lever adapted to be engaged by the nose and to engage the rearwardly extended arm for swinging the bottom forwardly to release the filler from the receptacle, substantially as set forth. 3rd. The combination with the rolling mechanism and the trimming blades, of a wiper under the control of the rolling mechanism to free the trimming blades from foreign substances, and means for operating the rolling mechanism, the trimming blades and the wiper, substantially as set forth. 4th. The feeding mechanism comprising an apron for carrying the substances to be fed, a ratchet-toothed wheel for actuating the apron, a vibrating arm carrying a pawl for engaging the ratchet-wheel and a guard consisting of a segment of an annular ring surrounding a portion of the periphery of the ratchet-toothed wheel, and means for clamping the guard in different fixed positions around the periphery of the ratchet-wheel to expose more or less of the ratchet-teeth to the pawl, substantially as set forth. 5th. The cigarette machine, comprising a suitable support, a feed mechanism, means for separating the filler from the supply advanced by the feed mechanism, a primary rolling mechanism, a secondary rolling mechanism, a trimming mechanism, a wiping mechanism, a single driving-shaft mounted in a supporting frame and direct connections between the several aforesaid mechanisms and the single driving-shaft for operating the said mechanisms at suitable intervals, substantially as set forth. 6th. The combination with the finishing rolling mechanism and a pair of stationary blades in position to sustain the cigarette after it is rolled, of movable trimming blades mounted to co-act with the stationary blades to trim the cigarette and means for actuating said blades, substantially as set forth. 7th. The combination with a primary rolling mechanism and a secondary or finishing rolling mechanism located in position to receive the cigarette from the primary rolling mechanism, of a trimming mechanism located in position to receive the cigarette from the secondary rolling mechanism to trim it, the said trimming mechanism comprising a pair of stationary blades for sustaining the cigarette after it has passed through the finishing mechanism, and a pair of movable trimming blades mounted to co-act with the stationary blades and means for actuating the several mechanisms at the proper times, substantially as set forth. 8th. The combination with the rolling mechanism and the trimming blades, of a wiper under the control of the rolling mechanism to free the trimming blades from foreign substances, and means for operating the rolling mechanism, the trimming blades and the wiper, substantially as set forth. 9th. The feeding mechanism comprising an apron for carrying the substance to be fed, a ratchet-toothed wheel for actuating the apron, a vibrating arm carrying a pawl for engaging the ratchet-wheel and a guard adjustable around the periphery of the ratchet-wheel to expose more or less of the ratchet-teeth to the pawl, as may be desired, substantially as set forth. 10th. The cigarette machine comprising a suitable support, a feed mechanism, means for separating the filler from the supply advanced by the feed mechanism, a primary rolling mechanism, a secondary rolling mechanism, a trimming mechanism, a single drive-shaft mounted in the supporting frame and connections

between the aforesaid mechanisms and single drive-shaft for operating the mechanisms at suitable intervals, substantially as set forth.

**No. 54,167. Cyclometer. (Cyclomètre.)**



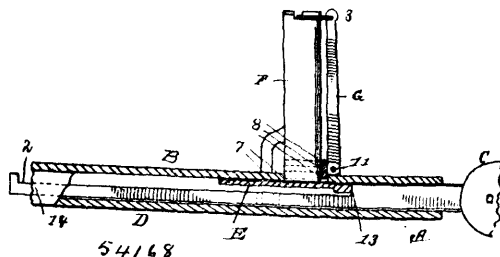
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John Washington Wilson, Boston, assignee of Charles Harold Clawson, Everett, both of Massachusetts, U.S.A., 24th November, 1896; 6 years. (Filed 16th October, 1896.)

*Claim.*—1st. A cyclometer, comprising the following instrumentalities, viz.:—a containing case of substantially small diameter provided with a dial having four openings arranged in a substantially straight line, four indicator discs located within the casing and arranged in a circle, one behind each opening, and each disc being provided with indications or numerals arranged at an angle to a radial line through the centre of the numeral, the two outside or endmost discs being located in a different plane from the two intermediate discs, and gearing to effect progressive rotation of the said discs, to thereby bring each numeral on each disc opposite its opening in the dial, whereby all the numerals will be substantially vertical to a transverse line through the openings in the dial, to thereby obtain a straight reading of the four numerals, substantially as described. 2nd. A cyclometer, comprising the following instrumentalities, viz.:—a containing case of substantially small diameter, a plate  $a^1$  located in said case, screws inserted through the bottom of the case to firmly secure the plate  $a^1$  within the said case, studs erected upon the plate  $a^1$  in the arc of a circle, sleeves upon the said studs, four indicating discs mounted on said sleeves, with the two outside or endmost discs in a different plane from the two intermediate discs, each disc being provided with numerals or indications arranged at an angle to a radial line through the centre of the numeral, gearing secured to the said sleeves to effect progressive rotation of the said indicating discs, a dial  $d^1$  within the casing, having four holes or openings arranged in a straight line and with each of which co-operates an indicating disc to obtain a straight reading of the four numerals brought in line with the said openings, substantially as described.

**No. 54,168. Staple Driver.**

(Appareil à chasser les crampes.)



54168

John R. Kline and Cyrus R. Frick, both of Clayton, Ohio, U.S.A., 24th November, 1896; 6 years. (Filed 15th October, 1896.)

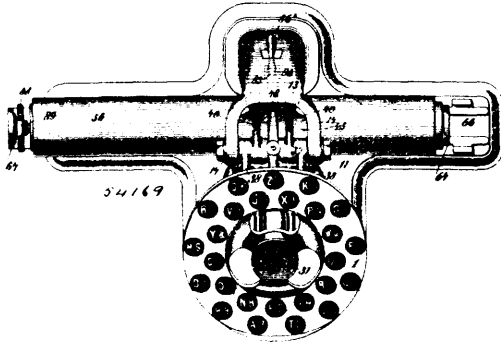
*Claim.*—The combination of the frame A provided with a vertical channel with chamfered edge near the forward end to turn the staple, the driving bar D, the feed plate E with its receiving orifice, and engaging lug, the fixed guide F and pivotal locking-arm G, held in a vertical position, substantially as described.

**No. 54,169. Typewriter. (Clavigraphie.)**

Frank Lambert, Brooklyn, New York, U.S.A., 24th November, 1896; 6 years. (Filed 15th October, 1896.)

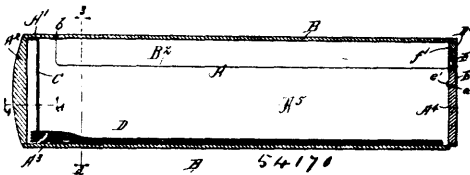
*Claim.*—1st. A typewriter having a nutating key and a type ring connected thereto, provided with two or more rows of type,

constructed and arranged so that a tilting of the key over a certain angle shall bring the type of one row into position to be acted upon



by a pressing device, and the tilting of the key in the same direction over a different angle shall bring another row of type into similar position. 2nd. A typewriter having a nutating key actuating a type ring constructed substantially as set forth, in combination with an adjustable stop for arresting and supporting said type ring at different angles of inclination. 3rd. A typewriter having a nutating key with pressure points thereon, in combination with mechanism as set forth for equalizing the effect of pressures exerted by the operator on said points. 4th. The nutating key provided with mechanism acting upon said key at its central support, and operating to return said key to normal position after tilting. 5th. The nutating key provided with three or more pressure points designated by variations in or on the key surface. 6th. The construction and arrangement of the type ring 4, having two or more rows of type and internal recesses, substantially as specified. 7th. A typewriter having a key nutating on a central support, and a paper carriage, the feed movement of which is controlled by the depression of said key and support.

**No. 54,170. Box File. (Boîte pour files)**

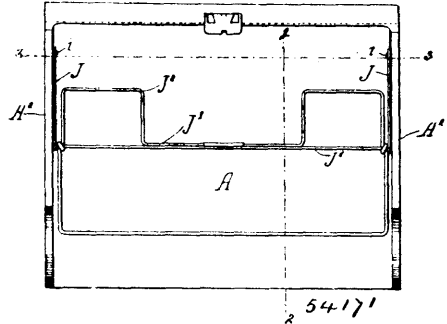


Felix Tremblay, Chicago, Illinois, U.S.A., 24th November, 1896; 6 years. (Filed 14th October, 1896.)

*Claim.*—1st. A holding device for file case index sheets, comprising a straight, resilient, sheet metal strip, the end portions of which are bent at right angles to the body of the strip and are provided with teeth which project outward in planes substantially parallel with the body of the strip, substantially as described. 2nd. A holding device for file case index sheets, comprising a straight, resilient, sheet metal strip, the end portions of which are bent at right angles to the body of the strip and extended from opposite sides of the same, said end portions being provided with teeth which project outward in planes substantially parallel with the body of the strip, substantially as described. 3rd. A holding device for file case index sheets, comprising a straight, resilient, relatively wide sheet metal strip or strap, the end portions of which are bent at right angles to the body of the strip and are provided with teeth which project in opposite directions in planes substantially parallel with the body of the strip, substantially as described. 4th. The combination with a file case, having a bottom wall and a top wall which forms an overhanging ledge, and a series of index sheets, of a holding device for the index sheets, comprising a straight, resilient, sheet metal strip, the end portions of which are bent at right angles to the body of the strip and which are provided with teeth adapted to engage the opposing surfaces of said bottom and top walls of the case, substantially as described. 5th. The combination with a file case having a bottom wall, and a top wall which forms an overhanging ledge, a series of index sheets within the case, each provided with a tag or projection at its margin provided with an elongated slot therein, of a holding device for the index sheets, comprising a straight, resilient, relatively wide sheet metal strip, the end portions of which are bent at right angles with the body portion of the strip, and provided at their end margins at the corners thereof with teeth adapted to engage the opposing surfaces of said bottom and top walls of the case, substantially as described. 6th. The combination with a file case body and lid, of a locking device, the members of which are made of sheet metal, one of said members being creased to form a transverse socket and having an inclined tongue, the other of said members having a main part adapted to be secured to the face of one member of the case, and being provided with a lip bent at right angles to the said main

part and adapted to engage said socket, substantially as described. 7th. The combination with a file case body and lid, of a catch consisting of two members, one of which is provided with a transverse socket, with an obliquely arranged tongue and with a prong adapted to be inserted through the wall of the case and clinched on the inside of the same, and the other member being provided with inturnd arms embracing the edge of the wall of the case, with an inturnd free edge extending between said arms and adapted for engagement with said recess, and a prong adapted to be inserted in the case wall, substantially as described. 8th. A catch for file cases, comprising a lower member E provided with a prong  $e^1$ , a recess  $e^2$ , and an inclined tongue  $e^3$ , and an upper member F having an exterior portion  $f_1$  provided with an inturnd prong  $f^1$ , an inturnd portion  $f^2$  provided with arms  $f^2$  and with a free edge or flange  $f^2$  extending between said arms, substantially as described.

**No. 54,171. Temporary Binder. (Reliure temporaire.)**

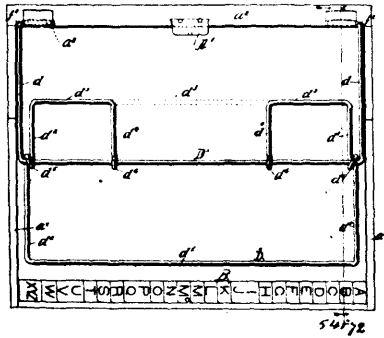


Felix Tremblay, Chicago, Illinois, U.S.A., 24th November, 1896; 6 years. (Filed 14th October, 1896.)

*Claim.*—1st. As a new article of manufacture, a sheet metal index clip for temporary binders, comprising a back-plate provided at its ends with integral forwardly extending top and bottom flanges, two vertical guide strips arranged in a plane parallel with the face of the back plate, said strips being integral with one of said flanges and detachably engaged with the other flange by a device releasable by a partial rotation of the end of the strip, substantially as described. 2nd. As a new article of manufacture, an index clip for temporary binders made of a single integral piece of sheet metal, and comprising a back plate provided at its ends with forwardly extending top and bottom flanges, parallel vertical guide strips struck forward from the back plate, the upper ends of said guide strips being left integrally connected with the body of the clip, and the lower ends of said guide strips being detachably engaged with the bottom flange, substantially as described. 3rd. As a new article of manufacture, an index clip made from a single integral piece of sheet metal, comprising a back plate and forwardly extending top and bottom flanges, parallel vertical guide strips struck forward from the back plate and integral with one of said flanges, and slots in the other flange for detachably engaging the free ends of said guide strips, substantially as described. 4th. As a new article of manufacture, an index clip for temporary binders comprising a back plate and forwardly extending top and bottom flanges, vertical parallel guide strips struck forward from the back plate and left integral with the top flange, and T-shaped slots extending into the bottom flange from the edge thereof, the lower ends of the guide strips being each provided with a narrowed portion of greater width than the slot openings but adapted to be passed through the same when the guide strips are twisted, substantially as described. 5th. The combination with the receptacle of a temporary binder or transfer case, having in its end wall a relatively wide vertical recess provided with laterally extending vertically arranged grooves, of an index clip, comprising a back plate adapted to fit within said groove, integral forwardly extending top and bottom flanges on said plate, the bottom flange being made narrower than the width of the base plate, and two vertical guide strips arranged in a plane parallel with the back plate, permanently secured to one of said flanges and detachably engaging the other flange, the distance apart of said guide strips being such as to leave spaces between their outer margins and the inner side faces of the recess in the transfer case, substantially as described. 6th. An integral sheet metal index clip, comprising the back plate  $B^1$ , the top and bottom flanges  $B^2$ ,  $B^3$ , guide strips  $B^4$ , and outwardly projecting lips  $b^3$  on the rear face of said back plate, substantially as described. 7th. An integral sheet metal index clip, comprising the back plate  $B^1$ , top and bottom flanges  $B^2$ ,  $B^3$ , guide strips  $B^4$ , and upper and lower tongues  $b^5$ ,  $b^6$ , substantially as described. 8th. An integral sheet metal index clip, comprising the back plate  $B^1$ , top and bottom flanges  $B^2$ ,  $B^3$ , parallel guide strips  $B^4$ , and upper tongue  $b^7$ , substantially as described. 9th. An integral sheet metal index clip, comprising the back plate  $B^1$ , top and bottom flanges  $B^2$ ,  $B^3$ , vertical guide strips  $B^4$ , laterally projecting lips  $b^3$  on the rear of the back plate, and tongues  $b^5$ ,  $b^6$ ,  $b^7$ , substantially as described. 10th. An integral sheet metal index

clip, comprising the back plate B<sup>1</sup>, top and bottom flanges B<sup>2</sup>, B<sup>3</sup>, parallel guide strips B<sup>4</sup>, an apertured tongue b<sup>2</sup>, substantially as described. 11th. The combination with a filling receptacle, of a presser frame, comprising a cross bar, recesses in the inner face of the end wall of the receptacle near the side walls thereof, springs within recesses formed by bending a single flat piece until its ends are brought nearly in contact, the ends of said springs being pointed upward, and the back portion of the spring being secured to the back of the recesses, pivot bearings for the radial arms on the rear portion of the springs, and forwardly extending crank portions on said arms adapted to engage the back of the front portions of the springs, substantially as described. 12th. An index clip made from a single piece of sheet metal and comprising a back plate, top and bottom forwardly extending flanges and a resilient guide strip extending from one flange to the other in front of and parallel with said back plate, said guide strip being integral with one flange, and detachably connected with the other by a device releasable by a torsional movement of the guide strip, substantially as set forth.

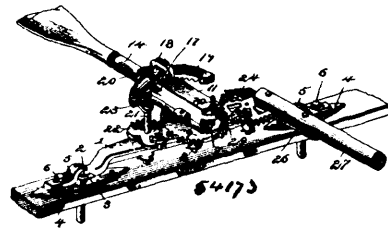
**No. 54,172. Filing Case. (Serre-papier.)**



Felix Tremblay, Chicago, Illinois, U.S.A., 24th November, 1896; 6 years. (Filed 14th October, 1896.)

*Claim.*—1st. In a filing receptacle having a vertical recess arranged on the inner face of its back wall, the combination, with a spring-pressed bail-arm pivotally secured in said recess, of a plate covering said recess, a leaf spring mounted on said plate, and an anti-friction roller secured to the end of said bail-arm, substantially as and for the purpose specified. 2nd. The combination, with a filing receptacle or box adapted for the filing of loose papers therein, and a movable bail adapted to rest on said papers, of vertically arranged recesses in the back of said box, plates secured to the said box and covering said recesses, a leaf spring secured to said plate within said recesses, arms connected at one end to said movable bail and pivotally secured at the other end to said plate, and a crank formed by bending the last mentioned end of said arms and located between the rear of the plate and said spring in contact with the latter, substantially as described. 3rd. As a new article of manufacture, the device for securing the swinging arm of a bail to a filing receptacle or box, consisting of the plate provided at one end with an integral extension having a right angled depending flange, vertical side pieces, and top and bottom brackets extending rearwardly from said plate to form supports for the actuating spring, said side pieces being provided with journal bearings for the end of the bail arm, all of said parts being stamped out of a single piece of metal, substantially as described. 4th. The combination of a recess in the front part of the back wall of a filing receptacle, a plate removably secured to said back wall and adapted to cover said recess, integral brackets or supports extending rearwardly from said plate into said recess, a spring mounted in said brackets, a bail supporting arm secured at its end within said recess and provided with a bend or crank portion positioned between said plate and said spring in engagement with the latter, substantially as described. 5th. In a filing receptacle having a recess in its back wall, a plate covering said recess and a bail supporting arm pivotally secured in said recess, the combination with a spring for actuating said bail arm provided at its ends with a tongue narrower than the width of the spring, of brackets or supports in said recess provided with apertures of less width than the spring but sufficiently wide to accommodate the tongue thereof, substantially as and for the purpose described. 6th. In a filing box, the combination of the box A, spring-pressed arms d pivotally secured thereto, cross bar D<sup>1</sup>, and the bail D consisting of a single piece of wire having the front side d<sup>1</sup>, and arms d<sup>2</sup> pivotally secured to the cross bar D<sup>1</sup> by the loop d<sup>3</sup>, rear side sections d<sup>3</sup>, ends d<sup>4</sup> also united to said cross bar D<sup>1</sup> by loops d<sup>5</sup>, substantially as and for the purpose described. 7th. The combination with the filing receptacle A, provided with index-sheets B, of a bail D and supporting arms, means for pivotally securing said arms to said receptacle, comprising a plate C, having an aperture c<sup>1</sup>, integral top extension c<sup>2</sup> and flange c<sup>3</sup>, integral side pieces c<sup>4</sup>, c<sup>5</sup>, each having a journal bearing, as f, and integral supports E<sup>1</sup>, of means for normally pressing said bail on said index-sheets comprising a spring E mounted on said supports E<sup>1</sup> and engaging said arms, substantially as specified.

**No. 54,173. Bow Facing Oar. (Rames.)**

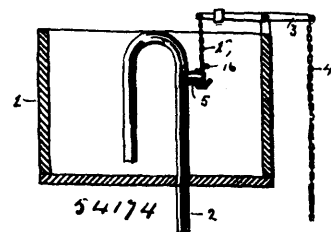


Otto Schmieke, Three Lakes, Wisconsin, U.S.A., 24th November, 1896; 6 years. (Filed 15th October, 1896.)

*Claim.*—1st. The combination with an oar made in two sections, of a gear arranged at the inner end of the outer section, and having said inner end journaled thereon, a driving segment meshing with said gear and carrying the inner section of the oar, one or more teeth on said outer section, and a feathering segment engaging said teeth and serving to feather the oar during its stroke, substantially as described. 2nd. The combination with an oar made in two sections, of a toothed gear having the inner end of the outer section journaled thereon, a driving segment meshing with said gear and carrying the inner oar section, one or more teeth on said outer section, a feathering segment engaging said teeth for feathering said outer section, and a spring for preserving the engagement between said feathering segment and the teeth on the outer oar section, substantially as described. 3rd. The combination with the intermediate gear having the bearing box rigidly mounted thereon, of the oar socket revolvably mounted therein and provided with one or more teeth, the oar rigidly mounted in said socket, a driving segment carrying the handle section of the oar and meshing with the intermediate gear, another segment meshing with the intermediate gear on the opposite side, and a toothed segment connected thereto and engaging the teeth on the oar socket, substantially as and for the purpose described. 4th. The combination with the intermediate gear carrying the bearing for the oar socket, of the oar socket journaled therein and provided with one or more teeth working through an aperture therein, a driving segment arranged at one side of said gear and carrying the handle section of the oar, another segment arranged at the opposite side of said gear and driven thereby, the feathering segment connected to the last named segment and meshing with the teeth on the oar socket, the U-shaped guard on the bearing box of the oar socket, and the spring arranged between said guard and the feathering segment, all arranged for joint operation, substantially as described. 5th. The combination with the oar socket having a pin socket formed therein, of the bearing box in which said oar socket is mounted provided with a pin opening with which the pin socket is adapted to be brought into alignment, and the locking pin adapted to be inserted through the opening in the box and into the oar socket for holding the latter from turning, substantially as described.

**No. 54,174. Siphon Valve for Water Tanks.**

(Soupape de siphon pour citernes à eau.)

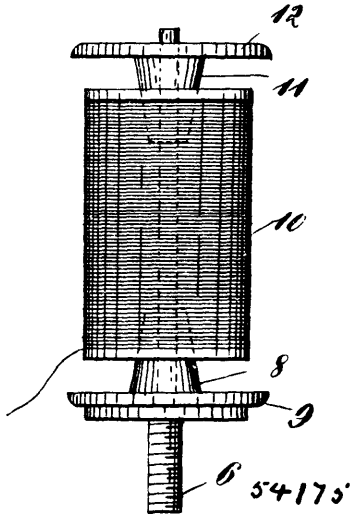


Myron H. Wilcox and Charles Kautz, jr., Chillicothe, Missouri, U.S.A., 24th November, 1896; 6 years. (Filed 23rd October, 1896.)

*Claim.*—1st. A valve consisting of a cylinder, a plate arranged to swing in a vertical plane and close the end of said cylinder, a guide carried by said cylinder and designed to move said plate outwardly as it is moved upwardly. 2nd. In combination with the siphon-pipe of a tank, a valve-cylinder tapped into the longer leg of said pipe, and a plate arranged to swing upwardly and outwardly over the open end of said valve-cylinder. 3th. In combination with a siphon-pipe of a tank, a valve-cylinder tapped into the longer leg of the pipe within the tank, a weighted plate arranged to swing in a vertical plane and close the end of the valve-cylinder, a guide carried by the valve cylinder for causing the weighted plate to move outwardly simultaneous with its upward movement, and means for operating said weighted plate. 4. A siphon-valve for closet tanks, constructed with a valve-cylinder, a packing-ring located in the face or said valve-cylinder, an arm formed integral with and projecting laterally from the forward end of said cylinder, stops ar-

ranged on top of the bottom of the forward end of said cylinder, a link pivoted to the outer end of the integral arm, and a weighted circular plate hinged to the free end of the link and arranged to close upon the packed end of the valve-cylinder. 5th. A siphon-valve, constructed with a valve-cylinder 8 arranged to be fixed to the siphon pipe, an annular packing-ring located in the forward end of the valve-cylinder, an arm formed integral with and projecting laterally from the forward end of said cylinder, a link pivoted upon the outer end of said arm, a weighted plate hinged to the free end of the link, a stop arranged at the bottom and forward end of the valve cylinder upon which the weighted plate normally engages, and a guide carried by the upper forward end of the valve-cylinder, the same extending upwardly and outwardly from said cylinder. 6th. A valve consisting of the cylinder 5, the arm 6 attached to said cylinder, the packing-ring 8 seated in the front face of said cylinder, the link 10 pivotally connected to said arm 6, the plate 11 hinged to the free end of said link, the stop 14 fixed to the under side of the forward end of said cylinder, and the guide-stop 15 fixed to the top and outer end of said cylinder.

**No. 54,175. Spool Attachment for Sewing Machines.**  
(*Attache de bobines pour machines à coudre.*)



Helen Louisa Webster, Wellesley, Massachusetts, U.S.A., 25th November, 1896; 6 years. (Filed 15th October, 1896.)

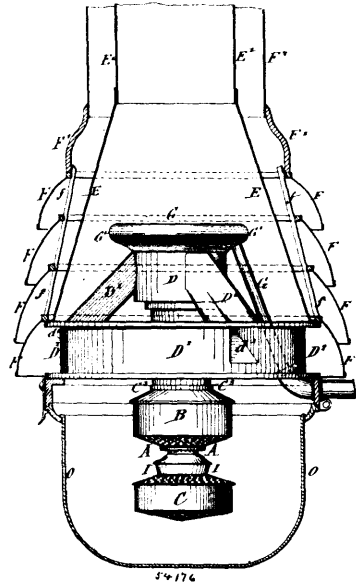
*Claim.*—1st. In a spool support for sewing machines, the combination with the pin as 5, which is adapted to be secured to the machine, of a conical tubular support as 8, provided with a circular base as 9, and an auxiliary conical tubular holder as 11, provided with a circular head as 12, said parts being adapted to operate substantially as shown and described. 2nd. A spool support for sewing machines, consisting of a pin rigidly secured to the machine, and a conical support mounted thereon and adapted to revolve thereon, said support being provided at its lower end with a circular base which is equal to or greater in diameter than the end of the spool, substantially as shown and described. 3rd. A spool support for sewing machines, consisting of a pin rigidly secured to the machine and a conical support mounted thereon and adapted to revolve thereon, said support being provided at its lower end with a circular base which is equal to or greater in diameter than the end of the spool, and an auxiliary holder which is adapted to be mounted on said pin at the upper end thereof and adapted to revolve thereon, said auxiliary holder being conical in form and adapted to be inserted into the upper end of the spool, and having a circular head equal to or greater in diameter than the end of the spool, substantially as shown and described. 4th. A spool support for sewing machines, which is adapted to be mounted on the usual pin connected therewith, said support consisting of a conical tubular portion, which is provided with a circular base, the diameter of which is equal to or greater than that of the end of the spool, substantially as shown and described. 5th. The herein described device for supporting spools of thread on sewing machines, which consist of a tubular device adapted to be mounted on the pin with which the machines are provided, said device being adapted to revolve on said pin, and being also adapted to support a spool, and being provided with a conical tubular portion having a circular base, the diameter of which is equal to or greater than that of the end of the spool, substantially as shown and described.

**No. 54,176. Regenerative Gas Lamp.**  
(*Lampe à gaz régénératrice.*)

Jules Dawson, Lyndhurst, N.-w Jersey, U.S.A., 25th November, 1896; 6 years. (Filed 15th October, 1896.)

*Claim.*—1st. The combination, with an annular gas-burner, of an annular deflector, located below said burner and provided with an

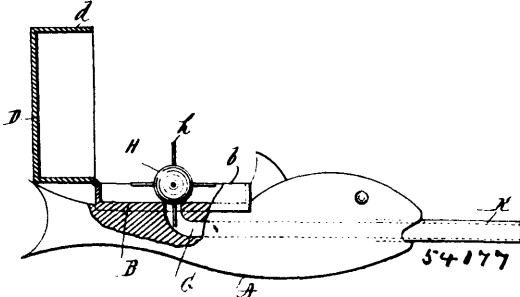
annular concave groove and a convex portion below said groove, substantially as set forth. 2nd. The combination with an annular gas-



burner, having a step-shaped lower portion provided with openings in the horizontal and vertical faces of the lower portion, of a deflector, provided with an annular concave groove, a convex outer portion and a circumferential edge, substantially as set forth. 3rd. The combination, with an annular gas-burner, of an annular deflector below the same, having a grooved upper part and a conical lower part, air-supply chambers having inclined or converging perforated surfaces adjacent to the burner, means for supplying gas to the burner, and air to the air-supply chambers, substantially as set forth. 4th. The combination, with an annular burner, having a step shaped lower portion provided with two sets of openings arranged at right angles with each other, of an annular deflector arranged below the burner, and air-supply chambers arranged respectively above the burner and below the deflector, said air-supply chambers being provided with inclined or converging perforated portions for supplying the required amount of air for the proper combustion of the gas emitted by the burner, substantially as set forth. 5th. In a regenerative gas-lamp, an annular burner provided with a central tubular portion and a lower step-shaped portion having gas-openings in its adjacent surfaces arranged at a suitable angle with each other so that the gas-jets emitted through said openings impinge against each other and form one flame, substantially as set forth. 6th. The combination, of an annular gas burner, an annular deflector located below said burner, a lower air-supply chamber having an inclined perforated surface, located below the deflector, an upper air-supply chamber extending around the upper portion of the burner and provided with an inclined and perforated surface, an interior and exterior air-supply tube connected respectively with the lower and the upper air-supply chamber, an air-chamber connected with the upper ends of the air-supply tubes, and inclined air channels extending from the supporting ring of the lamp-chimney to the air-chamber for supplying the air required for combustion to the air-supply chambers, substantially as set forth. 7th. The combination, of an annular gas-burner, a deflector below said burner, an upper and lower air-supply chamber having converging and perforated surfaces, an air-chamber at the upper part of the lamp, an exterior and interior air-supply tube connecting said air-chamber with the air-supply chambers above and below the burners, a gas-chamber above the upper air-chamber, inclined air-tubes for supplying air to the upper air-chambers, a gas-tube for supplying gas to the gas-chamber, gas-tubes connecting the gas-chamber with the burner, and a chimney extending around the upper air and gas-chambers for conducting off the products of combustion, substantially as set forth. 8th. The combination, of an annular burner, a deflector below the same, air-supply chambers located respectively above and below the burner and a reflector, and provided with inclined or converging air-supply openings, an air-chamber at the upper part of the lamp, an exterior and interior air-tube connecting the air-chamber with the upper and lower air-supply chambers, a chimney-supporting ring having openings, air-channels extending from the ring to the air-chamber, a gas-chamber above said air-chamber, an angular ring below the chimney-supporting ring, gas-tubes extending from the angular ring to the gas-chamber, gas supply-tubes extending from the air-chamber to the burner, and a chimney for conducting off the products of combustion, substantially as set forth. 9th. The combination, of an annular burner, a deflector below said burner, an upper and a lower air-supply chamber located respectively above and below said burner, and deflecting air-tubes for supplying air to the upper and lower air-supply chambers, an air-chamber communicating with the upper ends of the air-supply

tubes, a gas chamber located above said air-chamber, gas-tubes for connecting the gas-chamber with the burner, a chimney for conducting off products of combustion, ventilating cones extending around said chimney, and an exterior cylinder connected with said ventilating cones so as to draw off the vitiated air from the top of the car and deliver it to the atmosphere. substantially as set forth.

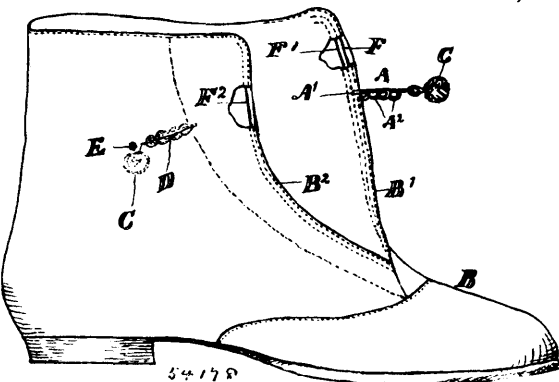
**No. 54,177. Toy. (Jouet.)**



Frank Raymond Treasure, Brooklyn, New York, U.S.A., 25th November, 1896; 6 years. (Filed 21st October, 1896.)

*Claim.*—1st. A toy comprising a body portion having a central longitudinal bore or passage which extends from one end partway therethrough, and which opens upwardly a ball or spherical body which is placed upon the opening of said bore or passage, substantially as shown and described. 2nd. A toy comprising a body portion having a central longitudinal bore or passage which extends from one end partway therethrough, and which opens upwardly and a ball or spherical body which is placed upon the opening of said bore or passage, said ball or spherical body being provided with radial pins, substantially as shown and described. 3rd. A toy comprising a body portion having a central longitudinal bore or passage which extends from one end partway therethrough, and which opens upwardly and a ball or spherical body which is placed upon the opening of said bore or passage, said ball or spherical body being provided with radial pins, and said opening being provided with a cover, substantially as shown and described. 4th. A toy comprising a body portion, having a central longitudinal bore or passage which extends from one end partway therethrough, and which opens upwardly and a ball or spherical body which is placed upon the opening of said bore or passage, said ball or spherical body being provided with radial pins, and said opening being provided with a cover, and the central bore or passage provided at its outer end with a tube or pipe, substantially as shown and described.

**No. 54,178. Shoe Fastener. (Attache de chaussure.)**



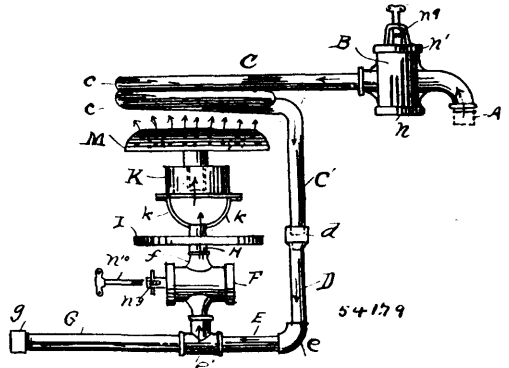
Leonard A. Fortier, St. Scholastique, Quebec, Canada, 25th November, 1896; 6 years. (Filed 27th October, 1896.)

*Claim.*—1st. A shoe fastener, comprising an arm formed with a series of loops and adapted to be connected with the overlapping flap of the shoe to swing thereon, and a hook adapted to be engaged by one of the said loops, substantially as shown and described. 2nd. A shoe fastener, comprising a hook adapted to be fastened to the under flap of the shoe, and an arm connected at one end with the overlapping flap to swing thereon, the said arm being formed with a series of loops for engagement with the hook, and a bar extending in front of the loops to protect the said hook when engaged by one of the loops, substantially as shown and described. 3rd. A shoe fastener, comprising a hook adapted to be fastened to the under flap of the shoe, and an arm connected at one end with the overlapping flap to swing thereon, the said arm being formed with a series of loops for engagement with the said hook, and a bar extending in front of the loops to protect the said hook when engaged by one of the loops, and a handle having a loose connection with the said bar,

substantially as shown and described. 4th. A shoe provided in the edges of its flaps with reinforcing wires extending from the top of the flaps to the joint thereof, substantially as shown and described. 5th. A shoe provided in the edges of its flaps with reinforcing wires extending from the top of the flaps to the joint thereof, one of the wires in the overlapping flap being extended transversely of the said joint, substantially as shown and described. 6th. I claim, finally, the use of my invention as a globe fastener, similarly.

**No. 54,179. Hydrocarbon Burner.**

(Foyer à hydro-carbures.)

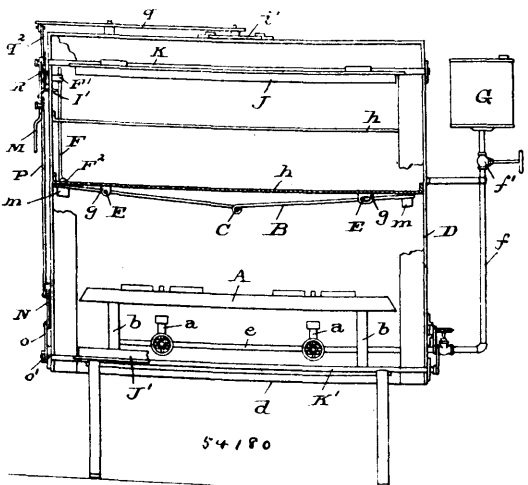


Wilbert J. Jackman, Lima, Ohio, U.S.A., 25th November, 1896; 6 years. (Filed 23rd October, 1896.)

*Claim.*—1st. In a hydrocarbon burner, the combination with a burner, and a retort, of a condensing tube through which the vapour passes to the burner, and a supplemental pipe or tube communicating at one end with the condensing tube, and closed at its opposite ends, and adapted to receive globules of unvaporized oil which are carried past the vapour discharging orifice, said condensing tube being of relatively smaller diameter than its inlet and discharge connection. 2nd. In a hydrocarbon burner, the combination with a vaporizing retort, of a burner proper comprising an upper perforated plate, and a lower plate, constituting an expansion chamber, a central inlet for combined vapour and air in said lower plate, an annular hood arranged below the burner proper, a delivery pipe extending through the top of the hood and communicating with the inlet of the burner proper and a pipe provided with a jet orifice through which vapour is supplied to the delivery pipe.

**No. 54,180. Safety Casing for Gasoline Stoves.**

(Enveloppe de sûreté pour poêle à gazoline.)

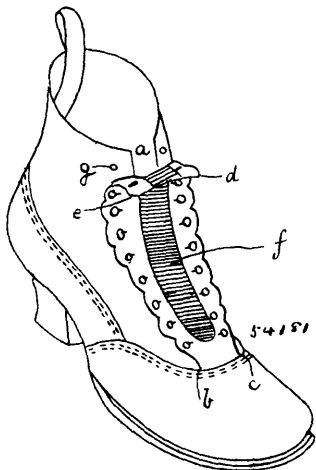


John Anton Ruth, Baltimore, Maryland, U.S.A., 27th November, 1896; 6 years. (Filed 6th November, 1896.)

*Claim.*—1st. In a safety case for enclosing oil stoves, the combination of a case having self-closing doors, a catch to hold the doors open, a movable diaphragm in the case and adapted to be moved by the expansion which ensues when an explosion occurs, and connections between the movable diaphragm and said catch, whereby when an explosion occurs the catch will be released from the doors and the latter will be closed automatically. 2nd. In a safety case for enclosing oil stoves, the combination of a case having doors provided with means for closing them, means for holding the doors open, a diaphragm hung in the case on pivots and nearly counterpoised, and connections leading from the said diaphragm to the said means which holds the doors open,

whereby when an explosion occurs the diaphragm will be shifted thereby causing the doors to be closed automatically. 3rd. The combination of a casing, an oil stove enclosed in the said casing, a door or doors for the casing, and means including a movable diaphragm for closing said door or doors when an explosion occurs within the casing, as set forth.

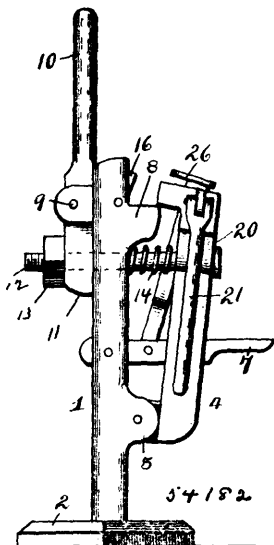
**No. 54,181. Method of Fastening Boots and Shoes.**  
(Attache de chaussures.)



Henry Spencer Haddland, 24 Cromwell Road, Montpelier, Bristol, England, 27th November, 1896; 6 years. (Filed 5th November, 1896.)

*Claim.*—1st. A fastener for boots, shoes or the like, consisting essentially of a flap or tongue having inserted within its width and extending through the whole or a portion of its length, a piece of elastic material, the said flap or tongue being attached to the boot or shoe by one or two of its edges and being provided with button holes or other arrangements, whereby it can be fastened down on to the buttons or their equivalents attached to the boot or the like, substantially as described in the above specification, and exemplified in the accompanying drawing.

**No. 54,182. Device for Forming Heel Calks on Horse-Shoes.**  
(Appareil pour faire les crampons de fer à cheval.)

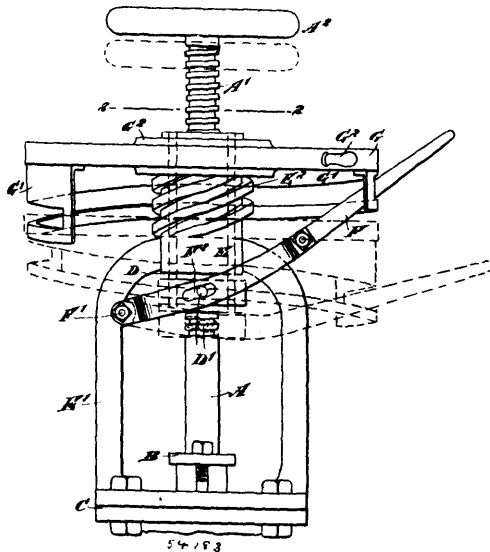


Philip M. Framer, Clear Lake, Iowa, U.S.A., 27th November, 1896; 6 years. (Filed 5th November, 1896.)

*Claim.*—1st. In a device of the character set forth, the combination with a standard or upright, having an upsetting tool thereon, of a horse-shoe supporting bar pivoted thereto, a clamp on the upper end of said supporting bar, and means for drawing said bar towards said upright and bringing the projecting end of said horse-shoe into engagement with said tool, substantially as and for the purpose described. 2nd. In a device of the character set forth, the combination with an upright or standard, having an upsetting tool in the upper end thereof, of a horse-shoe supporting bar pivoted to

said upright, a clamp adapted to engage the sides of the horse-shoe blank, a clamp for engaging the top surface of said horse-shoe blank, both located at the upper end of said supporting bar, and means for drawing said supporting bar toward said upright and bringing the projecting end of said horse-shoe into engagement with the upsetting tool, substantially as and for the purpose described. 3rd. In a device of the character set forth, the combination with an upright or standard, having an upsetting tool at the upper end thereof, of a horse-shoe supporting bar pivoted to said upright, a lever fulcrumed to said upright, engaging one end of a bolt attached to said supporting bar, a foot lever fulcrumed to said upright and projecting through a slot in said supporting bar, a spring for normally holding said foot lever in its raised position, a rod pivoted to said foot lever projecting upwardly therefrom and formed with a head overlapping the upper end of said supporting bar and constituting a clamp for the top surface of the horse-shoe blank, a shifting clamping plate movable in guides in the upper end of said supporting bar, and a lever fulcrumed to the side of said supporting bar for operating the same, all arranged substantially as and for the purpose described. 4th. In a device of the character set forth, the combination with an upright or standard, having an inwardly projecting ledge or shoulder near its upper end, a recess in the side of said standard, just above said ledge or shoulder, an upsetting tool fitting within said recess made up of a plate having a projection on its rear surface, and a spring for normally urging the upper end of said plate outwardly, of a horse-shoe supporting bar pivoted to said upright or standard and having a slot within, a foot lever fulcrumed to said upright and projecting through said slot, a spring for normally holding said foot lever in its raised position, a bolt passing through said upright, and said supporting bar having a head thereon which engages said bar, and a nut upon its opposite end, a spring surrounding said bolt and engaging the inner surfaces of said upright and said bar, a lever fulcrumed on the outside of said upright having bifurcated lower ends which surround said bolt and engage the nut thereon, a rod pivoted to said foot lever extending upwardly therefrom and formed with a head which overlaps the upper end of said supporting bar, and constituting a clamp for the top surface of the horse-shoe, a clamping plate slidingly mounted on the upper end of said supporting bar, and a lever for operating said sliding plate fulcrumed upon the side of said supporting bar, substantially as and for the purpose described.

**No. 54,183. Valve.** (Soupape.)



Sidney Winfield Sampson and Stephen J. Dauphinee, both of Hudson, Massachusetts, U.S.A., 27th November, 1896; 6 years. (Filed 13th November, 1896.)

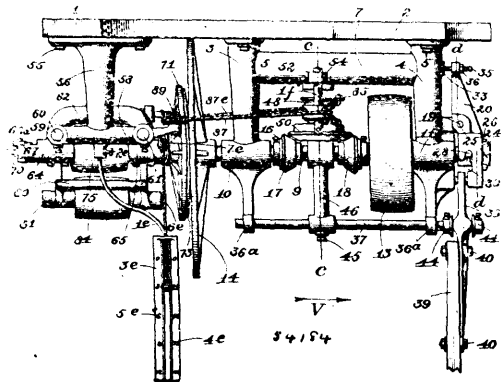
*Claim.*—1st. A valve, provided with a nut in which screws the valve stem, the said nut being arranged for movement in the direction of the axis of the valve stem, and a lever under the control of the operator and engaging the said nut, to lock the latter against longitudinal movement and to shift the nut and the valve stem, the latter having movement in the said nut independent of the said lever, substantially as shown and described. 2nd. A valve, provided with a cam wheel arranged for movement in the direction of the axis of the valve stem, and a lever controlled by the said cam, and connected with the nut of the valve stem, substantially as shown and described. 3rd. The combination with a valve stem having a threaded portion, of a nut in which screws the said threaded portion of the valve stem, a lever for shifting the said nut and stem, and a cam wheel engaging the said lever and arranged to turn and to move in the direction of the axis of the said valve stem, substantially as shown and described. 4th. The combination with



a fixed bearing, of a nut fitted to slide in the said bearing, and adapted to engage the threaded portion of the valve stem, a cam wheel screwing on the said bearing, and a lever connected with the said nut and engaged by the said cam wheel, substantially as shown and described. 5th. The combination of a yoke, a valve stem having a threaded portion, a nut wherein the threaded portion of the valve stem screws, and an adjustably mounted lever carrying the nut and arranged when moved, to move the nut in the direction of the axis of the valve stem, substantially as set forth. 6th. The combination of a yoke, a valve stem having a threaded portion, a nut in which the threaded portion of the valve stem is arranged to screw, a lever pointed on the yoke of the casing and connected with the nut, and means to hold the lever adjustably in position, said lever carrying the nut and being arranged to move the nut in the direction of the axis of the valve stem, substantially as set forth. 7th. The combination of a yoke, a valve stem having a threaded portion, a nut in which the threaded portion of the valve stem is arranged to screw, a bearing on the yoke in which the nut is longitudinally movable, a dog having engagement with the nut to hold the same against longitudinal movement, and a lever connected to and arranged when moved, to move the same out of engagement with the nut, to permit the nut to be moved longitudinally in its bearing, substantially as shown and described. 8th. The combination of a yoke, a valve stem having a threaded portion, a nut in which the threaded portion of the valve stem is arranged to screw, a bearing on the yoke in which the nut is longitudinally movable, a dog having engagement with the nut to hold the same against longitudinal movement, and a lever connected to and arranged to move the dog out of engagement with the nut, said lever being also connected to the nut and arranged to move the same longitudinally when released from said dog, substantially as set forth. 9th. The combination of a yoke, a valve stem having a screw-threaded portion, a nut in which the threaded portion of the valve stem is arranged to screw, a bearing on the yoke in which the nut is arranged to move longitudinally, a dog arranged to engage the nut to hold the same against movement, a pivoted lever connected to and arranged to move the nut longitudinally, and a keeper carried by the lever arranged to engage said dog and move the same out of engagement with the keeper, substantially as set forth. 10th. The combination of a yoke, a valve stem arranged between the yoke and having a threaded portion, a nut in which the threaded portion of the valve stem is arranged to screw, a bearing carried on the yoke and in which bearing the nut is longitudinally guided and movable, a lever pivotally connected with the yoke and embracing and pivotally connected to the lower end of the said nut, and means for securing said lever adjustably in position, substantially as set forth.

**No. 54,184. Variable Speed Countershaft.**

(*Contre-arbre à vitesse variable.*)



Martha White, assignee of Britain Holmes, both of Buffalo, New York, U.S.A., 27th November, 1896; 6 years. (Filed 5th November, 1896.)

*Claim.*—1st. In a frictional gearing, the combination with two discs, the operative faces of which are unobstructed and at a slight angle to each other and contact only on a line, the line of contact of one of the discs being always at the same distance from its centre, while the line of contact of the other disc may be varied, of means for relatively moving said disc so that one may pass entirely across the face of the other one, whereby the speed and direction of the gearing may be changed at will, substantially as set forth. 2nd. In a friction gearing, the combination with two discs, the operative faces of which are unobstructed and at a slight angle to each other, and contact only on a line, of means for moving one of the discs toward and away from or entirely across the face of the other disc, whereby they may be placed in or out of operative position and the speed and direction be changed at will, substantially as set forth. 3rd. In a variable speed countershaft, the combination with supporting hangers, of a driving shaft mounted in suitable boxes in said hangers, a driving disc at one end of said shaft, an arm pivoted

to the rear hanger, a yielding spring engaging with said arm, a box pivoted in said arm below its pivotal centre, a thrust bearing connecting said arm with the opposite end of the driving shaft, a toggle joint having one end of its members located within a recess in the lower end of the pivoted arm, and the other member having one end located in a recess in the lower portion of the rear hanger, and a pivoted shifting bar having depressions at each side of its top end, in which are located the two opposite ends of the toggle joint bars for moving the driving shaft and its driving disc away from the driven disc, substantially as described. 4th. In a variable speed countershaft, the combination with a driving friction disc, its driving shaft and operating mechanism, of a supporting frame, a slideway mounted thereon at right angles to the driving shaft, a sliding guide mounted on said slideway, a driving pulley and a driven disc, a disc on said carriage facing the driving disc at a slight incline thereto so that a portion of one side only is in contact therewith, two driving bevel wheels on the driving shaft, a vertical shaft between said wheels, a bevel driven wheel, and winding drum mounted thereon, cords or cables connecting the winding drum with the driven disc carriage, and a pivoted shifting bar and its connecting mechanism for moving the driven bevel wheel to or in engagement with one or the other driving bevel wheel, and thereby causing a movement of the driven disc on the face of the driving disc, for the purposes described. 5th. A variable speed countershaft, the combination of a supporting frame, a driving shaft capable of a rotary movement in its bearings, two bevel driving wheels and a driving friction disc mounted on said shaft, in combination with a supporting frame, a transverse slideway, a carriage thereon, a driven friction disc mounted in said carriage on said slideway at a slight incline to the one face of the driving disc so that the portion only on one side of its centre is in frictional contact therewith, a driven bevel wheel, means connecting it with the driven disc carriage, a shifting bar, and means for bringing said driven bevel wheel into engagement with one or the other bevel driving wheels on the driving shaft, and thereby causing a movement of the driven friction disc on the face of the driving friction disc, substantially as described. 6th. In a variable speed countershaft, the combination of a depending supporting frame, a driving shaft mounted thereon capable of a longitudinal and rotative movement in its bearings, a driving disc rigidly secured to the forward end of said shaft, an arm pivoted to the rear frame piece, a spring for moving said arm on its pivotal centre in one direction, means for adjusting the force of said spring, a pivoted box, a thrust bearing connecting the lower end of said arm with the rear end of the driving shaft, and a shifting bar and connecting mechanism for moving the pivoted arm in an opposite direction against the force of said spring, and thereby operating the driving disc, substantially as described. 7th. In a variable speed countershaft, the combination with the driven disc carriage and a slideway on which it travels, of a clamping device, a spring for closing the same and holding the carriage to the slideway at any point to which it may be adjusted, a carriage-releasing bar and means for operating it and opening the clamp and releasing the carriage and moving the latter, substantially as described. 8th. In a variable speed countershaft, the combination with the driven disc carriage and slideway upon which it slides back and forth, of a pivoted clamping bar and a closing spring for locking the driven disc carriage when adjusted to the desired point, and means substantially as above described, whereby the driven disc carriage is released just prior to being moved and instantly locked the moment the desired adjustment is made. 9th. In a friction gearing, the combination with two rotatable discs, the operative faces of which are unobstructed and at a slight angle to each other, so that a portion of one disc at an invariable distance from its centre is in contact with the face of the other disc over which it is movable, of means for moving it toward or from the centre or entirely across the face of said disc, whereby the speed or direction of the gearing may be changed, substantially as set forth.

**No. 54,185. Steam Exhaust.**

(*Appareil d'évacuation de la vapeur.*)

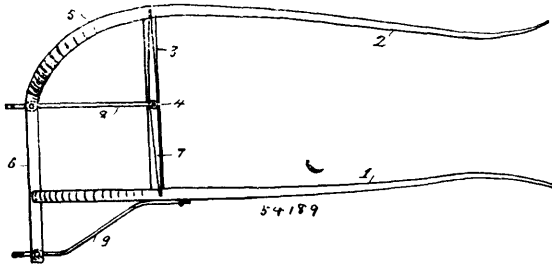
Wilhelm Schmidt, Ballinstedt, Anhalt, Germany, 27th November, 1896; 6 years. (Filed 7th November, 1896.)

*Claim.*—1st. The method of exhausting the energy of superheated steam in the cylinders of all types of steam-engines, without detriment for the same, consisting in regulating the inlet temperature of the superheated steam according to the degree of filling of the cylinder or cylinders of the engine or engines, in such a manner, that the great st part of the work done by the steam at each stroke of the piston is done by dry steam, whereas a rest of the work is done by expanding saturated steam, for the purpose of working under preservation of the sliding surfaces of the cylinder or cylinders and the piston or pistons of said engine or engines. 2nd. A mode of application of the method claimed under head 1, to be employed especially when letting expanding steam act one time only, consisting in using the quantity of heat which is in excess over the degree of superheating as corresponds to the degree of filling either for increasing the temperature of steam having a lower temperature than the superheated steam, and being admixed thereto, or in any other useful way. 3rd. An arrangement for automatically executing the method claimed under head 2, in which wet steam is admixed to the superheated steam by the mediation of a regulator, or a valve-



dress shield provided with a cord around its edge united thereto by a row of stitches passing through the edge of the shield and the cord, substantially as described.

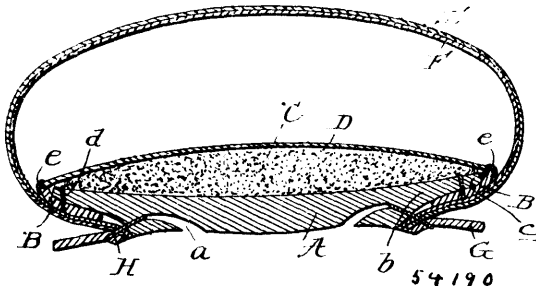
**No. 54,189. Thill for Vehicles. (Limonière.)**



John Wallace, Houghton, and Henry Harry Mergan, Jacobsville, both in Michigan, U.S.A., 27th November, 1896; 6 years. (Filed 9th November, 1896.)

*Claim.*—In thills for vehicles, the combination of the cross bar 3, the off thill 1, having its rear end bent downwardly from the point of its contact with the cross bar 3, and secured to the rear part of the near thill intermediate of the extreme end of the near thill and the rear portion of the shaft iron 8, the said shaft iron 8 secured to said cross bar 3 by the whiffletree bolt 4 and curved downwardly to the point of contact with the rear part of the near thill 2 and then run directly backward for attachment to the running gear of the vehicle, the said near thill 2 curving downwardly and inwardly from its point of contact with said cross bar 3 to the point of contact with said shaft iron 8, and then horizontally at a right angle therewith beyond the rear end of the thill 1 to and forming a support for the shaft iron 9, said shaft iron 9 attached at its front end to thill 1 and curved downwardly and outwardly to the point of contact with said thill 2, near its extreme rear end, and thence directly rearward for attachment to the running gear of the vehicle, substantially as shown and described.

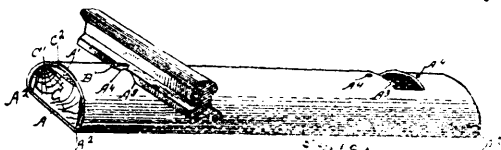
**No. 54,190. Welt Shoe. (Chaussure.)**



Adam Reed, Saint Joseph, and George J. Winter, Buffalo, New York, both in the U.S.A., 27th November, 1896; 6 years. (Filed 9th November, 1896.)

*Claim.*—The herein described shoe consisting of the leather insole A, having the under cut a, in its under side and also having such under side skived to form the thin edge portion c, the tape B, resting partly beneath and flat against the thin edge portion c, of the insole, the vertical stitches d, taking directly through and connecting the tape B, and the thin edge portion of the insole A, the cushion sole C, arranged upon the upper side of the insole A, the soft leather cover D, arranged upon the cushion sole, connecting the contiguous edges of the tape B, and cover D, and serving to draw the tape tight against the insole, the upper E, lapped against the tape B, the welt G, laid against the lapped portion of said upper and the single line or row of stitches H, separate from the stitches c, and connecting the undercut portion of the insole A, the upper and the welt, all as and for the purpose set forth.

**No. 54,191. Railroad Tie. (Traverse de chemin de fer.)**

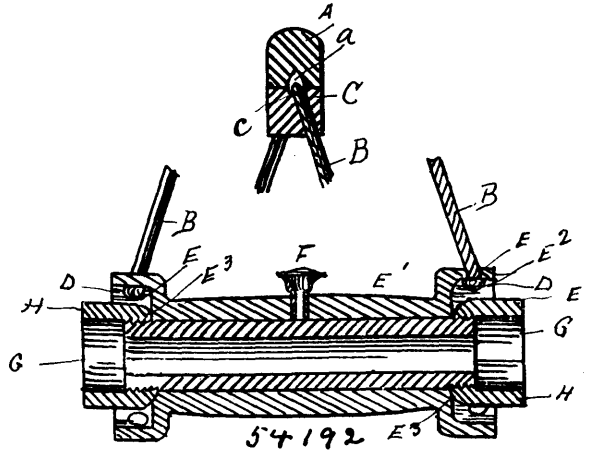


Orville W. Brown, Hayt's Corners, New York, U.S.A., 27th November, 1896; 6 years. (Filed 9th November, 1896.)

*Claim.*—1st. A railroad tie consisting of a tube or case having a flat base and rounded top, a block or blocks fitting therein having their bottom and upper corners engaging, respectively, the bottom and top of the tube. 2nd. A railroad tie consisting of a case or box

having an upper rounded portion provided with rail seats or sockets, a block or bar fitting in said case and having a flat surface below the seats in the rounded portion of the case to form a flat bed for the rails, and fastenings for securing the rails to the case and block. 3rd. A railroad tie consisting of a substantially round case or box having seats or sockets therein for the rails, a substantially rectangular block or blocks fitting in said case or box, and fastenings for securing the rails to the case and block. 4th. In a railroad tie, the combination of the box or case having seats therein, the block fitting in said case to provide spaces between it and the case, the rails having their base fitting in the seats of the case and resting on the block, and the spikes passing through the case into the block, having their heads engaging the base of the rail, and arranged at an angle or diagonally to each other.

**No. 54,192. Vehicle-Wheel. (Roue de voiture.)**



John Lind, Astoria, Illinois, U.S.A., 27th November, 1896; 6 years. (Filed 9th November, 1896.)

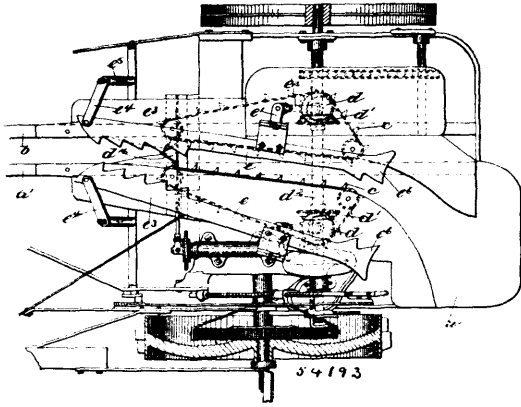
*Claim.*—1st. A wheel of the character described, comprising a boxing having projecting flanges provided with perforations and a boxing provided with thimbles secured within the casing and spokes and a tightening device, consisting of metallic pieces adapted to embrace the opposite ends of the parted felly and a screw for filling the space between the sections on the ends of the felly and a wedge having a depression Q, adapted to be secured beneath the screw, substantially as described. 2nd. A wheel of the character described, comprising a boxing having projecting flanges provided with perforations and a boxing provided with thimbles secured within the casing and spokes and a tightening device, consisting of metallic pieces adapted to embrace the opposite ends of the parted felly and a screw for filling the space between the sections on the ends of the felly and a wedge provided with lips, and a depression Q, adapted to be secured beneath the screw, substantially as described. 3rd. In a tightening device for wheels, the combination of a tap and washer, adapted to fit between the parted felly, embracing it at opposite ends, with a device for holding the washer and tap apart and a wedge adapted to fit between the washer and the tap and provided with permanent lips O, and projecting lips P at the opposite end which are adapted to be upset, substantially as described. 4th. In a tightening device for wheels the combination of a tap and washer, provided with recesses p, p, adapted to fit between the parted felly, embracing it at opposite ends, with a device for forcing tap and washer apart and a wedge adapted to fit between the washer and tap and provided with permanent lips O, and projecting lips P at the opposite end which are adapted to be upset. 5th. A tap provided with a screw-threaded hole and a flange at its rear and adapted to embrace the end of the felly and a washer provided with a depression L at one side and a flange M at the opposite side, in combination with a tightening screw L adapted to screw into the stationary tap and which is also adapted to fit within the recess L in the washer, and wedge N provided with a depression Q adapted to fit between the tap and the washer, substantially as described.

**No. 54,193. Corn Harvester. (Moissonneuse de blé d'indé.)**

D. M. Osborne & Company, assignee of Charles Stephen Sharp, both of Auburn, New York, U.S.A., 27th November, 1896; 6 years. (Filed 7th November, 1896.)

*Claim.*—1st. In a corn harvester, a pair of feeding chains adapted to receive the corn between them and feed it along, and clearing devices located adjacent thereto and moving alternately to push the corn away from said chains, substantially as described. 2nd. In a corn harvester, feeding mechanism for the corn having as a co-operative part of it a continuously moving feeding chain, and an intermittently clearing device therefor located adjacent thereto and adapted to push the corn away from the chain, substantially as described. 3rd. In a corn harvester, a pair of continuously moving

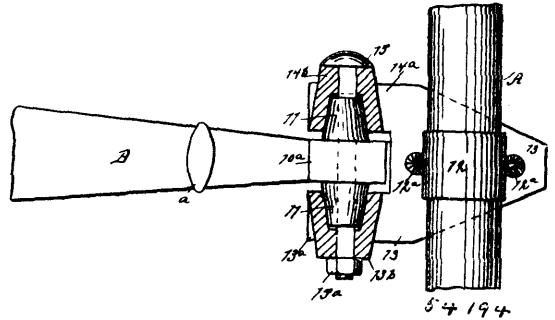
feeding chains adapted to receive the corn between them and feed it along, and a pair of feed-chain-clearing devices located adjacent to



said feed chains and moving intermittently and alternately to push the corn away from one and then away from the other feed chain, substantially as described. 4th. In a corn harvester, a pair of feeding chains adapted to receive the corn between them and feed it along, and a pair of reciprocating clearers located close to said chains, substantially as described. 5th. In a corn harvester, a pair of feeding chains adapted to receive the corn between them and feed it along, and a pair of four-motion clearing plates for said feeding chains located adjacent thereto to clear them of weeds, etc., substantially as described. 6th. In a corn harvester, in combination with upper or stalk-feeding devices, of a pair of butt-feeding chains adapted to receive the corn between them and co-operate with said stalk-feeding devices in feeding it along, and clearing devices for said butt-feeding chains, and means for moving them in and out to disentangle the weeds, etc., from said chains, substantially as described. 7th. In a corn harvester, feeding chains adapted to receive the corn between them and feed it along, and a pair of reciprocating clearing plates located close to said chains for removing weeds, etc., therefrom, said plates having teeth on their adjacent edges, substantially as described. 8th. In a corn harvester, feeding chains adapted to receive the corn between them and feed it along, a pair of clearing plates for said chains having toothed extensions in advance of the feeding chains, means for moving said clearing plates inwardly to remove the weeds, etc., from the feeding chains, and to engage the corn in advance of said feeding chains, and for moving them rearwardly to feed the corn along into engagement with said feeding chains, substantially as described. 9th. In a corn harvester, the combination of a pair of gathering arms, a laterally confined passageway forming a continuation of the passageway between said gathering arms, a cutter crossing the passageway, and a binder at the rear, upper or stalk-feeding devices, a pair of butt-feeding chains at opposite sides of said laterally confined passage extending from the cutter toward the binder, and a pair of clearing plates for said butt-feeding chains having forward extensions in advance of the cutter provided with teeth, and means for moving said plates to the cutter and butt feeding chains, substantially as described. 10th. In a corn harvester, wherein the corn is feed along a laterally confined passageway to a binder, a cutter, and continuously operating butt-feeding chains which terminate adjacent said cutter and which engage the butts of the corn and assist in feeding said corn along the passageway, and reciprocating toothed plates which engage the butts of the corn in said passageway in advance of said butt-feeding chains and draw them into engagement with and across the cutter and deliver them cut to said butt-feeding chains, substantially as described. 11th. In a corn harvester, wherein the corn is fed along a laterally inclined passageway to a binder, a cutter, butt-feeding devices which terminate adjacent the cutter and which engage the butts of the cut corn and assist in feeding said corn along said passageway, and two alternately operating toothed plates which engage the butts of the corn in said passageway in advance of said butt-feeding devices and draw them into engagement with and across the cutter and deliver them to said butt-feeding devices, substantially as described. 12th. In a corn harvester, wherein the corn is fed along a laterally confined passage to a binder, a cutter, butt-feeding devices which terminate adjacent the cutter, which engage the butts of the cut corn and assist in feeding said corn along said passageway, and two alternately operating toothed plates located at opposite sides of said passageway which alternately engage the butts of the corn in said passageway in advance of said butt-feeding devices, moving them against one and then against the other wall of said passageway and drawing them into engagement with and across the cutter and delivering them cut to said butt-feeding devices, substantially as described. 13th. In a corn harvester, feeding chains adapted to receive the corn between them and feed it along, a pair of clearing plates for said chains, having toothed extensions beyond the rear of the feeding chains, means for moving said clearing plates inwardly to disengage weeds, etc., from said feeding chains and for moving them rearwardly to pack the corn into the

binder, substantially as described. 14th. In a corn harvester, a pair of feeding chains adapted to receive the corn between them and feed it along, clearing plates therefor having toothed extensions in advance of and also beyond the rear of said feeding chains, and means for operating said clearing plates, substantially as described.

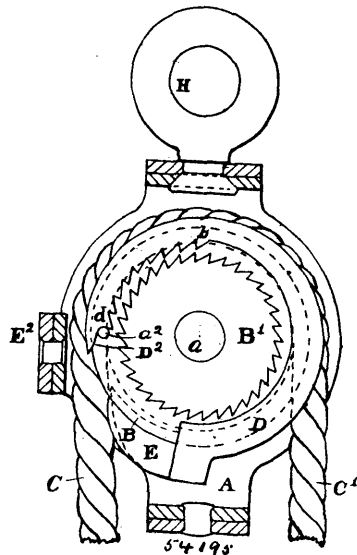
**No. 54,194. Thill Coupling.** (*Armon de limonière.*)



Peter Bold, Woodburne, New York, U.S.A., 27th November, 1896; 6 years. (Filed 9th November, 1896.)

*Claim.*—A thill coupling, comprising the combination of a clip, an upper clip plate having two openings respectively and snugly receiving the terminals of the clip and having also a socket, a lower clip plate pivotally mounted on one terminal of the clip and having an arc-shaped slot movable on the remaining terminal, the lower clip plate also having a socket co-operating with the upper clip plate, and a thill strap having oppositely projected and transverse trunnions respectively mounted in the sockets of the upper and lower clip plates, substantially as described.

**No. 54,195. Automatic Clutching Pulleys.** (*Poulie automatique.*)



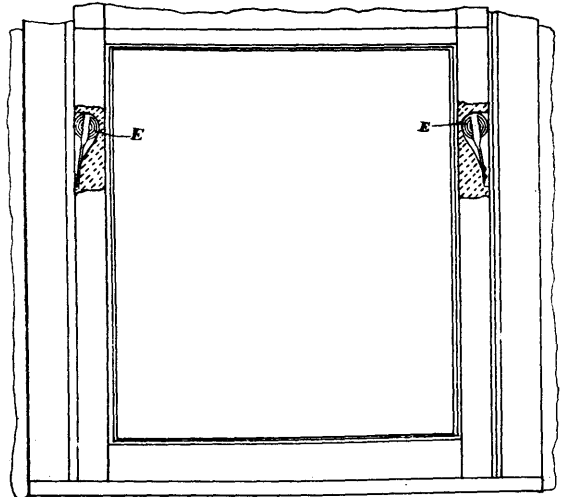
John N. Starr, Snohomish, Washington, U.S.A., 27th November, 1896; 6 years. (Filed 9th November, 1896.)

*Claim.*—1st. The combination with a pulley, and a fixed holding block just outside of the pulley rim, of a movable wedge block located to bear against the underside of a hoisting rope between the pulley and rope, and means actuated by the backward rotation of the pulley for forcing the wedge under the rope so as to wedge the rope between the fixed and movable blocks, substantially as shown and described. 2nd. The combination with a pulley, a ratchet-wheel fixed to one side thereof, and a fixed holding block just outside the pulley rim, of a movable wedge block lying in the pulley groove beneath the hoisting rope and adapted to bear against the underside of the rope, and a dog attached to the wedge block by which said block may be engaged with the ratchet-wheel and forced under the rope, substantially as shown and described. 3rd. The combination with a pulley, a ratchet-wheel fixed to one side thereof, and a fixed holding block just outside the pulley rim, of a circularly shaped arm or dog encircling the ratchet-wheel and having one or more teeth at one end to engage said ratchet-wheel, and a wedge block attached to the other end and lying in the pulley groove, substantially as shown and described. 4th. The combination with a pulley, a ratchet-wheel fixed to one side thereof, and a fixed holding block just outside of the pulley rim, of a wedge block lying in the pulley groove, a supporting and operating arm or dog therefor, and means for engaging and disen-

gaging said arm or dog with the ratchet-wheel, substantially as shown and described. 5th. The combination with a pulley, a ratchet-wheel fixed to one side thereof, and a fixed holding block just outside the pulley rim, of a circularly shaped arm or dog encircling the ratchet-wheel and having one or more teeth upon one end to engage the ratchet-wheel so as to be carried around thereby, a wedge block attached to the outer end and lying in the pulley groove, and a pin fixed in the path of the toothed end of the circular dog so as to engage it and hold it away from the ratchet-wheel, substantially as shown and described. 6th. The combination with a pulley, a ratchet-wheel fixed to one side thereof, a fixed holding block just outside the pulley rim, and a movable wedge block between the pulley and the rope having a smooth toe adjacent to the rope, of a circular arm or dog attached at one end to the heel of and supporting the movable wedge block and surrounding the ratchet-wheel, one or more teeth upon the other or free end adapted to engage the ratchet-wheel and thereby carry the wedge block under the rope, and means operated by contact of the rope with the toe of the wedge block to hold the tooth disengaged from the ratchet-wheel, substantially as shown and described. 7th. The combination with a pulley, a ratchet-wheel fixed to one side thereof, a fixed holding block just outside the pulley rim, and a movable wedge block between the pulley and the rope having a smooth toe adjacent to the rope, of a circular arm or dog attached at one end to the heel of and supporting the movable wedge block and surrounding the ratchet-wheel, one or more teeth upon the other or free end adapted to engage the ratchet-wheel and thereby carry the wedge block under the rope, a pin in the path of the free end of the circular arm or dog to disengage it from the ratchet-wheel, the toe of said wedge block being adapted to be engaged by the rope so as to hold the tooth of the circular arm or dog thus disengaged while the rope is being paid out, substantially as shown and described. 8th. The combination with a pulley, a ratchet-wheel fixed to one side thereof, a fixed holding block just outside the pulley rim, and a movable wedge block between the pulley and the rope having a smoothed toe adjacent to the rope, of a circular arm or dog attached at one end to the heel of and supporting the movable wedge block and surrounding the ratchet-wheel, one or more teeth upon the other or free end adapted to engage the ratchet-wheel and thereby carry the wedge block under the rope, a stop to limit the backward rotation of the wedge block, and means operated by contact of the rope with the toe of the wedge block to hold the tooth disengaged from the ratchet-wheel, substantially as shown and described. 9th. The combination with a pulley and a fixed holding block located just outside the pulley rim, of a wedge block supported in the pulley groove between the pulley and rope, and means for locking it to the pulley so as to be revolved thereby when desired, substantially as shown and described. 10th. The combination with a pulley and a fixed holding block located just outside the pulley rim, of a wedge block supported in the pulley groove between the pulley and rope, and having a tendency to be carried along by the backward rotation of the pulley and adapted to be held back by the side resistance of the rope when under tension, substantially as shown and described. 11th. The combination with a pulley, a ratchet-wheel fixed to one side thereof, and a fixed holding block just outside the pulley rim, of a circularly shaped arm or dog encircling the ratchet-wheel and having a number of teeth upon its inner surface extending from its free end and adapted to engage the ratchet-wheel, and a wedge block attached to the other end of the circular arm and lying in the pulley groove, substantially as shown and described. 12th. The combination with a pulley, a ratchet-wheel fixed to one side thereof, and a fixed holding block just outside the pulley rim, of a circularly shaped arm or dog encircling the ratchet-wheel and having a hook or sloping point on its free end, a pin attached to the casing and in the path of the said hook so as to engage it and support the free end of the arm clear of the ratchet-wheel, a series of teeth upon the inner surface of the curved arm or dog extending from the free end thereof approximately one-quarter of the circle, and a wedge block attached to the other end of the curved arm and lying in the pulley groove with its toe adjacent to the rope, substantially as shown and described. 13th. The combination with a pulley, a ratchet-wheel fixed to one side thereof, a fixed holding block just outside the pulley rim, and a pin fixed to the casing and extending inwardly therefrom just outside the ratchet-wheel, of a curved arm or dog encircling the ratchet-wheel and having a series of teeth on its inner surface next the free end of a sloping point at the free end adapted to engage the said fixed pin and hold the extremity of the arm clear of the ratchet-wheel, a wedge block lying in the pulley groove and attached to the opposite end of the curved arm or dog, said curved arm or dog bearing normally upon the ratchet-wheel at that extremity of the said series of teeth farthest removed from the free end of the arm, and means controlled by the side pressure of the rope for lifting and holding the arm clear of the ratchet-wheel at all points, substantially as shown and described. 14th. The combination with a pulley, a ratchet-wheel fixed to one side thereof, a fixed holding block just outside the pulley rim, and a pin fixed to the casing and extending inwardly therefrom just outside the ratchet-wheel, of a curved arm or dog encircling the ratchet-wheel and having a series of teeth on its inner surface next the free end and a sloping point at the free end adapted to engage the said fixed pin and hold the extremity of the arm clear of the ratchet-wheel, a wedge block lying in the pulley groove and attached to the opposite end of the curved arm or dog,

said curved arm or dog bearing normally upon said ratchet-wheel at that extremity of the said series of teeth removed from the free end of the arm, said wedge block having a toe adjacent to the rope and adapted to be engaged thereby to lift and hold the curved arm clear of the ratchet-wheel at all points, substantially as shown and described.

**No. 54,196. Sash Holder. (Arrête croisée.)**

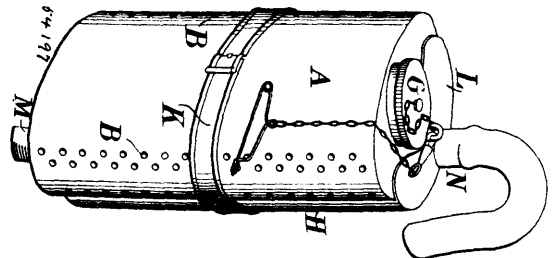


Willard E. Dowling, Pocono, Pennsylvania, U.S.A., 28th November, 1896; 6 years. (Filed 10th November, 1896.)

*Claim.*—1st. A sash balancing attachment, comprising a spring-actuated drum designed to be rotated by friction or other contact with an aligned surface, suitable bearings therefor, and a spring suitably held and designed to give an outward thrust of the drum upon the co-acting surface, as and for the purpose specified. 2nd. A sash balancing attachment, comprising a hollow drum, a helical spring located in the drum, a bearing boss having a slit to receive the inner end of the spring, means on the internal periphery of the drum for securing the opposite end of the spring, bearing brackets for supporting the boss and a flat spring connected to the lower end of the bearing brackets suitably secured in position and designed to exert an outward thrust upon the drum, as and for the purpose specified. 3rd. A sash balancing attachment, comprising a hollow drum, a helical spring located in the drum, a bearing boss having a slit to receive the turned end of the spring, means on the internal periphery of the drum for securing the opposite end of the spring, bearing brackets for supporting the boss, a mortised recess to receive the drum, and a flat spring connected to the lower end of the bearing brackets suitably secured in position at the lower end of the recess and designed to exert an outward thrust upon the drum, as and for the purpose specified. 4th. In combination, the hollow drum, having one face forming part thereof, the bracket C having a boss c extending through the centre hole of such face, the bracket C' having a hole C<sup>2</sup> to receive the reduced end c' of the boss c, the inwardly extending reverse L-shaped projections C<sup>2</sup> and C<sup>3</sup>, the flat spring D and the screw 4 extending through the holes in the projections and fastening the upper end of the spring in position, as and for the purpose specified.

**No. 54,197. Pocket Stove and Air Warmer.**

(Poêle de poche et réchaud d'air.)



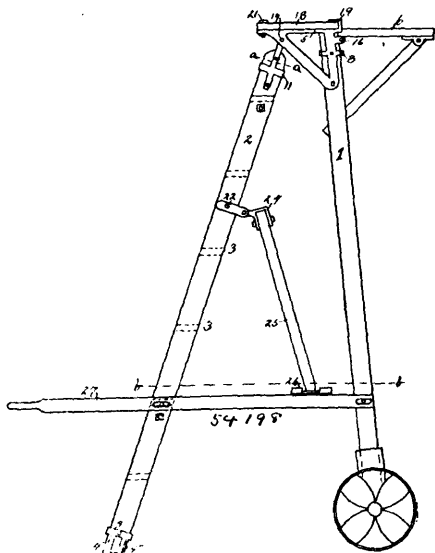
The Right Honourable Douglas Mackinnon Baillie Hamilton Cochrane, Earl of Dundonald, 34 Portman Square, London, England, 28th November, 1896; 6 years. (Filed 14th November, 1896.)

*Claim.*—1st. A pocket stove, comprising a metallic casing with perforations, internal linings of metallic gauze and incombustible fabric, a hole with screw cover chained to the casing, and a catch also chained to the casing, substantially as described. 2nd. In com-

bination with a pocket stove such as is above referred to, an air warmer, adapted to be attached to the casing and provided with flexible air tubes, substantially as described.

**No. 54,198. Portable Step Ladder.**

(Echelle à marches portative.)

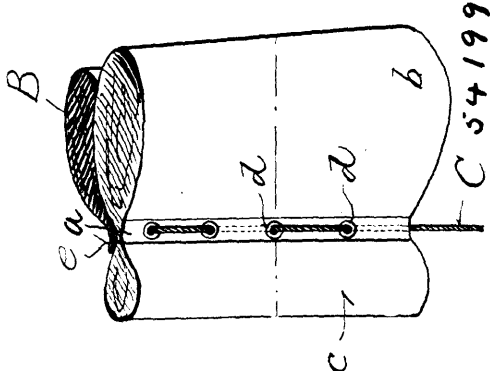


Harvey Bowman, Dayton, Ohio, U.S.A., 28th November, 1896; 6 years. (Filed 9th November, 1896.)

*Claim.*—1st. In a step-ladder, the combination with the posts 1 and 2, of a triangular bracket rigidly attached to the posts 1, and to which the posts 2 have a pivotal attachment, a top board inclosed by a clip projecting from said brackets, and an upper shelf having a pivotal connection with said brackets, as herein shown and described. 2nd. In a ladder, the combination with the posts 1 and 2, of a bracket having a triangular form, which is rigidly attached to the posts 1, clips attached to the upper ends of the posts 2, and having pivotal connection with the said brackets, pivot plates 22 secured to each side of the posts 2, inclined braces, a bracket attached to the upper end of each of said braces and provided with pins that project into openings in said plates 22, handle bars, plates on said handle bars having rounded portions, and a recess into which the lower ends of said braces may be moved and secured, as herein shown and described. 3rd. In a ladder, the combination with the posts 1 and 2, the latter provided with steps, of triangular brackets attached to the posts 1, and to which the posts 2 have pivotal attachment, an upper shelf having a pivotal attachment with said bracket, handle bars having a pivotal attachment with the posts 1, and a rigid but detachable connection with the posts 2, and a shelf having a pivotal attachment with the posts 1, and a rigid connection with the handle bars, as herein shown and described.

**No. 54,199. Horse-Collar and Pad.**

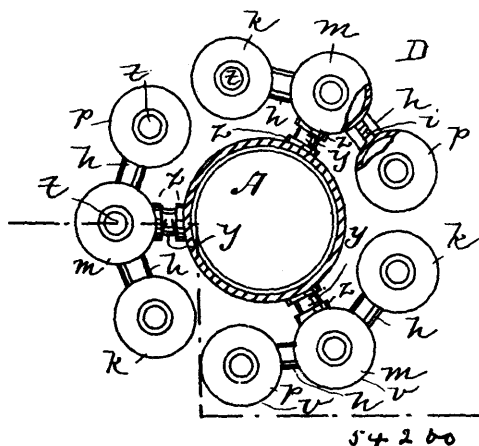
(Collier de cheval et coussinet.)



Frederic Casper Kreiger, West Bend, Wisconsin, U.S.A., 28th November, 1896; 6 years. (Filed 9th November, 1896.)

*Claim.*—The combination with a horse-collar having its creases provided with series of threading-tubes, of independent removable and restorable pads whose front edges are similarly provided with series of tubes, adapted to exactly register with those that pass through the collar-creases, and a lacing-cord for engagement with both series of threading-tubes.

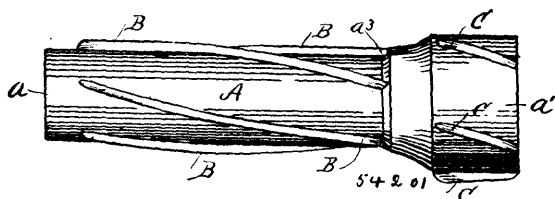
**No. 54,200. Boiler.** (Chaudière.)



Lewis Saunders, Lawrence, Massachusetts, U.S.A., 28th November, 1896; 6 years. (Filed 10th November, 1896.)

*Claim.*—1st. In a tubular boiler, a group of two or more cylinders connected by webs and ducts formed in said webs and provided with heads all being cast integral. 2nd. In a tubular boiler, a main cylinder in combination with a series of supplemental cylinders arranged in groups of two or more, the cylinders of each group being connected by ducts and cast integral and one of said cylinders of each group being connected by ducts with said main cylinder, substantially as set forth. 3rd. In a tubular boiler, the grouped cylinders *k, m, p*, provided with heads *r*, and connected by webs *i*, and inclined ducts *h*, all cast integral in combination with the flues *t*, shrunken into the heads of said cylinders, substantially as described. 4th. In a boiler of the class described the fire-box in combination with the rectangular tank having the water inlet *k*, through the fire-box into its bottom and the steam outlet into its top, two rows of vertical circulation tubes *b*, arranged in parallelism and having their ends closed by heads *f*, connected by flues, the inner row of tubes being the shorter and said tubes being each independently connected with the tank by ducts *d*, entering the side walls of said tank and the tubes adjacent their heads, said tank projecting above the upper ends of the tubes to form a steam space, substantially as shown and specified.

**No. 54,201. Axle Box.** (Boîte à graisse.)



Henry A. Hyle, Redwood, New York, U.S.A., 28th November, 1896; 6 years. (Filed 11th November, 1896.)

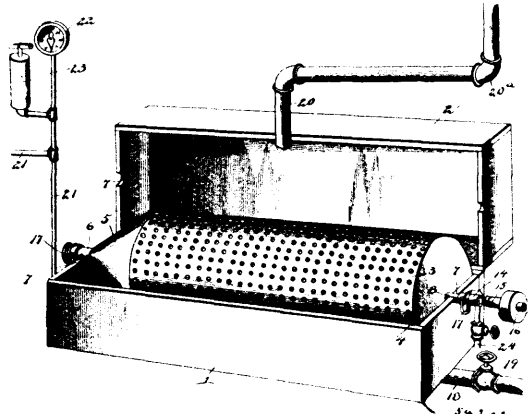
*Claim.*—1st. An axle-box or bushing for hubs having a reduced forward portion provided with longitudinally-curved flanges *B*, and an enlarged rear portion with longitudinally-inclined flanges *C*, the flanges *B* and *C* having sharpened front edges and being positioned out of line with each other, substantially as shown. 2nd. An axle-box or bushing for hubs having a plurality of longitudinally-curved flanges *B* with knife-edges and sharpened forward ends, said flanges extending from a point near the front end of the axle-box to the shoulder thereof, and flanges *C* on the enlarged rear portion of the axle-box having knife-edges and sharpened forward ends, the flanges *C* being inclined with respect to the longitudinal centre of the axle-box and positioned on a line between the rear ends of the flanges *B*, substantially as shown and for the purpose set forth.

**No. 54,202. Process of and Apparatus for Producing Hominy or Hulled Cereals.** (Procédé et appareil pour la production de céréale écalée.)

Kirk Hopkins, Springville, New York, U.S.A., 28th November, 1896; 6 years. (Filed 9th April, 1896.)

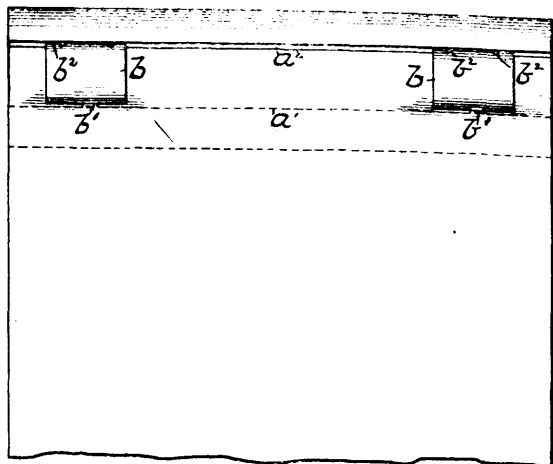
*Claim.*—1st. A process for producing hominy or hulled cereals, which consists in introducing the cereal into a vessel and submerging the same in a chemical for loosening and breaking the hull, then subjecting the mass of cereal to agitation within the vessel and flushing clean wash water therethrough simultaneously with the agitation, and finally subjecting the hulled and washed cereal to the cooking action of water and steam in said vessel, substantially as set forth. 2nd. In an apparatus of the class described, a box-casing, a screen drum or cylinder mounted to rotate within said

box-casing and having interiorly arranged agitators, and separate water and steam pipe connections with said box-casing to provide



respectively for washing and cooking purposes, substantially as set forth. 3rd. In an apparatus of the class described, a box-casing, a rotary screen drum or cylinder removably mounted in said box-casing and provided at one end with an imperforate head and at its opposite end with a conical funnel provided at its apex with a hollow trunnion neck, a horizontal drum shaft secured within the drum or cylinder and extending through the imperforate head thereof, agitators fitted on said shaft within the drum or cylinder, and separate water and steam pipe connections with said box-casing to provide respectively for washing and cooking purposes, substantially as set forth. 4th. In an apparatus of the class described, the casing, a rotary screen drum mounted in the casing and provided at one end with a hollow trunnion neck and at its opposite end with a shaft extension having a coupling socket, and hoisting clevises or bails loosely connected respectively with said trunnion neck and with said shaft extension, substantially as set forth.

**No. 54,203. Means for Attaching Window Shades to Rollers.** (*Moyen d'assujettir les rideaux aux bâtons.*)



Edmund Fisher Hartshorn, Newark, New Jersey, U.S.A., 28th November, 1896; 6 years. (Filed 10th November, 1896.)

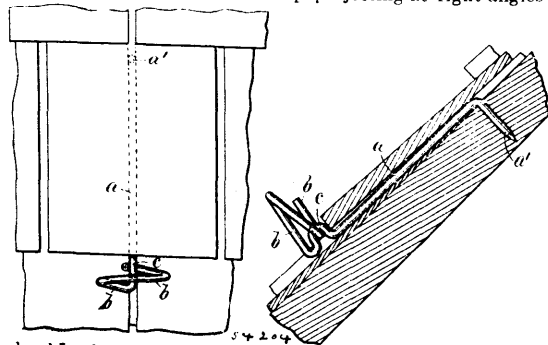
*Claim.* 1st. In a fastening for attaching shades to rollers, the combination with a roller having a channel along its sides, of a shade-holder provided with teeth arranged and adapted to enter under the edges of the channel, substantially as described. 2nd. In a fastening for attaching shades to rollers, the combination with the roller having a channel along its side, of the shade-holder *b* provided with the spur *b*<sup>1</sup> adapted to enter under the edge of the channel and with the spurs *b*<sup>2</sup>, *b*<sup>2</sup>, substantially as described. 3rd. In a fastening for attaching shades to rollers, the shade-holder *b* having the teeth *b*<sup>1</sup> and *b*<sup>2</sup>, *b*<sup>2</sup> arranged at different angles to enter the roller in a direction oblique to the circumference, whereby as the teeth *b*<sup>2</sup>, *b*<sup>2</sup>, are driven into the roller, they cause the tooth *b*<sup>1</sup> to penetrate the roller, substantially as described.

**No. 54,204. Snow-Guard for Roofs.**

(*Garde-neige pour toitures.*)

Charles Henry Gilman, Melrose, Massachusetts, U.S.A., 28th November, 1896; 6 years. (Filed 11th November, 1896.)

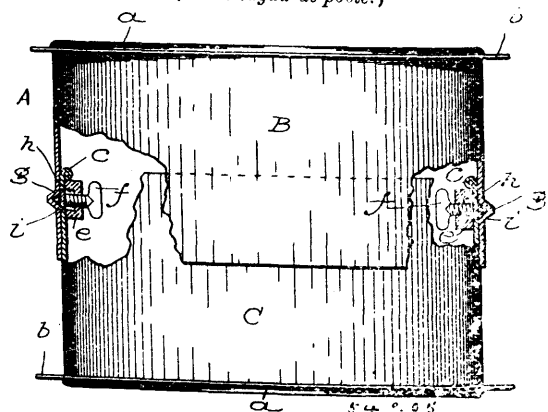
*Claim.*—1st. In a wire snow guard for roofs made of a single piece of wire, a shank portion, a snow stop projecting at right angles to



the shank and a loop on the shank portion above the snow stop, a portion of the snow stop engaging said loop to support the snow stop, and a fastening device to attach the guard to the roof, for the purpose set forth. 2nd. In a wire snow guard for roofs, a shank portion, a loop on the shank, a snow stop projecting at right angles to the shank, the end of the wire after forming the snow stop being returned in the direction of the shank and engaging the loop thereon to support the snow stop, and a fastening device to attach the guard to the roof, for the purpose set forth. 3rd. In a wire snow guard for roofs, a shank portion, a loop on the shank, a snow stop projecting at right angles to the shank having a portion thereof engaging the upper side of the loop on the shank portion and said loop overhanging the portion of the snow stop which engages it to retain it in position so as to support the snow stop, and a fastening device to attach the guard to the roof, for the purpose set forth. 4th. In a wire snow guard for roofs, a shank portion, a snow stop projecting at right angles to the shank, the end of the wire after forming the snow stop being returned in the direction of the shank and secured thereto, and a fastening device to attach the guard to the roof, for the purpose set forth. 5th. In a snow guard made of wire, a shank portion, a loop in the shank portion, a snow stop, made by a loop in the wire from which the guard is formed, said loop itself passing under the shank portion through the loop therein and extending on both sides of the shank portion, whereby the snow stop is strengthened and locked to the shank portion, and means for attaching the guard to the roof, for the purpose set forth. 6th. In a snow guard made of wire, a shank portion, a loop in the shank portion, a drive end at the upper end of the shank portion, and a snow stop at the lower end of the shank portion, said stop having a diametral portion and a circular portion, and extending through the loop in the shank portion and on both sides of the same, whereby the snow stop is strengthened and locked to the shank portion, for the purposes set forth.

**No. 54,205. Safety Stove-Pipe Thimble.**

(*Dé de tuyau de poêle.*)

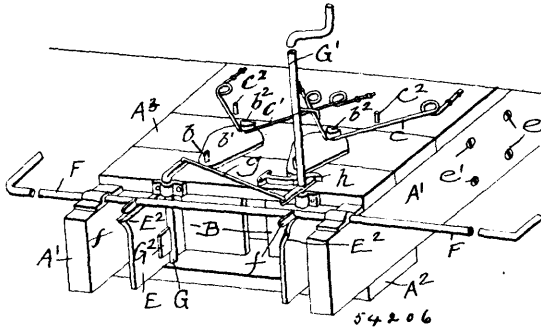


John R. Bostwick, Clifton Springs, New York, U.S.A., 28th November, 1896; 6 years. (Filed 11th November, 1896.)

*Claim.*—1st. A stove-pipe thimble, consisting of the overlapping sections B and C, the latter being formed with a stiffening flange or bead at its inner end, in combination with section C adjacent to said flange or bead, with screw-nuts, held by said nuts and adapted to press the section B, and the nuts being provided each with a slight internal cavity whereby they are adapted to the employment of rigid collars or enlarged parts on the screws near the points of the latter, substantially as and for the purpose set forth. 2nd. A stove-pipe thimble, having the heads joined to the body of the thimble, by means of integral parts of the heads turned over to engage said body of the thimble, substantially as described. 3rd. A stove-pipe thimble, consisting of cylindrical

parts adapted to slide upon each other to form the body of the thimble, and heads for said body, the thimble being formed with turned parts or flanges and the heads formed with lips adapted to engage said turned parts or flanges, substantially as specified. 4th. A stove-pipe thimble, consisting of a cylindrical body and heads for the body, the latter being formed with flanges, and the heads formed with integral parts, or lips turned to bear against the edges of said flanges to centre the heads upon the bodies, substantially as and for the purpose specified. 5th. A stove-pipe thimble, consisting of a cylindrical body and heads therefor, the latter having stiffening beads at their inner edges and joined to the body by means of parts or lips partially cut from the substance of the respective heads, but remaining as integral parts thereof, bent down to engage the body of the thimble, substantially as shown and described. 6th. A stove-pipe thimble, consisting of the overlapping sections B, C, the latter being formed with a stiffening flange or bead at its inner edge, in combination with screw-nuts held by said section C adjacent to said flange or bead and fastening screws held by the nuts and adapted to press the section B and rigid collars, or enlarged parts on the screws near the points of the latter, substantially as shown and for the purpose specified.

**No. 54,206. Car Coupler. (Attelage de chars.)**



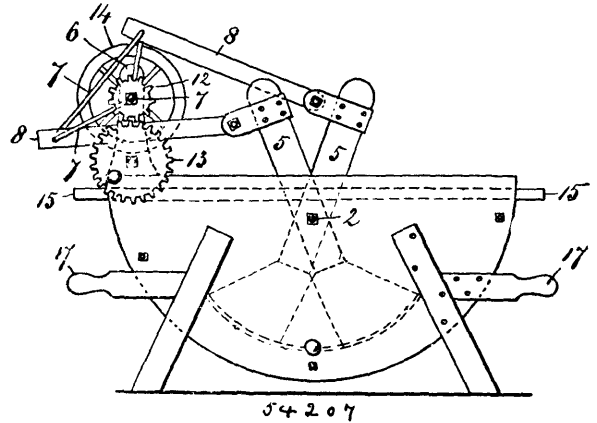
Alexander Atkinson, Huntsville, Alabama, U.S.A., 28th November, 1896; 6 years. (Filed 11th November, 1896.)

*Claim.*—1st. In a car coupling, the combination with a coupling head, of swinging plates B mounted therein upon vertical axes, springs for holding the plates normally on a line with each other, and flat spring bars attached to the coupling head and provided with lugs with which the coupling plates engage, together with means for throwing the spring bars out of engagement with the coupling plates, substantially as shown and for the purpose set forth. 2nd. In a car coupling, the combination of the swinging coupling plates attached to vertical axes or shafts having at their upper ends rearwardly projecting portions with lugs, springs carried by the coupling head and adapted to engage said lugs to hold the coupling plates normally on a line with each other, flat spring bars attached to the coupling head and provided with lugs with which the coupling plates engage, and means for throwing the flat spring bars out of engagement with the coupling plates, substantially as shown and for the purpose set forth. 3rd. In a car coupling, the combination with the pivoted coupling plates, of flat spring bars having outwardly curved ends and lugs with which the coupling plates engage, and a rock-shaft F having projecting arms which are adapted to engage with the curved ends of the flat spring bars to throw them out of engagement with the coupling plates, substantially as described. 4th. In a car coupling, the combination of the coupling plates B pivotally supported in the drawhead and having lugs with which the outer ends of the coupling plates engage, vertical shafts G, G', supported in the drawhead and provided with lugs adapted to engage the flat spring bars, a rod connecting the shafts to each other, one of the shafts being extended to the top of the car, and a spring catch adapted to engage an arm projecting from one of the vertical shafts, substantially as shown and for the purpose set forth. 5th. In a car coupling, the combination of the pivoted plates B, flat spring bars E having projecting lugs E<sup>1</sup> with which the pivoted plates engage, the flat spring bars being connected to the coupling head by screws c and c' and separated by a cross bar c<sup>2</sup>, the ends of the bars E being bent upon the cross bar so as to bear against the cross bar A<sup>1</sup> of the coupling head, and means for throwing the flat spring bars out of engagement with the coupling plates, substantially as shown and for the purpose set forth. 6th. In a car coupling, the combination of the pivoted coupling plates B provided with vertical axes having rearwardly projecting plates at their upper ends provided with lugs, springs c and c' attached at one end to the coupling head, and provided with intermediate coils, the free ends of the springs engaging the lugs on the rearwardly projecting plates of the coupling plates to hold said coupling plates normally on a line with each other, flat spring bars E attached to the coupling head and provided with lugs with which the coupling plates engage, and means for throwing the spring bars

out of engagement with the coupling plates, substantially as shown and for the purpose set forth. 7th. In a car coupling, the combination with the coupling plates B attached to vertical axes, of brace plates D connected at their rear ends to the coupling head, and provided with diverging members d having apertures through which the vertical axes of the coupling plates pass. 8th. In combination with the coupling mechanism constructed substantially as shown, of a coupling link I connected to its drawhead so as to have a swinging movement thereon, and springs i' attached to the link and adapted to engage the adjacent edges of the coupling head, the link being cut away adjoining the springs, substantially as set forth.

**No. 54,207. Washing Machine and Churn.**

(Machine à laver et baratte.)

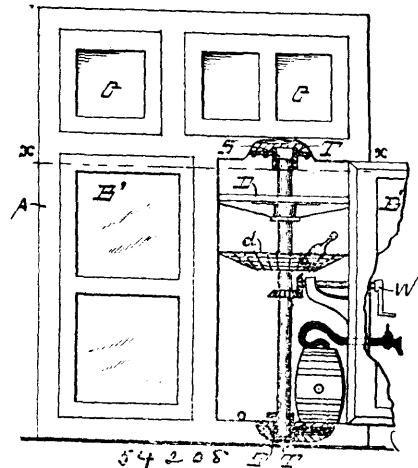


Samuel Mirfield, Meaford, Ontario, Canada, 28th November, 1896; 6 years. (Filed 12th November, 1896.)

*Claim.*—In combination with the suds box 1, the groups of oscillating beaters 3, hung on an axle 2, crosswise of said box, and provided with arms 5, a crank shaft 7, journaled to posts at opposite sides of the suds box, near the end, pitman rods 8, connecting the shaft and arms, half covers 15, sliding from opposite ends of the suds box, and with or without gears 12, 13, as set forth.

**No. 54,208. Rotary Shelves for Refrigerators.**

(Tablettes rotatives pour réfrigérateurs.)



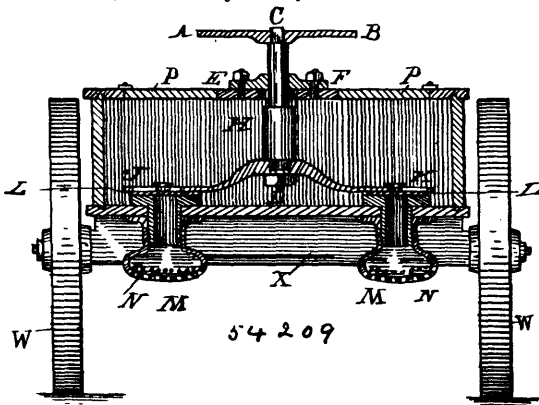
Frances M. Lochen, Milwaukee, Wisconsin, U.S.A., 28th November, 1896; 6 years. (Filed 12th November, 1896.)

*Claim.*—1st. The combination with the enclosing walls of a refrigerator, of a rotary standard E, provided at its respective ends with trunnions or trunnion-supporting bearings, series of shelves D loosely supported around said standard E upon supporting collars, ratchet H rigidly affixed to said standard E, spring actuated pawl G pivotally attached to one of said shelves D, substantially as and for the purposes specified. 2nd. The combination within the enclosing walls of a refrigerator provided with glass doors, of a rotary standard E provided at its respective ends with trunnions and trunnion-supporting bearings, a series of shelves D supported from said standard E, means for rotating the standard from the exterior of the case, substantially as described.



**No. 54,209. Gravity Sprayer for Field Crops.**

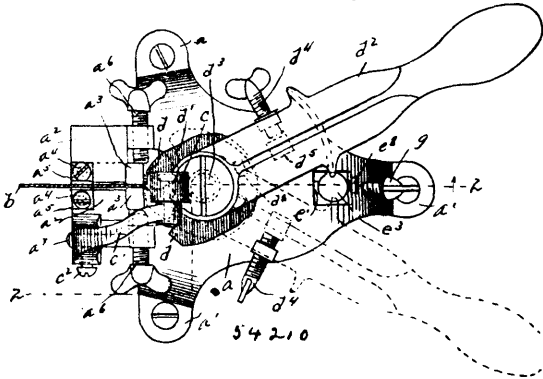
(Arrosoir à gravité pour moissons.)



Lyman Beecher Wood, Ann Arbor, Michigan, U.S.A., 28th November, 1896; 6 years. (Filed 13th November, 1896.)

*Claim.*—In a gravity sprayer for field crops, the discharge pipes N, the cover-valves L, the slotted spring-bar J K, the shaft C D, and the handle A B, combined as shown and specified for the purpose of simultaneously moving said valves I, by means of the handle A B, and thereby opening and closing the discharge pipes N.

**No. 54,210. Saw-Set. (Tourne à gauche.)**



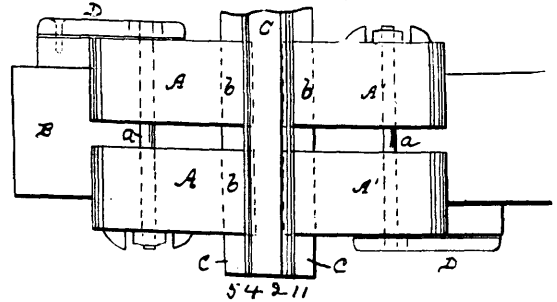
Adelbert J. Grimmell, Waltham, Massachusetts, U.S.A., 28th November, 1896; 6 years. (Filed 13th November, 1896.)

*Claim.*—1st. In a saw-set, the combination of the supporting frame having at one end adjustable saw guides or supports arranged to bear on the sides of a saw, a lever pivoted to the frame and provided with a detachable die-plate constituting the shorter arm of the lever, said die-plate having the tooth-bending jaws arranged to act alternately on opposite sides of a saw held by said guides, and edge-guiding rollers adjustable toward and from the pivot of said lever and determining the projection of the saw teeth into the space between the said jaws. 2nd. In a saw-set, the combination of the supporting frame having at one end adjustable saw guides or supports arranged to bear on the sides of a saw, a lever pivoted to the frame and provided with a lug or projection such as d<sup>8</sup>, and a die-plate having an orifice to receive the pivot-screw or stud of the lever and another orifice to receive said lug, said die-plate also having setting jaws arranged to act alternately on the opposite sides of a saw held by said guides. 3rd. In a saw-set, the combination of a supporting frame having at one end adjustable saw guides or supports arranged to bear on the sides of a saw, a lever pivoted to the frame and provided with a detachable die-plate constituting the shorter arm of the lever, said die-plate having the tooth-bending jaws arranged to act alternately on opposite sides of a saw held by said guides, a holder such as c<sup>1</sup> movable on the supporting frame

toward and from the pivot of the lever, rolls journalled on said holder and arranged to bear on the toothed edge of the saw, and means for securing said holder to the frame in any desired position to which it may be adjusted.

**No. 54,211. Rail-Fastening for Railways.**

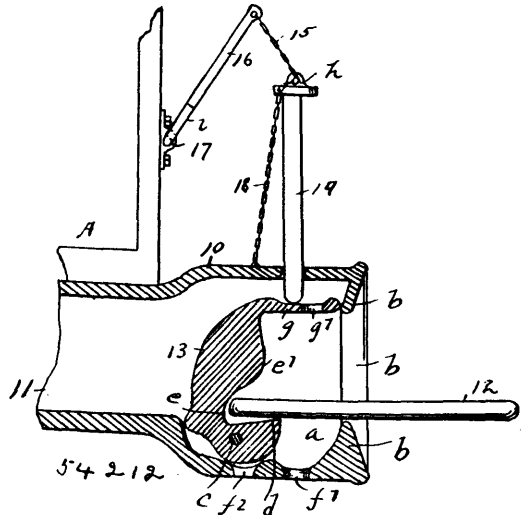
(Attache de rails.)



Edward McCann, Oneonta, New York, U.S.A., 28th November, 1896; 6 years. (Filed 13th November, 1896.)

*Claim.*—The combination with a railway-tie, the lower part of which is bevelled to form two converging inclined surfaces of a clamp made in two parts, the upper portions of which are provided with lateral projections, adapted to bind the flange of a rail, the lower portions being formed to close against the inclined surfaces of said tie, and a securing bolt which connects the two parts of the clamp, substantially as and for the purposes described.

**No. 54,212. Car Coupling. (Attelage de chars.)**



Philip Bogler, Alamosa, Colorado, U.S.A., 28th November, 1896; 6 years. (Filed 13th November, 1896.)

*Claim.*—The combination with a chambered draw-head that is perforated in its top and lower walls near the front end, and an elongated coupling-link, of a gravity-block pivoted in the chamber of the draw-head near the lower edge of the block, said block having a forwardly-extending toe, a transverse open recess immediately above the toe, a forwardly-projecting swell above the recess, affording an overhanging wall that contacts with the end of the link when the latter occupies the recess, the block being further provided with a forwardly-projecting table-flange, that is perforated to drop the pin when the block is rearwardly rocked, and adapted to sustain said pin at the rear of the perforation when the block is forwardly rocked, substantially as described.

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

4537. JOHN MORRISON McLEOD, 2nd term of No. 37,813, from the 18th November, 1896. Medical Compound, November 3rd, 1896.
4538. Mrs. PERMELIE LAFORCE, 2nd term of No. 37,890, from the 2nd December, 1896. Pneumatic Tire, November 4th, 1896.
4539. CHARLES HENRY NIX, 2nd term of No. 37,937, from the 10th December, 1896. Horse Collar, November 4th, 1896.
4540. ALEXANDER STANLEY ELMORE, 2nd term of No. 37,787, from the 14th December, 1896. Manufacture of Metallic Articles by Electrolysis and Apparatus for that purpose, November 5th, 1896.
4541. GEORGE BOOTH, 2nd term of No. 38,668, being a reissue of Patent No. 37,976, from the 18th December, 1896. Bath Tub, November 9th, 1896.
4542. CHRISTOPHER JOSEPH GRELLNER, 2nd term of No. 25,337, from the 11th November, 1896. Hammer, November 11th, 1896.
4543. GEORGE GEER, 2nd term of No. 37,779, from the 13th November, 1896. Knife Sharpener, November 11th, 1896.
4544. MATTHEW CURRIE TANNER, 2nd term of No. 37,772, from the 13th November, 1896. Leather Feeder, November 11th, 1896.
4545. WARDEN KING AND JAMES COCHRANE KING, 2nd term of No. 39,168, from the 21st June, 1897. Hot Water Circulating Boiler, November 12th, 1896.
4546. CHARLES S. GOODING AND SHERMAN W. LADD, 2nd term of No. 38,105, from the 12th January, 1897. Lasting Machine, November 14th, 1896.
4547. THOMAS J. McBRIDE, 2nd term of No. 37,830, from the 20th November, 1896. Observatory Car, November 16th, 1896.
4548. FÉLIX LOUIS DÉCARIE, 2nd term of No. 37,808, from the 18th November, 1896. Flushing Apparatus and Stop-Cock, November 18th, 1896.
4549. THE AMERICAN DUNLOP TIRE COMPANY, (assignee), 2nd term of No. 38,284, from the 15th February, 1896. Tire for Bicycles, November 21st, 1896.
4550. THOMAS McAVITY AND SONS, (assignee), 2nd term of No. 37,894, from the 3rd December, 1896. Globe Valve, November 25th, 1896.
4551. GERALD DE COURCY O'GRADY AND JOHN ROBINETTE COLLINS, 2nd term of No. 37,851, from the 26th November, 1896. Coin Holder, November 25th, 1896.
4552. LYMAN BICKFORD AND HELEN M. KIRKPATRICK, 3rd term of No. 25,523, from the 7th December, 1896. Changeable Speed Gearing, November 27th, 1896.
4553. THE ROYAL GUIDE BOARD ADVERTISING COMPANY, (assignee), 2nd term of No. 37,898, from the 3rd December, 1896. Guide and Sign Board, November 27th, 1896.
4554. MORITZ BOAS, 2nd term of No. 37,886, from the 2nd December, 1896. Knitting Machine, November 27th, 1896.
4555. JOHN R. WHITNEY, 2nd term of No. 25,434, from the 30th November, 1896. Chill for Casting Car Wheels, November 28th, 1896.
4556. JAMES AYTOWN, 2nd term of No. 37,902, from the 4th December, 1896. Can and Box, November 28th, 1896.
4557. NELSON GILLESPIE AND CHESTER GILLESPIE, 2nd term of No. 37,899, from the 3rd December, 1896. Blanket Muzzle, November 30th, 1896.
4558. M. GREVENBROICH, 2nd term of No. 37,972, from the 16th December, 1896. Treatment of Solutions, November 30th, 1896.
4559. RICHARD ARTHUR SHAPLAND, 2nd term of No. 37,963, from the 15th December, 1896. Method of Drying Timber and Apparatus therefor, November 30th, 1896.
4560. JASPER H. SELWYN, 2nd term of No. 38,101, from the 11th January, 1897. Metallurgical Process, November 30th, 1896.



## TRADE - MARKS

Registered during the month of November, 1896, at the Department of Agriculture--  
Copyright and Trade-Mark Branch.

5789. ELLIMAN, SONS AND COMPANY, Slough, Buckingham, England. Embrocation for human use, 5th November, 1896.
5790. GEORGE A. DEADMAN AND ALEXANDER IRA McCALL, Brussels, Ont., trading as DEADMAN AND McCALL. A Fluid Butter Colour for the use of butter makers, 6th November, 1896.
5791. CHEMISCHE FABRIK VON HEYDEN GESELLSCHAFT MIT BESCHRANKTER HAFTUNG, Radébeul, near Dresden, Saxony, German Empire. A Chemical Substance adapted for use as a medicine and for use in manufactures and arts, 10th November, 1896.
5792. J. W. LAMBLY, Montreal, Que. A Cure for Headache, Toothache, Neuralgia, Earache, Pain in the Back, Bowels or Stomach, 11th November, 1896.
5793. LAW, YOUNG AND COMPANY, Montreal, Que. Port Wine, 12th November, 1896.
5794. LAW, YOUNG AND COMPANY, Montreal, Que. Sherry Wine, 12th November, 1896.
5795. JOHN GEORGE SAVAGE, Montreal, Que., trading as ALFRED SAVAGE AND SON. Toilet Soaps, 13th November, 1896.
5796. THE FARBENFABRIKEN, vormals, FRIEDRICH BAYER AND COMPANY, Elberfeld, Kingdom of Prussia, Empire of Germany. Antiseptic Compounds, 14th November, 1896.
5797. THE FARBENFABRIKEN, vormals, FRIEDRICH BAYER AND COMPANY, Elberfeld, Prussia, Germany. Pharmaceutical Compounds, 14th November, 1896.
5798. THE FARBENFABRIKEN, vormals, FRIEDRICH BAYER AND COMPANY, Elberfeld, Prussia, Germany. Extract of Thyroid Glands, 14th November, 1896.
5799. THE FARBENFABRIKEN, vormals, FRIEDRICH BAYER AND COMPANY, Elberfeld, Prussia, Germany. Pharmaceutical Compounds, 14th November, 1896.
5800. THE FARBENFABRIKEN, vormals, FRIEDRICH BAYER AND COMPANY, Elberfeld, Prussia, Germany. Antineuralgic Medicine, 14th November, 1896.
5801. THE FARBENFABRIKEN, vormals, FRIEDRICH BAYER AND COMPANY, Elberfeld, Prussia, Germany. Colours or Dye Stuffs, 14th November, 1896.
5802. THE FARBENFABRIKEN, vormals, FRIEDRICH BAYER AND COMPANY, Elberfeld, Prussia, Germany. Remedial Agents especially adapted to the cure of Rheumatics, 14th November, 1896.
5803. THE FARBENFABRIKEN, vormals, FRIEDRICH BAYER AND COMPANY, Elberfeld, Prussia, Germany. Dietetical Compounds, 14th November, 1896.
5804. THE FARBENFABRIKEN, vormals, FRIEDRICH BAYER AND COMPANY, Elberfeld, Prussia, Germany. A Pharmaceutical Product used as a substitute for Sugar, 14th November, 1896.
5805. THE FARBENFABRIKEN, vormals, FRIEDRICH BAYER AND COMPANY, Elberfeld, Prussia, Germany. Antigonorrhoeic and adstringent medical substances, 14th November, 1896.
5806. THE FARBENFABRIKEN, vormals, FRIEDRICH BAYER AND COMPANY, Elberfeld, Prussia, Germany. Hypnotic Compounds, 14th November, 1896.
5807. MARY RANKINE BROAD (Wife of Hermann Drechsel), Lachine, Que. Illuminating Lights and accessories thereof, 14th November, 1896.
5808. SIMON SNYDER, Waterloo, Ont. Pills, 17th November, 1896.
5809. THE DISTILLERS COMPANY, LIMITED, Edinburgh, Scotland. Whisky and other similar goods, 17th November, 1896.
5810. ELIZABETH WORK AND JOHN PERRIN, Montreal, Que. Hair Restorers, 18th November, 1896.

5811. W. R. WEBSTER, Shebrooke, Que. Cigars, 19th November, 1896.
5812. MATHEW HICKS AND EDWARD P. O'BRIEN, Montreal, Que., trading as M. HICKS AND COMPANY. Name and device to be used in their commercial pursuits as Auctioneers and Commission Merchants, 19th November, 1896.
5813. FRANCIS JOHN SCOTT, KATHLEEN MARY MOOTE SCOTT AND MARTHA BARBARA HIGH, Toronto, Ont. Toilet Preparations, 20th November, 1896.
5814. D. W. ALEXANDER AND COMPANY, Toronto, Ont. Leather Belting, 20th November, 1896.
5815. THE McCORMICK MANUFACTURING COMPANY, LIMITED, London, Ont. Biscuits, 20th November, 1896.
5816. FOX BROTHERS AND COMPANY, LIMITED, Tonedale Mills, Wellington, Somersetshire, England. Woollen and Worsted Goods, 23rd November, 1896.
5817. CHARLES ALFRED RUDDOCK, 32 Ash Grove, Cricklewood, London, England. Tea, Coffee, Cocoa, Chocolate and Chicory, 23rd November, 1896.
5818. WALTER J. STETHEM, Montreal, Que. Dyed Textile Fabrics, 24th November, 1896.
5819. POPE MANUFACTURING COMPANY, Hartford, Connecticut, U.S.A. Vehicles and parts thereof, 24th November, 1896.
5820. THE HARTFORD RUBBER WORKS COMPANY, Hartford, Connecticut, U.S.A. Vehicle Tires, 24th November, 1896.
5821. FELIX EYDOUX, Marseilles, France. General Trade Mark, 28th November, 1896.
5822. CORDELIA DESMARAIS (Veuve de Louis E. Cloutier), Montreal, Que. Marque de Commerce Générale, 28 novembre 1896.
5823. THE ROVER CYCLE COMPANY, LIMITED, Meteor Works, West Orchard, Coventry, England. Cycles and other similar goods, 30th November, 1896.
5824. J. HARVEY BROWN, St. John, N.B. Tea, 30th November, 1896.

## COPYRIGHTS

Entered during the month of November, 1896, at the Department of Agriculture—  
Copyright and Trade-Mark Branch.

8820. PRO-RATA CALCULATING DISK *RE* LIFE INSURANCE POLICIES. Wm. A. Smith, Hartford, Conn., U.S.A., 2nd November, 1896.
8821. THE S. CARSLY COMPANY, LIMITED, WINTER PRICE LIST No. 9, 1896-97. The S. Carsley Co., Ltd., Montreal, Que., 4th November, 1896.
8822. CUTHBERT'S PRIMARY NUMBER WORK; AND COMPANION TO THE COMMON SENSE ARITHMETICAL CALCULATOR. For Teachers' use only. The Copp, Clark Co., Ltd., Toronto, Ont., 5th November, 1896.
8823. THE BELL TELEPHONE COMPANY OF CANADA, LIMITED, EASTERN EXCHANGES, SUBSCRIBERS' DIRECTORY, ONTARIO DEPARTMENT, NOVEMBER, 1896. The Bell Telephone Company of Canada, Ltd., Montreal, Que., 5th November, 1896.
8824. MASSEY'S MAGAZINE. (November, 1896.) The Massey Press, Toronto, Ont., 6th November, 1896.
8825. MASSEY HARRIS TELEGRAPHIC CODE. Parts I and II. The Massey Press, Toronto, Ont., 6th November, 1896.
8826. A MAP OF THE COUNTY OF BRUCE. By James Warren, Walkerville, Ont., 6th November, 1896.
8827. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 7TH NOVEMBER, 1896. The Mail Printing Co., Toronto, Ont., 7th November, 1896.
8828. MACPHERSON'S COMBINED CASH BOOK AND VOUCHER REGISTER. (As applicable to Public and High Schools.) Frank Herbert Macpherson, Windsor, Ont., 7th November, 1896.
8829. THE DEBRISAY ANALYTICAL FRENCH METHOD. Part II. Charles T. DeBrisay, Toronto, Ont., 10th November, 1896.
8830. RURAL RHYMES, and THE SHEEP THIEF, by Eric Duncan. Wm. Briggs, (Book-Steward of the Methodist Book and Publishing House,) Toronto, Ont., 12th November, 1896.
8831. LET BRITISH MIGHT UPHOLD THE RIGHT. (Baritone Song.) Words by J. F. Le Maitre. Music by Adèle Le Maitre, Toronto, Ont., 12th November, 1896.
8832. THE DOMINION POCKET MEMORANDUM BOOK WITH CALENDARS, 1897. The Copp, Clark Co., Ltd., Toronto, Ont., 13th November, 1896.
8833. THE ORGAN VOLUNTARY. A Choice Collection of Voluntaries for Churches, Schools and Homes. Composed and arranged by A. J. Barrie, Port Arthur, Ont., 13th November, 1896.
8834. THE DELINEATOR. A Journal of Fashion, Culture and Fine Arts. (December, 1896.) The Butterick Publishing Co., Ltd., New York, N.Y., U.S.A., 13th November, 1896.
8835. THE GLASS OF FASHION. (December, 1896.) The Butterick Publishing Co., Ltd., New York, N.Y., U.S.A., 13th November, 1896.
8836. THE HOUSE OF BISHOPS OF THE GENERAL SYNOD OF THE DOMINION OF CANADA, (held in St. John's College, Winnipeg, September, 1896.) Frank Wootten, Toronto, Ont., 13th November, 1896.
8837. A NEW COURSE OF STUDY IN BOOK-KEEPING. (With Business Forms. For the use of Elementary Schools.) By F. T. D. F. M. Sigebert, Sainte-Martine, Que., 13th November, 1896.
8838. LE TRÉSOR DE LA BEAUTÉ. Par le Dr. Nemo. Edouard Hartmann, Montréal, Qué., 14 novembre 1896.
8839. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 14TH NOVEMBER, 1896. The Mail Printing Co., Toronto, Ont., 14th November, 1896.
8840. CHRISTIANITY REVIEWED. By Rev. Wm. Cheetham, Brockville, Ont., 14th November, 1896.

8841. SUBSTANCE OF LECTURES ON SYSTEMATIC HOMILETICS. (Delivered in 1896.) By John J. A. Proudfoot, D.D., London, Ont., 16th November, 1896.
8842. LIVRE D'INSTRUCTIONS: AVEC DIAGRAMME ET LIVRE DE MESURE DU SYSTEME METRIQUE DU PROFESSEUR JEAN B. PEYRY, POUR COUPER LES VETEMENTS D'HOMMES, DE DAMES ET D'ENFANTS. J. B. Peyry, Montréal, Qué., 16 novembre 1896.
8843. THE GIRL OF '39. (March and Two-Step.) By Harry H. Lickel. The R. S. Williams & Sons Co., Ltd., Toronto, Ont., 17th November, 1896.
8844. MCKINLEY MARCH. (Two-Step.) By Paul Jones. W. H. Billing, Toronto, Ont., 19th November, 1896.
8845. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 21ST NOVEMBER, 1896. The Mail Printing Co., Toronto, Ont., 21st November, 1896.
8846. LOUIS JOSEPH PAPINEAU. (Portrait.) Albert Ferland, Montréal, Qué., 21 novembre 1896.
8847. SEXTON'S OMNIMETRE. (Enlarged and Revised Edition.) Thaddeus Norris, Washington, D.C., U.S.A., 21st November, 1896.
8848. BECOME YOUR OWN LANDLORD. Alexander M. Campbell, Toronto, Ont., 23rd November, 1896.
8849. PHOTOGRAPHIC MENTAL AND PHRENOLOGICAL CHART. A. H. Welch, Toronto, Ont., 23rd November, 1896.
8850. OUR PERPETUAL CATALOGUE. The Anderson Furniture Co., Ltd., Woodstock, Ont., 23rd November, 1896.
8851. BIRDS OF THE ISLAND OF MONTREAL. By Ernest D. Wintle. W. Drysdale & Co., Montreal, Qué., 25th November, 1896.
8852. THE TELEPHONE CITY MARCH, OR TWO-STEP. By Albert I. Bowbeer, Brantford, Ont., 25th November, 1896.
8853. THE SAD SWEET FACE OF MY MOTHER. (Song.) Words and Music by Henry G. S. Dixon, Montreal, Qué., 27th November, 1896.
8854. NAPOLEON; OR, LITTLE CORSICAN. (Game.) The Copp, Clark Co., Ltd., Toronto, Ont., 27th November, 1896.
8855. OVER THE FENCE IS OUT. (Song.) Words and Music by Amelia McMillan. Whaley, Royce & Co., Toronto, Ont., 27th November, 1896.
8856. VOICE OF ANGELS. (Sacred Song.) Words and Music by Hastings Weblyn. Whaley, Royce & Co., Toronto, Ont., 27th November, 1896.
8857. HILL'S INVOICE REGISTER. Containing Monthly Statements of Wholesale Accounts, Showing Open Accounts, Notes and Drafts Coming Due, &c. Joseph S. Hill, Bridgen, Ont., 27th November, 1896.
8858. THE CANADIAN ALMANAC. And Miscellaneous Directory for the Year 1897. The Copp, Clark Co., Ltd., Toronto, Ont., 27th November, 1896.
8859. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 28TH NOVEMBER, 1896. The Mail Printing Co., Toronto, Ont., 28th November, 1896.
8860. THE MASTER'S MEMORIAL. (A Manual on the Lord's Supper for Class and Private Study.) By Rev. Thomas Macadam. Wm. Drysdale & Co., Montreal, Qué., 28th November, 1896.
8861. ROSSLAND LANCERS. By E. E. Farringer. The Anglo-Canadian Music Publishers' Association, Ltd., London, England, 28th November, 1896.
8862. MANUEL D'ECONOMIE DOMESTIQUE. Par le Recorder Testard De Montigny. Calieux et Dérome, Montréal, Qué., 28 novembre 1896.
8863. SACRED SONGS. (No. 1.) By Ira D. Sankey, James McGranahan and Geo. C. Stebbins. The Copp, Clark Co., Ltd., Toronto, Ont., 30th November, 1896.
8864. UN MANIFESTE LIBÉRAL. (M. L.-O. David et le Clergé Canadien.) Léger Brousseau, Québec, Qué., 30 novembre 1896.