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INVENTIONS PATENTED.

No. 8059. Improvements on Bougies.

(*Perfectionnements aux bougies.*)

John C. Allen, (Co-inventor with, and Assignee of, J. Fowler and R. K. Smither), Buffalo, N.Y., U.S., 2nd November, 1877, for 5 years.

Claim.—1st. A flexible wrethral bougie composed of gum arabic or tragacanth, glycerate of starch and cocoa butter; 2nd. The glycerate of starch as an ingredient of flexible wrethral bougies; 3rd. A flexible wrethral bougie, medicated or not, fusible at the temperature of the body, coated with glue or gelatine, medicated or not.

No. 8060. Improvements on Wringer Rollers.

(*Perfectionnements aux rouleaux d'essoreuses.*)

John Graeco, Jr., New York, U.S., 2nd November, 1877, for 5 years.

Claim.—1st. Preparing a wrought iron shaft or spindle by freeing it from scales and foreign matters, building up upon the shaft thus prepared a body of vulcanized rubber compound, until the requisite form and thickness is attained, and then vulcanizing the same; 2nd. An improved clothes wringer roll, in which the rubber of such roll is vulcanized directly on to the central iron shaft or spindle.

No. 8061. Improvements on Threshing

Machines. (Perfectionnements des machines à battre.)

Ira H. Green, Canandaigua, N. Y., U.S., 2nd November, 1877, for 5 years.

Claim.—1st. The combination with the endless apron C and rotary cutters E E, of the dividers G G consisting of arms resting between the cutters, and pivoted at their upper ends so as to be capable of being turned backward; 2nd. The combination with the endless apron C and rotary cutters E E, of the beater D standing in the angle between the apron and cylinder.

No. 8062. Improvements on Car Ventilators.

(*Perfectionnements aux ventilateurs de wagons.*)

Manfred A. Morton and Edwin H. Winchell, Chicago, Ill., U.S., 2nd November, 1877, for 5 years.

Claim.—1st. A box divided into two compartments by a permanent partition, both compartments opening through gauze screens to the outside air, and opening into the car through apertures which are provided, or which are not provided, with a valve or valves, said box being attached in such manner to the car as to project clear into the air at all sides, except that which connects it to the car; 2nd. The ventilator having the double compartment permanently divided, gauze covered ends, and a double inclined bottom.

No. 8063. Improvements on Steam Boilers.

(*Perfectionnements aux machines à vapeur.*)

Alvin C. Norcross, Boston, Mass., U.S., 2nd November, 1877, for 5 years.

Claim.—1st. An automatic draft regulator, operated by water forced from the boiler into an air chamber, and returned by the expansive force of the compressed air; 2nd. The coil I arranged within the casing A and forming a flexible oscillating conduit joint; 3rd. The combination of the casing A with grooved arm B, rim C, cap D, with arm B having knife edges bb and overlapping projections or flanges dd; 4th. The curved pipe K extending from the arm G to the bottom of the air chamber H, in combination with the said chamber, arm and the coil I; 5th. The combination of the tilting rim C, beam E, with weights, flexible joint conduit pipe I, hollow arm G and air chamber H.

No. 8064. Improvements on Wooden-soled

Shoes. (Perfectionnements aux souliers à semelles de bois.)

Theophilus R. Hyde, Westerly, R.I., U.S., 2nd November, 1877, for 5 years.

Claim.—1st. Shaping the block or blank to conform to the finished sole and then sawing the same into sole sections, with surfaces of curvature adapted to be united together to form two or more sections of sole; 2nd. The combination with the insole D and outer sole A, of the yielding intermediate sole F of smaller size than the insole, leaving a marginal space a between the said insole and outer sole, for the introduction of the edge of the upper; 3rd. The combination with an insole and tread-sole, sawed from the same block, of a welt sole C located between the two, and screwed to the insole; 4th. A wood-soled shoe having the sections of its sole sawed apart to fit each other, and the yielding intermediate sole E laid in waterproof cement between the insole and outer sole; 5th. The wood-soled shoe consisting of the insole D, intermediate sole E, tread-sole B and welt sole C, connected, first, to the insole, and then to the tread sole; 6th. A sectional wooden shoe sole composed of the parts A C and D, sawed from a single piece, or blank, of wood and having their contiguous surfaces accurately conforming to each other.

No. 8065. Improvements on Screw Machines.

(*Perfectionnements des machines à vis.*)

Albert R. Munson, New York, U.S., 2nd November, 1877, for 5 years.

Claim.—1st. In an organized machine arranged for the automatic manufacture of screws from a continuous supply of wire, the combination of the following elements, viz.: a blank heading device, a shaving device, a drilling device, a punching device, a slotting device, a re-shaving device, a screw threading device, and an apparatus for transferring the screw blanks from one device to the others, such combination of elements being arranged for the manufacture of screws, the heads of which are provided with an angular cavity in addition to the usual slot or nick; 2nd. In an organized machine arranged for the automatic manufacture of screws from a continuous supply of headed screw-blanks, the combination of the following elements, viz.: a shaving device, a drilling device, a punching device, a slotting device, a re-shaving device, a screw-threading device, and an apparatus for transferring the blanks from the first named device to the others in rotation, such combination of elements being arranged for the manufacture of screws, the heads of which are provided with an angular cavity, in addition to the usual slot or nick; 3rd. In an organized machine arranged for the automatic manufacture of screws from a continuous supply of wire, the combination of the following elements, viz.: a blank heading device, a drilling device, a punching device, a slotting device, a shaving and milling device, a screw-threading device, and an apparatus for transferring the screw blanks from one device to the others, such combination of elements being arranged for the manufacture of screws, the heads of which are provided with an angular cavity, in addition to the usual slot or nick; 4th. In an organized machine arranged for the automatic manufacture of screws from a continuous supply of wire, the combination of the following elements, viz.: a blank heading device, a shaving device, a drilling device, a punching device, a screw-threading device, and an apparatus for transferring the screw blanks from one device to the others, such combination of elements being adapted to the manufacture of screws, the heads of which are provided in the centre with an angular cavity, in place of the usual slot or nick; 5th. In an organized machine arranged for the automatic manufacture of screws from a continuous supply of headed screw blanks, the combination of the following elements, viz.: a shaving device, a drilling device, a punching device, a screw threading device, and an apparatus for transferring the screw blanks from the first named device to the others in rotation, such combination of elements being adapted to the manufacture of screws, the heads of which are provided in the centre with an angular cavity, in place of the usual slot or nick; 6th. In an organized machine arranged for the automatic manufacture of screws from a continuous supply of wire, the combination of the following elements, viz.: a blank heading device, a drilling device, a punching device, a combined milling and shaving device, a screw-threading device, and an apparatus for transferring the screw blanks from one device to the others, such combination of elements being

arranged for the manufacture of screws, the heads of which are provided in the centre with an angular cavity, in place of the usual slot or nick, 8th. In an organized machine arranged for the automatic manufacture of screws from a continuous supply of headed screw blanks, the combination of the following elements, viz.: a drilling device, a punching device, a combined milling and shaving device, a screw threading device, and an apparatus arranged for transferring the screw blanks from the first named device to the others in rotation, such combination of devices being arranged for the manufacture of screws, the heads of which are provided in the centre with an angular cavity, in place of the usual slot or nick, 9th. In an organized machine arranged for the automatic manufacture of screws from a continuous supply of wire, the combination of the following elements, viz.: a blank heading device, a shaving device, a drilling device, a slotting device, a re-shaving device, a screw-threading device, and an apparatus for transferring the screw blanks from one device to the others, such combination of devices being arranged for the manufacture of screws, the heads of which are provided centrally with a round hole, in addition to the usual slot or nick; 10th. In an organized machine arranged for the automatic manufacture of screws from a continuous supply of headed screw blanks, the combination of the following elements, viz.: a shaving device, a drilling device, a slotting device, a re-shaving device, a screw threading device, and an apparatus for transferring the screw blanks from one device to the others in rotation, such combination of devices being arranged for the manufacture of screws, the heads of which are provided centrally with a round hole, in addition to the usual slot or nick, 11th. In an organized machine arranged for the manufacture of wood screws, provided in the centre of their heads with a round or angular cavity, in addition to or without the usual slot or nick, the combination of the following devices: a rotating spindle provided with clamping jaws for grasping the screw blanks, a longitudinal reciprocating rotating spindle, carrying a drill, the two spindles revolving in contrary directions, and a feeding device for delivering the screw blanks to such devices, 12th. In an organized machine arranged for the manufacture of wood screws, provided in the centre of their heads with a round or angular cavity, in addition to or without the usual slot or nick, the combination of the following devices, viz.: a rotating spindle provided with clamping jaws for grasping the screw blanks, a longitudinal reciprocating rotating spindle, carrying a drill, the two spindles rotating in contrary directions, a shaving cutter or cutters, and a feeding mechanism for delivering the screw blanks to such devices; 13th. In an organized machine for the manufacture of wood screws, in combination with the shaving, slotting and screw-threading devices embodied therein, a transferring apparatus provided with a series of clamping jaws, arranged to automatically adjust their grasp to various gauges of wire, and having the following stated movements: a movement to the right, and upward movement to grasp and remove the series of blanks from the various devices operating thereon, and a movement to the left, and a downward movement to deliver such blanks to the next succeeding operation; 14th. The combination of an apparatus or device for punching an angular cavity in the head of a screw blank, previously drilled, a device for slotting or nicking the same, and a transferring apparatus for delivering the screw blanks to, and removing them from, such punching and slotting devices, 15th. The combination of a re-shaving apparatus consisting of a reciprocating rotating shaft, carrying a milling and a shaving tool, such shaving tool being adjusted to its work by the advance of such shaft, and returned therefrom by its retrograde movement, a device for clamping and holding the screw blank while it is being operated upon, and an apparatus for delivering the screw blanks to, and removing them from the action of the milling and shaving apparatus; 16th. The combination of a carrying trough arranged to convey a column of screw blanks from a heading apparatus or a hopper, a device for separating or selecting a single blank from the column of blanks so conveyed, a device for shaving the heads of such blanks, a stationary guide rest, a reciprocating guide rest, and an apparatus for transferring the blanks after drilling and shaving, therefrom to the succeeding operations in the formation of a screw; 17th. The combination of a carrying trough arranged to convey a column of screw blanks from a heading apparatus or a hopper, a device for separating or selecting a single blank from the column of blanks so conveyed, a device for shaving the heads of such blanks, a stationary guide rest, a reciprocating guide rest, and an apparatus for transferring the blanks after being shaved, therefrom to the succeeding operations in the formation of a screw; 18th. The combination of a device for punching an angular cavity in the head of a screw blank, a device for slotting or nicking the blank head, and an apparatus for delivering the screw blank to, and removing it from, such devices, 19th. The combination of a screw-threading apparatus having two sets of threading devices operating in unison, and an apparatus for delivering the screw blanks alternately to such threading devices, such delivering apparatus having the following stated movements: a movement to the right beneath the line of screw blanks, supported in seats, a rising movement to grasp the blanks, a movement to the left carrying the blanks, and a falling movement to deliver the blanks to the threading devices; 20th. The stationary guide rest and reciprocating guide rest, arranged to support the screw blanks prior to, during the process of drilling and shaving and for delivery to the transferring apparatus.

No. 8066. Improvements in the Manufacture of Soap. (*Perfectionnements dans la fabrication du savon.*)

Camillo Maggio, Montreal, Que., 2nd November, 1877, for 5 years.
Résumé.—Un mélange de huile de graines de lin crue, d'ammoniaque liquide, d'esprit de térébenthine et de carbonate de soude.

No. 8067. Improvements on Car Trucks.

(*Perfectionnements aux trains des wagons.*)

Austin Berry, Waterloo, Que., 2nd November, 1877, for 5 years.
Claim.—1st. The journal boxes D rigidly secured to the underside of the truck frame, and bearing the ends of the divided axles C. 2nd. The divided axles C formed with a journal F and collar G, and bearing in boxes D secured to the underside of the truck frame A, to prevent enwise motion of the sections; 3rd. The oil reservoirs V above the truck frame bars B, in combination with the journal boxes D for supplying lubrication thereto; 4th. The journal boxes D having a packing chamber J, in combination with the abutting ends of a sectional axle for holding a lubricant; 5th. The boxes D secured to central bars B B of the truck, by struts c c and by braces d d, bolted to the frame A and nuts I, 6th. The swinging bolsters L, springs M

and bar N, suspended by hangers O, bearing on springs Q imposed on top of the truck frame, and yielding with the compression of the springs M for supporting the car.

No. 8068. Improvements on Seams for Leather Work.

(*Perfectionnements aux coutures pour les objets en cuir.*)

William W. Whitcomb and Samuel A. Brackett, Boston, Mass., U. S., 2nd November, 1877, for 5 years.

Claim.—Stitching together two pieces or parts of leather, and then turning the flaps or edges of one part over, and stitching it down to the main body of the other part beyond its edge, each of either of said lines of stitching being run in a channel cut in the leather.

No. 8069. Process of Making Illuminating Gas. (*Procédé de fabrication du gaz d'éclairage.*)

Henry Aitken, Falkirk, Scotland, 2nd November, 1877, (Re-issue of Patent No. 4616), for 2 years 5 months and 8 days.

Claim.—1st. Treating the gases obtained by the destructive distillation of coal and other substances, so that they are maintained at a temperature whereby they are prevented from depositing the volatile hydro-carbons and rich gases in the tar, or so that by revolatilizing the said hydro-carbons and rich gases which have been absorbed in the tars, these gases may become saturated therewith, and their illuminating power be improved, 2nd. The several arrangements of apparatus for treating crude gases obtained by the destructive distillation of coal and other substances, so that they are enabled to return or be saturated with volatile hydro-carbon vapours and rich gases, 3rd. Removing aqueous vapours from gases, and thereafter passing the gases in or through volatile hydro-carbons, thereby increasing the illuminating power, 4th. The employment of oil or tar saturated with paraffine spirit or other light spirit, as a liquid for wet meters, also for covering the water in gas holders with.

No. 8070. Construction of Vessels to Carry Inflammable Matters.

(*Construction des vaisseaux pour transporter les matières inflammables.*)

William G. Warden, Philadelphia, Pa., U. S., 2nd November 1877, (Extension of Patent No. 1736), for 5 years.

No. 8071. Washing Machine. (*Machine à laver.*)

James Grover and Thomas Grover, Toronto, Ont., (Assignees of Nathaniel T. Wortley,) 7th November, 1877, (Extension of Patent No. 1733.) for 5 years.

No. 8072. Turbine Water Wheel.

(*Turbine hydraulique.*)

Charles Barber, Meaford, Ont., 7th November, 1877, (Extension of Patent No. 1743), for 5 years.

No. 8073. Improvements on Faucets.

(*Perfectionnements aux robinets.*)

Frank C. Lillis, (Assignee of L. A. Rebasz,) Lockport, N. Y., U. S., 7th November, 1877, for 5 years.

Claim.—1st. The combination of the barrel A having the straight way C and enlarged bore H, with the fixed nut F, screw stem E and plug D. 2nd. The combination of the thumb J and rubber washer K, with the barrel A, screw stem E and nut F.

No. 8074. Improvement in Lamps.

(*Perfectionnement dans les lampes.*)

Charles F. A. Heinrichs, (Co-inventor with, and Assignee of, Charles Reistle,) Brooklyn, N. Y., U. S., 7th November, 1877, for 5 years.

Claim.—1st. In an Argand burner, the metallic holder for the mineral wick, composed of two tubes, the outer one of which is perforated, in combination with the mineral wick, at the upper end, and the filling of fibrous material between the tubes, 2nd. In an Argand burner a permanent mineral wick, in combination with the metallic wick holder, and the screw for raising and lowering the wick; 3rd. The non-combustible lamp-wick made of mineral wool with plaster, asbestos and sugar, or their equivalent, 4th. An Argand lamp-wick formed of the non-combustible porous ring b, between the metallic tubes a and c, in combination with the fibrous packing, also between said tubes a and c, 5th. The combination with the Argand lamp-wick, wick tube W and air tube g, of the packing l surrounding the wick tube a; 6th. The combination with an Argand burner having a cylindrical ring b, of the chimney holder provided with a short sleeve k, at the upper end, connecting with the tube c of the Argand wick and the perforated ring guide v, at the lower end of the chimney holder, around the wick tube W, to steady the chimney holder; 7th. The stationary air tube c having side openings, in combination with the mineral Argand wick a, and the flexible wicks g and their metallic wick tubes or holders, and the piston and rack, for raising and lowering the wick tubes and wicks; 8th. The plates W upon the movable Argand wick a, in combination with the central air-tube c and its lateral openings v for regulating the air passing to the inside of the flame, 9th. The mineral wick, whether cylindrical or flat, within a metal wick-tube or case, and having fibrous material, to conduct the oil to the same, in combination with a metal tube or case, adjacent to the top of the mineral wick, by which the height of the flame can be raised, by exposing more or less of the mineral-wick.

No. 8075. Washboard Leg Planing and Grooving Machine.

(*Machine à raboter et canneler les pieds des planches à savonnet.*)

Charles T. Brandon, Toronto, Ont., 8th November, 1877, for 5 years.

Claim.—1st. In combination with the horizontally-moving carriage E from E, the pivoted frame C provided with the rounding and tapering cutters D, 2nd. In combination with a horizontally-moving carriage provided with form

P of the right and left side grooving-saws O, 3rd. In combination with the horizontally moving and feeding carriage E provided with forms Et and P, the rounding and tapering cutters D, the right and left grooving saws O and the adjustable under-cutting knives S, 4th. The hinged frame C provided with the cutters D and the tapered bearing block Q, in combination with the carriage E provided with the form L, 5th. The combination of the continuously revolving partly-toothed wheels G carriage E, with rack F and weight H, 6th. In combination with the partly toothed revolving wheel G provided with the sectional filling web piece G¹ the hinged frames L provided with the projecting finger pieces L¹, 7th. The adjustable sectional bars T arranged to receive the legs after they have passed the knives S, 8th. The guiding and supporting bars F, in combination with the carriage E, cutters D and saws O, 9th. The combination of the driving-shaft B, pulleys R, and I, shaft L, friction wheels L¹, shaft J, worm J¹, worm wheel J² shaft K and sectionally toothed wheel G, with the carriage E.

No. 8076. Apparatus for Treating Ores.

(Appareil à traiter les minerais.)

Henry F Howell, Sarnia, Ont., 9th November, 1877, for 5 years.

Claim.—In combination with a retort for the treatment of ore, through which hot air (either alone or in combination with steam) is forced in fine streams, the hood or cover to said retort, and pipe for carrying off the volatilized products, a steam jet, exhaust fan, or equivalent device, for creating a partial vacuum above the ore, and increasing the draft through it.

No. 8077. Horse Shoe Nail Machine.

(Machine à clous à cheval.)

Thomas H Fuller, Boston, Mass., U. S., 10th November, 1877, (Extension of Patent No. 1757), for 5 years.

No. 8078. Improvement in the Manufacture of Horse Shoe Nails.

(Perfectionnement dans la fabrication des clous à cheval.)

Thomas H Fuller, Boston, Mass., U. S., 10th November, 1877, (Extension of Patent No. 1758), for 5 years.

No. 8079. Horse Shoe Nail Machine.

(Machine à clous à cheval.)

Thomas H Fuller, Boston, Mass., U. S., 12th November, 1877, (Extension of Patent No. 1759), for 5 years.

No. 8080. Horse Rake. (Râteau à cheval.)

German M. Cossitt and Newton Cossitt, Brockville, Ont., (Assignees of C. M. Titus.) 13th November, 1877, (Extension of Patent No. 1790), for 5 years.

No. 8081. Improvements on Dog Powers.

(Perfectionnements aux manèges à chiens.)

Alphens Hamlin, Almonte, Ont., 13th November, 1877, for 5 years.

Claim.—1st. The platform D having a crown-wheel H bolted to the underside of the intersecting arms E, and meshing with a pinion J on the driving shaft K, 2nd. The platform D constructed of arms E, halved together at their intersection, and halved at their outer ends to receive a single board floor F, whereby are formed raised cleats, corresponding to cleats G, planted radially on the floor and the underside of the floor is a plane surface, 3rd. The rectangular frame A provided with movable legs B, for adjusting the inclination of the platform, 4th. The friction rollers M axially mounted on standards O, having vertical adjustment on the frame A, for elevating the platform out of gear.

No. 8082. Treatment of Residuous Wine for the Manufacture of Tartaric Acid and Salts.

(Traitement des résidus de vin pour la fabrication de l'acide et des sels tartariques.)

Frauz Dietrich, Marton, Switzerland, 13th November, 1877, for 5 years.

Claim.—Treating the residuous of wine by heating the same to a temperature of from 140° to 170° C.

No. 8083. Improvements on Clothes Wringers.

(Perfectionnements aux essoreuses à linge.)

Alexander Israel and James Hall, Kinniswick, Mo., U. S., 13th November, 1877, for 5 years.

Claim.—1st. The combination of the side pieces A A, each cast of a single-piece of metal with slot A¹ and feet B B, with the set screws C C and rollers D D, 2nd. The combination of the upper roller D, slating boxes b b, having rods d d shouldered at their upper ends, the elliptic springs G G, collar I and set screw J.

No. 8084. Improvements on Sink Traps.

(Perfectionnements aux valves d'éviers.)

John Magee, Chelsea, Mass., U. S., 13th November, 1877, for 5 years.

Claim.—The combination with a sink, of the hinged or removable strainer plate B, stationary convex cap E, provided with arm C, disk F and pipe D, the several parts constructed and relatively secured together, and to the sink.

No. 8085. Improvements in Stoves and Furnaces. (Perfectionnements dans les poêles et les calorifères.)

Charles Dion, Chambly Basin, and James Baylis, Montreal, Que., 13th November, 1877, for 5 years.

Claim.—1st. The combination in a stove, of the central chamber, or coal reservoir A, with the external concentric inner and outer casings B E, having between them a spiral diaphragm D, 2nd. In combination with the spiral chamber D, the doors H and L, rod I, cranks h and l, and lever k, 3rd. In combination with the cylinder E, the door E, 4th. The cleaner consisting of ball N and brush O.

No. 8086. Improvements on Steam Boilers.

(Perfectionnements aux chaudières à vapeur.)

Edward Hamer James Metcalfe, Aberystwith, Cardigan and Edward Davies, Pontypridd, Glamorgan, Wales, 13th November 1877, for 5 years.

Claim.—In an injector for steamboilers adapted to be worked by the exhaust steam, the combination of the discharging cone or throat I and the combining cone K, with a steam nozzle F having its final cross-sectional area considerably larger in proportion to that of the water passage and to that of the discharging cone or throat.

No. 8087. Improvements in Steam Engines.

(Perfectionnements dans les machines à vapeur.)

George Marskell Hamilton, Ont., (Assignee of Cyrenus C. Roe), 13th November, 1877, for 5 years.

Claim.—1st. The combination of the rolling valve X constructed with the oscillating steam cylinder M, and operated by the oscillation of the said cylinder, 2nd. In combination with a steam engine of a cone D (oval or circular) on the shaft B for operating a variable cut off and governed by an automatic governor F attached to said shaft, 3rd. In combination with a steam engine of the guides L, constructed and attached to the cylinder M for the crank pin box O to slide in for the purpose of removing side strain from the piston rod, 4th. In combination with the cone D of a steam engine shaft B and collar I of a spring J adjusted by said collar on the shaft, for regulating the speed of the engine, 5th. In combination with the cylinder M of a steam engine, of a hollow piston head P¹ so that said piston head may expand with the cylinder, 6th. The combination of a frame A, shaft B, pulley C, governor F, rods G, cone D, rods T U, cylinder M, steam chest N, spring J, crank-disc K, guide L, crank S, valve X, piston head P¹.

No. 8088. Improvements on Broad Cast Sowers.

(Perfectionnements aux semoirs à la vole.)

Charles E. Alden and David Brust, Philadelphia, Pa., U. S., 13th November, 1877, for 5 years.

Claim.—1st. The distributing wheel composed of the disc A¹ having the lifts C and sloping curved ribs B, 2nd. The delivery nozzle composed of the tube e having inclined bottom e¹ and slot e², 3rd. In combination with a distributing wheel or scatterer of a sowing machine, a rotary hopper nozzle, adjustable, so as to bring its feed opening across a line drawn transversely through the middle of said wheel and thus cause the latter to scatter wholly on one side or track of a machine, or more on one side than on the other.

No. 8089. Machine for Cutting Iron and other Metals. (Machine pour couper le fer et autres métaux.)

Aaron Bradrick and Frederick Cook, Dashwood, Ont., 13th November, 1877, for 5 years.

Claim.—The standards D E, cutting bars C F, rods G and lever-arm H, in combination with stand A, block B and guard-iron I.

No. 8090. Improvements on Hay Elevators.

(Perfectionnements aux élévateurs à foin.)

Frank Ward Rockford, Ill., U. S., (Assignee of Eugene L. Church), 13th November, 1877, for 5 years.

Claim.—1st. The combination of the bail of the sheave frame, of the hay fork with the stationary guide-hook f, the pivoted grappling hook g and the locking catch G of the carriage B, 2nd. The combination of the swinging grappling hook g having shoulder g¹, tilting catch G having end lugs or points e¹, and the carriage B, with the fixed stop block e of the track frame.

No. 8091. Improvements on Bench Vises.

(Perfectionnements aux claus d'établis.)

Emmett H Brower, Carson City, Mich., U. S., 13th November, 1877, for 5 years.

Claim.—1st. The combination of the foot lever G, spring H, dog J and cam lever I, with a carpenter's vise, 2nd. A carpenter's vise provided with the ratchet-bar k, dog B and lever a, 3rd. The screw M journalled in a collar N, sliding horizontally in a frame O, secured to jaw A and provided with stops P, 4th. The hinged plate Q applied to the jaw B.

No. 8092. Improvement in Saw Frames.

(Perfectionnement dans les montures des scies.)

Emanuel Andrews, Williamsport, Pa., U. S., 13th November, 1877, for 5 years.

Claim.—1st. A saw frame constructed partly of wood and partly of spring metal, so secured together as to automatically strain the saw, 2nd. A self-straining saw frame having wooden end pieces A A and elastic metal back C, 3rd. The metallic back C of U-shaped, having curved centre a and curved ends b b, 4th. The elastic metal back C secured to the wooden end pieces by bands c c.

No. 8093. Clothes and Fruit Dryer.

(Séchoir à linge et à fruits.)

Martin L. Smith, Arkona, Ont., 14th November, 1877, (Extension of Patent No. 1791), for 5 years.

No. 8094. Middlings Separator.

(Séparateurs des gruaux.)

James Parkyn Thomas Pringle and John Ogilvie, (Assignees of Willard H Sherman), Montreal, Que., 14th November, 1877, (Extension of Patent No. 1793), for 5 years.

No. 8095. Car-coupler with Double or Single Compressed Buffer Combined.

(Attelage de wagons combiné, avec double ou simple tampon comprimé.)

Alfred Willson, Belle Ewart, Ont., 14th November, 1877, (Extension of Patent No. 1793), for 5 years.

No. 8096. Straw-carrier for Threshing Machines. (*Toile sans fin pour les machines à battre.*)

Anthony Kline, Bond Head, Ont., 14th November, 1877, (Extension of Patent No. 1805.) for 5 years.

No. 8097. Gang Plough. (*Charrue à socs multiples.*)

Brooks W. Walton, Fergus, Ont., 14th November, 1877, (Extension of Patent No. 1843.) for 5 years.

No. 8098. Improvements on Wrenches.

(*Perfectionnements aux manches de tarauds.*)

Andrew B. Lipsey, West Hoboken, N. J., U. S., 16th November, 1877, for 5 years.

Claim.—1st. The combination, in a wrench, of a slideway C in the head A thereof, provided with a partly open fixed collar F, a movable jaw B supported in said slideway, and a screw C having a neck K at a short distance from its head; 2nd. In a wrench, a slideway provided with a partly open fixed collar, whereby provision is afforded for the insertion of a screw with its head in place, and adapted to secure the screw longitudinally without other means; 3rd. The combination in a wrench, with a screw-threaded socket in a movable jaw, of a screw provided with a thread only at the end farthest from the head, and a shank diametrically smaller than said thread, and admitting of play within the said socket; 4th. The combination in a wrench, with a slideway G having cheeks L provided with end M inclined rearwardly from the fixed jaw, and having internal opposite longitudinal ribs E, of a movable jaw B, the shank I of which is provided with grooves E fitting the said ribs e.

No. 8099. Improvements in Water Filters.

(*Perfectionnements dans les filtres à eau.*)

William Nugent, New York, U. S., 16th November, 1877, for 5 years.

Claim.—The sheet metal case A, struck up as described, having the inlet c provided with spiral corrugations and the outlet b, the spirally corrugated elastic bushing D, the perforated bottom plate f and the sponge or other filtering material E.

No. 8100. Improvements on Nut Locks.

(*Perfectionnements aux noix de sûreté.*)

Thomas J. Sawyer, Pacific, Mo., U. S., 16th November, 1877, for 5 years.

Claim.—1st. The nut D with curved projections b, fitting into the curved recess of the washer C, in combination with one or more rigid holding projections on the inner side of the washer, whose holding faces are parallel to that side, and with a screw-welt and fish-plate; 2nd. The nut D with curved projection b, fitting into the curved recess c of washer C, in combination with rectangular tongue a, of washer C, fitting into rectangular groove f of fish plate B.

No. 8101. Improvements on Bird Cages.

(*Perfectionnements aux cages d'oiseaux.*)

Anson E. Mook, East Pembroke, N. Y., U. S., 16th November, 1877, for 5 years.

Claim.—1st. The wheel B provided with the rod C having head C₁, in combination with the opening L and standard G; 2nd. The combination of a revolving cage-wheel B, with a series of perches J; 3rd. A revolving cage-wheel B provided with an annular opening B₁ surrounding the rod C.

No. 8102. Improvements on Circular Sawing Machines. (*Perfectionnements aux scieries circulaires.*)

Simon H. Richardson, Bangor, Me., U. S., 16th November, 1877, for 5 years.

Claim.—The removable support C for the end of the saw arbor.

No. 8103. Improvements on Threshing Machines. (*Perfectionnements aux machines à battre.*)

Thomas H. Brown, Brantford, Ont., 16th November, 1877, for 5 years.

Claim.—1st. The combination of riddle frame E on rollers F, with crank and forked connecting rod G attached to sides of frame E; 2nd. The application of serrated bottom on spout T, also rollers V; 3rd. The combination of extended sides C, with rollers F carrying riddle frames and directing the wind.

No. 8104. Improvements on Hand Stamps.

(*Perfectionnements aux estampes à main.*)

William H. Phillips and Thomas Hawthorn, London, Ont., 16th November, 1877, for 5 years.

Claim.—1st. The combination of the connecting arms K K₁, rod I, coil spring L and the inking box H, with grooves P, perforated false bottom R and bottle O, with narrow opening F; 2nd. In combination with the above, the die-plate G with curved projections C, plunger A and tube B.

No. 8105. Street Stop-Cock for Gas and Water. (*Robinet à gas et à eau pour les rues.*)

Amos W. Morgan, Buffalo, N. Y., U. S., 16th November, 1877, for 5 years.

Claim.—1st. In connection with street gas and water boxes, the pipes A are constructed, or cast, with the spirals, or threads a b b, one pipe turning on, or in the other; 2nd. The combination of a street gas or water pipe A, lug t and cover C, having the countersunk opening k and provided with the vertical brass screw j, or its equivalent, for fastening the same, and with the head formed to receive a wrench, or key; 3rd. In combination with a stop-cock box pipe A or A₁, having the conducting pipe openings e e, the flanges or bases g g.

No. 8106. Improvement in Brick Kilns.

(*Perfectionnement dans les fourneaux à brique.*)

William T. Christy, St. Louis, Miss., U. S., 16th November, 1877, for 5 years.

Claim.—1st. The combination, in a fire-brick kiln, of a fire-brick lined metallic shell, with the arrangement of the blast-pipes passing under the heated kiln bottom, with each a regulating stock valve for tempering the blast, and having also a many-perforated pipe under each fire chamber, for blowing air upward between the grate-bars, together with the up-draft, and the crown opening for the unimpeded passage of the consumed and exhausted air and gases; 2nd. The sectional incasement A and the binding clamps a a, combined with the arch skew-band d; 3rd. The sliding valve v, in combination with grating S and valve l; 4th. The closed firing places with balanced doors b, combined with the split-bridge U, the cut-off valve-tile u and the clinking slot r.

No. 8107. Improvements on Lubricating Compounds. (*Perfectionnements aux composés lubrifiants.*)

Peter Sweeney, New York, U. S., 16th November, 1877, for 5 years.

Claim.—A lubricating compound made of graphite and a solution of pyroxyline, with the addition of mercury, camphor, or paper pulp if required.

No. 8108. Improvements on Bed Bottoms.

(*Perfectionnement aux fonds de lits.*)

Caleb E. Brown, Jackson, Mich., U. S., 16th November, 1877, for 5 years.

Claim.—A bed bottom composed of slats, in connection with alternating sets of spiral springs, of which each set is connected by a top or bridge piece, and secured to the outside of two adjoining slats by the bent ends of the wire, formed to hook partly around the slat.

No. 8109. Combined Mowing and Reaping Machine. (*Faucheuse-moissonneuse.*)

Cyrenus Wheeler, Jr., Auburn, N. Y., U. S., 17th November, 1877, (Extension of Patent No. 3608), for 5 years.

No. 8110. Combined Mowing and Reaping Machine. (*Faucheuse-moissonneuse.*)

Cyrenus Wheeler, Jr., Auburn, N. Y., U. S., 17th November, 1877, (Extension of Patent No. 3608), for 5 years.

No. 8111. Improvements in Harvesting Machines. (*Perfectionnements dans les moissonneuses.*)

Cyrenus Wheeler, Jr., Auburn, N. Y., U. S., 17th November, 1877, (Extension of Patent No. 4617), for 5 years.

No. 8112. Improvements in Harvesting Machines. (*Perfectionnements dans les moissonneuses.*)

Cyrenus Wheeler, Jr., Auburn, N. Y., U. S., 17th November, 1877, (Extension of Patent No. 4617), for 5 years.

No. 8113. Stove-pipe Joint.

(*Joint de tuyau de poêlès.*)

John Draper, Whitby, Ont., 17th November, 1877, (Extension of Patent No. 5934), for 5 years.

No. 8114. Stove-Pipe Joint.

(*Joint de tuyau de poêlès.*)

John Draper, Whitby, Ont., 17th November, 1877, (Extension of Patent No. 5934), for 5 years.

No. 8115. Improvements on Cultivators.

(*Perfectionnements aux cultivateurs.*)

Gottlieb Bettschen, Wilmot, Ont., 17th November, 1877, for 5 years.

Claim.—1st. The combination of the two short stationary beams b b and the iron frame h h, with the centre beam a and the two outside beams c c; 2nd. The combination with the two stationary beams b b and the iron frame h h, together with the centre beam a and the outside beams c c, of the curved iron bars d d, the centre block e and the crank and key f; 3rd. The combination with the centre beam a and the iron frame h h, of the handles g g; 4th. The shape of the knives i i i and their regulation and combination with the beams a b b and c c.

No. 8116. Improvements on Boot and Shoe Lasts. (*Perfectionnements aux formes des chaussures.*)

John Batley, John Keats, and James Neil, London, Eng., 17th November, 1877, for 15 years.

Claim.—1st. The combination with the body of the last, of a pivoted swinging heel piece, adjustable toward and from the instep, and within or under cover of the body of the last; 2nd. A last, provided on either side of its foot or forward portion with a side piece, constructed and applied to swing outward from an axial line, parallel, or nearly so, with the sole and length of the foot; 3rd. The combination of the swinging and adjustable heel piece of the last, with the laterally swinging or rolling side-pieces, on either side of the forward portion of the last; 4th. A last having an adjustable heel piece and expanding and contracting side pieces at its forward portion, the combination with the said heel piece and forward side pieces, of mechanism organized to provide first, for the expansion of the heel piece and subsequently for the expansion of the side pieces; 5th. The combination with the pivoted or swinging heel piece B and rolling side pieces D D, of the screw E, the toggle levers h h, the stud or pin K, the lever m having a slotted arc l and the rods r r.

No. 8117. Improvements on Strips for Patching Sheet Metal.*(Perfectionnements aux bandes à appâcher les feuilles métalliques.)*

John C. Mackey, Grand Rapids, Mich., and William H. Hurburt, Chicago, Ill., U.S., 17th November, 1877, for 5 years.

Claim.—A sheet metal strip or plate, provided with a facing of solder and treated with a flux.**No. 8118. Improvements on Air Compressors.***(Perfectionnements aux compresseurs d'air.)*

Benjamin T. Babbitt, New York, U.S., 17th November, 1877, for years.

Claim.—1st. The combination with the duplicate air compressing cylinders or mains D D₁, of the water receiving trunk or receiving duct A, for supplying said mains, the valve chambers B B₁ having ports b b₁ in their opposite sides, the connecting chambers or passages c and the slide valves C C₁; 2nd. The combination with the air compressing cylinders or mains D D₁, which operate by alternately charging them with water to compress the air within them, the upright chambers or ducts M M₁ near the discharging ends of said mains, the floats N N₁, the tripping or tilting weighted beam S set in motion by said floats, inlet and outlet valves for the water at opposite ends of said mains, and mechanism connecting said valves and actuated by the tripping or tilting weighted beam; 3rd. The combination of the side rocking beams L L₁, with the end rocking beam G K and the water inlet and outlet valves C C₁ I I₁ of the apparatus.**No. 8119. Improvements in Boots and Shoes.***(Perfectionnements dans les chaussures.)*

Jean L. Peiletier, Montreal, Que., 17th November, 1877, for 5 years.

Résumé.—L'application d'une doublure H, coupée d'un seul morceau pour recouvrir intérieurement les chaussures, et recouvrant par conséquent tout à la fois et la semelle et l'empeigne, son montage sur une forme et son cousage sur la dite forme; la manière de débiter le morceau destiné à former cette doublure H d'une seule pièce, et dont F forme la semelle, A le bout du pied B B₁ les parties qui recouvrent et forment le dessus du pied, C C₁ les cou-de-pied, D D₁ les côtes dont une partie recouvre le talon, et E le bout arrière et bas du talon; L'application des dites doublures ainsi fabriquées d'une seule pièce, à toutes espèces de chaussures sans exception, et quelle que soit la manière dont serait composée la susdite doublure.**No. 8120. Improvements on Vacuum-Brakes.***(Perfectionnements aux freins à vide.)*

Frederick W. Eames, Watertown, N.Y., U.S., 17th November, 1877, for 5 years.

Claim.—1st. The described coupling consisting of two parts, each the counterpart of the other, so as to be interchangeable at pleasure, and having end openings of oblique form, so that when brought together, they form a splice-joint and leaves a clear, open and unobstructed channel for the passage of the air; 2nd. A coupling device having its valve located entirely outside, so that while equally efficient as a valve, it does not obstruct the passage of the air through the coupling, when the parts are brought together; 3rd. A coupling consisting of two parts, each the counterpart of the other, and having levers E provided with valve discs e₁, operating in combination with the gaskets B; 4th. A coupling consisting of two parts, each the counterpart of the other, and having valve levers E provided with rounded projections or studs F, which engage with the correspondingly shaped groove C; 5th. The combination of the parts A A₁ having oblique end openings, with the flexible gaskets B B₁ seated in said openings; 6th. The gasket B constructed with two flanges b b₁ and annular grooves between the flanges, in combination with the flange a of the coupling; 7th. The combination of the coupling having oblique end openings, the gasket B and levers E having valve-discs e, with spring G.**No. 8121. Improvements on Portable Baths.***(Perfectionnements aux baignoires portatives.)*

Joshua Johnston and Benjamin Taylor, Toronto, Ont., 17th November, 1877 for 5 years.

Claim.—A portable bath B constructed of rubber cloth or sheeting, or other suitable material, secured to a frame A, having hinged bars D and legs E, folding inwardly, and hinged props H, whereby the whole will stand erect and collapse, and the metal collar H₂ for exhausting the bath of water.**No. 8122. Nailing and Lasting Machine for Boots and Shoes.***(Machine à clouer et enformer les chaussures.)*

Louis Goddu, Winchester, Mass., U.S., 17th November, 1877, for 5 years.

Claim.—1st. The combination with mechanism for feeding and driving tacks, of jaws to grasp and hold the edge of the upper while being drawn about the last and inner sole; 2nd. The nail tube m adapted to serve as the fixed member of the gripping jaws, in combination with the movable member of the gripping jaws; 3rd. In a lasting machine, the combination with the nail-tube or nose, of pins to enter the edge of the upper, mounted on a last pressed upward against the end of the nail tube, to hold the upper; 4th. The nail-tube m and movable gripping jaw, in combination with a spring and mechanism to operate it and the jaw, so that the jaws are adapted to grasp and hold uppers of different thickness; 5th. The nail tube m provided at its lower end with upper penetrating points, and at its face with teeth to engage the upper; 6th. The combination with tack driving mechanism, a clutch pulley and upper gripping jaws, of a slide-bar and cams to first operate the jaws to grasp the upper, and then to engage the clutch and operate the tack driving mechanism to drive the tack; 7th. The combination with the driver and nail-tube, of a pivoted block provided with a driver passage, and a tack guiding groove, adapted to be alternately placed each in line with the passage in the nail-tube; 8th. The combination with the driver, the nail-tube and the pivoted block, provided with driver passage and tack guiding groove of a combined feeder and cutter; 9th. The continuous tack-strip, consisting of a series of tacks, joined heads to points, the heads all projecting from oneside of the strip, thereby leaving a straight side to enter the strip-guiding groove; 10th. The combination with the pivoted block l and the inclined surface a₂, of the feeder and outer adapted to engage the head of the tack in the strip, feed it into the nail-tube, and then to sever the tack; 11th. The combination with the nail-driver, and gripping jaws adapted to hold the upper, of a hand-lever to close the jaws; 12th. In a lasting machine, the combination with the gripping jaws to grasp and hold the upper, of a fulcrum over which to pry the shoe or boot, to draw the upper firmly about the last; 13th. The reciprocating feeder and cutter adapted to feed and sever the strips, in combination with the spring which checks the backward motion of the nail-strip.**No. 8123. Compound for the Protection of Ship Bottoms.***(Composé pour la protection des fonds des navires.)*

Jacob B. Slichter, Chicago, Ill., U.S., 17th November, 1877, for 5 years.

Claim.—1st. The preparing of the heavy or black oil nitric and acetic acid litharge; 2nd. The combination of heavy or black oil, linseed oil in connection with asphaltum, rosin, soluble glass, common salt, ver-de-gris, arsenic, red lead, oxide of iron and white lead.**No. 8124. Compound for Saturating Roofing Felt.***(Composé pour saturer le feutre à toiture.)*

Jacob B. Slichter, Chicago, Ill., U.S., 17th November, 1877, for 5 years.

Claim.—The combination of oils, asphaltum, with oxide of iron, ground silicate barytes, whiting, tungstate of soda, common salt, or their equivalents.**No. 8125. Improvement on Heaters.***(Perfectionnement des chauffeferettes.)*

George L. Thorne and George C. Farnsworth, Buffalo, N. Y., U.S., 17th November, 1877, for 5 years.

Claim.—1st. The combination with a pail or similar culinary vessel A, of the heater B, said heater being removably suspended from; said vessel by means of spring-clamps or catches C; 2nd. The combination with reservoir B, of the spring-clamps C having the offset c and bent d; 3rd. The combination with the vessel A, of the reservoir B having the catches C and the disc I; 4th. The combination with the vessel A, of the heater B having catches C, the disc I and the interposed disc K; 5th. The wick tube D having the flange flange and perforations f, in combination with the cap E having the corresponding flange e.**No. 8126. Composition for Horse and Cattle Food.***(Composé alimentaire pour les chevaux et bestiaux.)*

Charles F. Bunnell, Chatham, Ont., 17th November, 1877, for 5 years.

Claim.—A compound composed of the following ingredients, viz.: corn meal 100 lbs., oil meal 35 lbs., fax seed meal 20 lbs., salt 18 lbs., anise seed 1 lb., hemlock bark 2 lbs., gentian root 3 lbs., carraway seed 1 lb., liquorice root 2 lbs., fenugreek 2 lbs., African ginger 1 lb., sulphur 3 lbs.**No. 8127. Apparatus for Shaping Pantaloon.***(Appareil à façonner les pantalons.)*

Ellen B. Viets, Boston, Mass., U.S., 17th November, 1877, for 5 years.

Claim.—1st. The combination with the drying box A and its supporting platform or railway C C, the truck G and the carriage I, provided with one or more trouser-shapers K; 2nd. In combination with the box A provided with one or more recesses a, of the shaper or shapers K supported by one or more posts b; 3rd. The combination of the carriage I and one or more trouser or garment shapers K applied thereto; 4th. The combination of a carriage I, one or more trousers or garment shapers K, and a drying or steaming chamber or box A, provided with means of introducing into it, steam, or of heating air in it; 5th. The combination of one or more garment shapers K, a supporting carriage I, therefor, and guides or rails C C, with a drying or steaming chamber, or box A; 6th. The combination of the guides or rails F F H H and C C, the truck G, the carriage I one or more trousers or garment shapers, and a steaming or drying chamber or box A.**No. 8128. Improvements on Artificial Stone.***(Perfectionnements à la pierre factice.)*

John A. Murray, Yarmouth, N.S., (Assignee of James H. Thorp,) 17th November, 1877, for 5 years.

Claim.—1st. The described chemical mixture or compound formed of the ingredients described, and diluted for the purpose of producing the crystallization of an artificial stone; 2nd. An artificial stone composed of sand and cement, moistened with the diluted chemical mixture or compound, formed of the ingredients described.**No. 8129. Improvements on Carriage Whiffletrees.***(Perfectionnements aux palonniers de voitures.)*

John H. Bainton, Tiverton, Ont., 18th November, 1877, for 5 years.

Claim.—The body A, snaffle E, provided with the shaft K and part H, in combination with the tube D and spring F.**No. 8130. Improvements on Ditching Machines.***(Perfectionnements aux machines à fossoyer.)*

Mathew J. Austin, Bonham, Texas, U. S., 17th November, 1877, for 5 years.

Claim.—1st. The vertically-sliding interior frame, moving inwards in the exterior frame, and operated by means of the crank-turning toothed pinions engaging with a rack, and controlled by a pawl and ratchet; 2nd. In combination with the interior frame, the T-shaped collar G, widener H, flanged wheel A, scraper D and shed D₁, and fender R.

No. 8131. Improvement on the "Sprague" Mower.*(Perfectionnement de la faucheuse dite "de Sprague.")*

Alexander Reekie, Wilfred, Ont., 21st November, 1877, (Extension of Patent No. 1817.) for 5 years.

No. 8132. Improvements in Adjustable Chairs. (Perfectionnements dans les plants.)

George Wilson, Montreal, Que., 23rd November, 1877, for 16 years.

Claim.—1st. The combination of the leg rest E E₁, pivoted separately to the seat and set at any angle, by means of the screwed shaft I rotated through gears and operating for that purpose through pivoted links; 2nd. The seat B carried on slides B₁, moving vertically on guides A₁, and raised or lowered by gears operating the screwed rod D; 3rd. In combination with the seat B of an adjustable chair, an arc B₂ having formed on it a rack in which intermeshes a worm, formed on a counter-shaft driven by gears. 4th. The back pivoted to slides running on the side rails of the seat, these slides carrying a shaft on which are mounted pinions working in racks, on the underside of the side rails. 5th. In combination with the back of an adjustable chair, a link pivoted thereto and to a toothed arc pivoted to the slide or side rail, and operated upon by a worm on a counter-shaft rotated through gears; 6th. An adjustable chair in which the separate leg rest may be set to any angle, the seat raised, or tilted either forward or backward, and the back set at any angle or brought forward, all these movements being accomplished either separately or in any combination by means of gears the operating points of which are within the reach of the occupant of the chair.

No. 8133. Apparatus for Self-Adjusting Saddle Girths.*(Appareil automatique pour serrer les sangles des selles.)*

Alois Steinbach, Vienna, Austria, 27th November, 1877, (Extension of Patent No. 7716.) for 5 years.

No. 8134. Apparatus for Self-adjusting Saddle Girths.*(Appareil automatique pour serrer les sangles des selles.)*

Alois Steinbach, Vienna, Austria, 27th November, 1877, (Extension of Patent No. 7716.) for 5 years.

No. 8135. Improvements in Lanterns.*(Perfectionnements dans les lanternes.)*

Frederick Diety, New York, U. S., (Assignee of Daniel Sherwood.) 27th November, 1877, for 15 years.

Claim.—In combination with one of the tubes of a tubular lantern, the tube or mouth-piece D, connected to the air-space around the flame of the lamp.

No. 8136. Improvements on Hoisting Apparatus. (Perfectionnements aux monte-charges.)

Francis A. Clarkson, Black Brook N. Y., U. S., 27th November, 1877, for 5 years.

Claim.—1st. The combination of the two timber-bent A A, of unequal height, and provided with pulleys B at the ends of their top bars, and with windlasses E upon their outer posts, the chair C, the chair G, provided with a pulley G, the three sluffing ropes D and the wire-track rope H, with each other. 2nd. The combination of the carriage I provided with the pulleys I J K, the pivoted loop latches P P and the suspended pivoted bail O, the hook N provided with the pulley M and the pivoted arm X, and the hoisting rope L, with each other, with the wire-track H and with the catch hoop W Y; 3rd. The combination of the hinged arm Z and the dumper A, B, C, with the hook-catch Y, the carriage I and the bucket G; 4th. The combination of the drop catch D₁ and the pivoted catch E₁, with the upper and lower arm of the hook-catch Y, to enable the carriage and bucket to be manipulated by operating the hoisting rope L.

No. 8137. Improvements in Harvesting and Reaping Machines.*(Perfectionnements dans les faucheuses-moissonneuses.)*

William A. Kirby, Auburn, N. Y., U. S., 27th November, 1877, for 15 years.

Claim.—1st. The combination with the apparatus for rolling up the rakes at the delivery side of the platform, of a movable stop or cam so arranged that, either automatically or at the will of the driver, the rakes can be rolled up on reaching or just passing the cutter. 2nd. The combination with the apparatus for rolling up the rakes, of devices, whereby one or more of the rakes may be rolled up at points different from the others; 3rd. The combination of the movable stop or cam N, link n, pivoted piece O, lug O₁, link O, lever O₂, rod O₃ and handle O₄; 4th. The combination of the movable stop or cam N, link n, pivoted piece O, arc P, pin P₁, projections Q and latches R; 5th. The lifter rod arranged beneath the finger-bar; 6th. The finger-bar S₁ having flange at back to receive the edge of the platform, and a groove formed underneath; 7th. The combination of a lever seat arranged to operate by means of a double crank, on the axle of the driving wheel, to raise the frame of the machine, with the lifter-rod T rotated and held in position by the lever T₂, working in the curved rack T₃ and operating to raise lower and hold the platform S with the finger-bar S₁ and cutter Y; 8th. The frame U pivoted at U₂; 9th. The combination of the shoe W, with rods W₁ and bars W₂, pivoted to plate W₃, and provided with clip W₄; 10th. The pin Z, partly enclosed in a sleeve, and connecting the driving rod and cutter.

No. 8138. Improvements on Horse Nails.*(Perfectionnements au clou à cheval.)*

John A. Huggett, London Eng., 27th November, 1877, for 5 years.

Claim.—1st. The manufacture of pointed nails by forming in the nail-bar the longitudinal groove a and upon the cutter b, the corresponding projection b₁; 2nd. The upper cutter b and lower cutter C having their cutting edges formed with a curvature, so as to simultaneously bend and cut the bar, and deliver the nail with the proper set or curvature upon it; 3rd. The combination of the cut steel bar having a transverse section similar to that of the nails, the two pairs of cutters b and c (both with edges of corresponding form), and presser e.

No. 8139. Improvements on Rotating Brushes. (Perfectionnements aux brosses rotatives.)

John Kistler, Celina, Ohio, U. S., 27th November, 1877, for 5 years.

Claim.—1st. The combination with the curved sections of a cylindrical brush, of the heads B, annularly grooved to receive the said sections, an axial shaft extending through the said heads, and suitable clamp-nuts applied upon the said shaft; 2nd. The combination with the hollow cylindrical brush body L, of the annularly grooved heads B, the axial shaft C and the clamp nuts g; 3rd. The combination with a cylindrical brush having plates d upon its ends, with rectangular openings therein, and the rectangular shaft extending through said plates, and provided with screw-threaded ends, of the crank arms D applied on said shaft and the nuts g; 4th. The combination with the cylindrical brush A, of the crank arms D having their inner wings oblique to the brush ends, and their handles oblique to the axis of the brush.

No. 8140. Improvements on Force Pumps.*(Perfectionnements aux pompes foulantes.)*

Edward I. Byron, Moes River, Que., 27th November, 1877, for 5 years.

Claim.—1st. The combination of the slotted wheel A, with the floats B cam-shaped case C and cam L, with cover K, also cavity G, shaft I and stand M, and the suction and delivery pipes E and F.

No. 8141. Improvements on Thill Couplings.*(Perfectionnement aux ajustages de limonieres.)*

David W. Copeland, Theresa, N. Y., U. S., 27th November, 1877, for 5 years.

Claim.—The combination with a clip having spaced bearing arms b, and the thill C having cam shaped head b₁ of the angular plate D having its spring-end S extending up between the clip, and cam bearing of said thill.

No. 8142. Improvements on Rock Drills.*(Perfectionnements aux forêts de mines.)*

Uriah Cummings, Buffalo, N. Y., U. S., 27th November, 1877, for 5 years.

Claim.—1st. Lifting dogs E applied to a vibrating lever D in combination with tripping devices N and a clutch head applied on a drill rod; 2nd. The clutch head F provided with a wedge G which is acted on by a spring and combined with a drill rod and raising and tripping mechanism; 3rd. In combination with the clutch head F and raising and tripping devices, the ratchet teeth d and pawl e. 4th. The gripping devices L combined with the drill-rod.

No. 8143. Gas Governor. (Regulateur a gaz.)

John C. Fisks and George S. Woodruff, Grand Rapids, Mich., U. S., 27th November, 1877, for 5 years.

Claim.—The chamber E provided with the inlet C and outlet M and the chamber E₁ provided with an orifice G, in combination with the diaphragm A, dividing the two chambers E E₁ and connected to valve C.

No. 8144. Improvements on Water Elevators.*(Perfectionnements aux elevateurs d'eau.)*

James M. Bam, Highland, Ohio, U. S., 27th November, 1877, for 5 years.

Claim.—1st. A water elevator having a tramway over which the water is carried in buckets, the stop block C and yoke D located over the source of water supply, and adapted to receive the bucket carriage, thereby depositing the bucket in the well or other water source; 2nd. The carriage E, provided with the hook bar L and latch M for catching and holding the bait of the bucket, in combination with the yoke D, rope F and bucket O, whereby said bucket is automatically connected and disconnected from said hook; 3rd. The block or float H, in combination with the bucket O and rope F.

No. 8145. Improvements on Sap Spouts.*(Perfectionnements aux siphons de sucreries.)*

Eileen Willis, Colton, N. Y., U. S., 27th November, 1877, for 5 years.

Claim.—A sap spout cast integrally, consisting of the spout A, tubular cylindrical end B to screw or drive, having recessed scoops C, collar D vertical hook E, and with or without a stud F.

Lists of Patents issued up to 26th December, 1877, but not yet Officially published in the Canadian Patent Office Record.

- No. 8146 T. R. Butman, Milan, Ohio, U. S. A. Furnace Door for Boiler. 27th November, 1877.
- No. 8147 E. Willis, Colton, N. Y., U. S. A. Sap Bucket, 27th November, 1877.
- No. 8148 T. Corsa, Brooklyn, N. Y., U. S. A. Axle Lubricator. 27th November, 1877.
- No. 8149 T. H. Pating, Woodstock, Ont. Window Shade, 27th November, 1877.
- No. 8150 W. Steele, St. Mary's, W. Va., U. S. A. Machine for Cutting and Dressing Hoops, 27th November, 1877.
- No. 8151 M. Tarabull, Toronto, Ont., "Terrestrial Globe" 27th November, 1877.
- No. 8152 B. Kirkbride, Morganville, Ohio, U. S. A. Toy pistol, 27th November, 1877.
- No. 8153 J. C. Cameron, Blanshard, Ont., "Gate," 27th November, 1877.
- No. 8154 L. Côté, St. Hyacinthe, Que. Sole Edge Trimmer or Burnisher, (Extension of Patent No. 1926,) 27th November, 1877.
- No. 8155 L. Côté, St. Hyacinthe, Que. Sole Edge Trimmer or Burnisher, (Extension of Patent No. 1926,) 27th November, 1877.
- No. 8156 T. R. Sinclair, New York, U. S. A. Filtering Apparatus, (Extension of Patent No. 1859,) 30th November, 1877.
- No. 8157 F. G. Wallace, Jackson, Mich., U. S. A., "Red Stones for Flouring Mills," 3rd December, 1877.
- No. 8158 G. L. Thorne, Buffalo, N. Y., U. S. A., "Portable Heater," 4th December, 1877.
- No. 8159 J. M. Rodkey and D. F. McMillan, Preeceville, Ont., Square and Bevel Combined, 4th December, 1877.
- No. 8160 A. Smith and H. Skinner, Youkers, N. Y., U. S. A. Loom, 4th December, 1877.
- No. 8161 J. H. Pendleton, Brooklyn, N. Y., U. S. A., A. H. Tiers and C. Tiers, New York, "Coffee Huller," 4th December, 1877.
- No. 8162 J. Grant and J. Sheppard, Gananoque, Ont. "Kettle Tongue and Cover Holder," 4th December, 1877.
- No. 8163 T. H. Haynes, Paul's Wharf, London, Eng., (Assignee of J. C. Schouley, New York, U. S. A.) "Gas Regulator," 4th December, 1877.
- No. 8164 J. Beckendorfer, New York, U. S. A., (Assignee of H. C. Benson, Youkers, N. Y., U. S. A.) "Pen," 4th December, 1877.
- No. 8165 S. N. Long and C. H. Kelly, West Warwick, Mass., U. S. A., Lamp Extinguisher, 4th December, 1877.
- No. 8166 G. R. Willett, Annapolis, N. S., now of Montreal, Que., Washer (Extension of Patent No. 1902,) 4th December, 1877.
- No. 8167 R. F. Frazier, Grand Rapids, Wis., U. S. A., "Clasps for Halters," 6th December, 1877.
- No. 8168 R. Smallwood, Charlottetown, P. E. I., "Coupling for Shafting," 6th December, 1877.
- No. 8169 A. A. Murphy, Montreal, Que. Store Stool, (Extension of Patent No. 1906,) 6th December, 1877.
- No. 8170 T. H. Hicks, London, Ont., "Automatic Gas Governor and Air Introducing Machine," 6th December, 1877.
- No. 8171 A. Lavigne, St. Pie, Que., Washing Machine, 6th December, 1877.
- No. 8172 T. B. Rogers, Jr., Brooklyn, N. Y., U. S. A., "Fastener and Adjuster for Shutters, Windows, Step Ladders, &c.," 6th December, 1877.
- No. 8173 T. Robertson, Toronto, Ont., "Lozenge Machine," 6th December, 1877.
- No. 8174 C. C. Redmond, San Jose, Cal., U. S. A., "Combined Measure and Funnel," 6th December, 1877.
- No. 8175 J. Demarest, New York, U. S. A., "Water Closet," 6th December, 1877.
- No. 8176 R. Soper, London, Ont., "Adjustable Needle Gauge and Threader," 6th December, 1877.
- No. 8177 S. Seabury, New York, U. S. A., "Rail Road Car Ventilator," 6th December, 1877.
- No. 8178 Z. Phillips, Bridgeport, Ohio, U. S. A., "Time Lock," 6th December, 1877.
- No. 8179 T. Galloway and J. Larsen, Oshawa, Ont., "Combined Broad Cast Seeder, Cultivator and Grain Drill," 6th December, 1877.
- No. 8180 C. L. Bullock and G. Mowitt, Toronto, Ont., "Skirt Protectors, Supporters and Distenders," 6th December, 1877.
- No. 8181 W. H. London, London, Ont., "and Gaiter Tree," 6th December, 1877.
- No. 8182 N. Thomas, Taunton, Mass., U. S. A., "Trace Fastener," 6th December, 1877.
- No. 8183 J. C. Van Aken, Aurora, Ont., "Land Roller," 6th December, 1877.
- No. 8184 O. St. Amant, Quebec, Que., "Boot Peg," 6th December, 1877.
- No. 8185 F. Jarecki, Erie, Pa., U. S. A., "Street Washer and Cut-off Casing," 6th December, 1877.
- No. 8186 S. Fox, Leeds, Eng., "Furnace Flue and Fire Box for Steam Boilers," 6th December, 1877.
- No. 8187 D. Stryngour, Foxborough, Mass., U. S. A., "Linen Board Shoe Stuffing," 6th December, 1877.
- No. 8188 E. V. Bodwell, St. Catharines, Ont., and J. E. Scott, Dunnville, Ont., "Combined Lock Gate Opener and Shutter," 6th December, 1877.
- No. 8189 J. Pattulo, Orangeville, Ont., "Perpetual Draw Lime," (Extension of Patent No. 1867,) 7th December, 1877.
- No. 8190 J. W. Calef, North Easton, Mass., U. S. A., "Washing Machine," 7th December, 1877.
- No. 8191 R. A. Mason, Paisley, Ont., (Assignee of A. Mason, Paisley, Ont.) "Tricycle," 7th December, 1877.
- No. 8192 G. Schwob, New York, U. S. A., "Dress Protector and Train Supporter," 7th December, 1877.
- No. 8193 J. P. Lovatt, (Assignee of A. J. Poorless) Toronto, Ont., Roller Skate, 10th December, 1877.
- No. 8194 D. E. Bangs, Boston, Mass., U. S. A. Air or Gas Arboretter, 10th December, 1877.
- No. 8195 A. Heiser, Prophetstown Ill. U. S. A. Sand Band for Vehicle Axle, 10th December, 1877.
- No. 8196 J. S. Hall, San Francisco Cal. U. S. A. Shoe and Glove Fastener, 10th December, 1877.
- No. 8197 R. H. Jarvis, Mitchell, Ont., "Root Thinner, Seeder and Sculler," 10th December, 1877.
- No. 8198 S. W. Belles, Orion, Mich., U. S. A., "Frused Whalffree and Neck Yoke," 10th December, 1877.
- No. 8199 J. Dowe, Ottawa, Ont., "Safety Seal and Stamp," 10th December, 1877.
- No. 8200 R. M. Wanzer, (Assignee of J. F. Chamberlain) Hamilton, Ont., Sewing Machine, 10th December, 1877.
- No. 8201 A. Camerou, Colborne, Ont., "Mowing and Reaping Machine Knife," 10th December, 1877.
- No. 8202 J. Tancour, Strathroy, Ont., "Gang Plough," 10th December, 1877.
- No. 8203 J. W. Norcross, Boston, Mass., U. S. A. Lumber blocks, 10th December, 1877.
- No. 8204 W. E. Sergeant, Minneapolis Minn., U. S. A. Millstone Driver, 10th December, 1877.
- No. 8205 C. J. F. Wilkins, Windsor, N. S., Mowing Reaping and Binding Machine, 10th December, 1877.
- No. 8206 R. Hersc, Montreal, Que. Horse Shoe Nail Blank Elongator, 10th December, 1877.
- No. 8207 H. Harrington, Blandford, and J. Harrington, East Zorro, Ont., "Moveable Farm Fence," 10th December, 1877.
- No. 8208 G. You, Montreal, Que., "Ventilating Apparatus," 10th December, 1877.
- No. 8209 W. W. Wait, Meriton, Ont., Pruning Shears, 12th December, 1877.
- No. 8210 H. Day, Detroit, Mich., U. S. A., "Railway Track Cleaner" (Extension of Patent No. 1911), 11th December, 1877.
- No. 8211 J. S. Fox, Oshawa, Ont., C. C. Cabio, Montreal, P. Q., and J. E. Christian, Richmond, Vt., U. S. A., "Advertising Table," 14th December, 1877.
- No. 8212 W. B. Arnold, North Abington, Mass., U. S. A. Peg Rasper, 14th December, 1877.
- No. 8213 G. G. Munger, Rochester, N. Y., U. S. A., "Lubricating Compound," 14th December, 1877.
- No. 8214 W. J. Allen, Buffalo, N. Y., U. S. A., "Engine Condenser," 14th December, 1877.
- No. 8215 M. Gaudy, Borough of Liverpool, England, "Belts and Bands for Driving Machinery," 14th December, 1877.
- No. 8216 T. Knowles, Westminster, Ont., Fruit Cleaner, 14th December, 1877.
- No. 8217 C. A. Bangs, Richmond, Ont., and G. H. Pierce, Cleveland, O., "Soldering Bolt," 14th December, 1877.
- No. 8218 D. Archer, Jr., Brier Hill, N. Y., U. S. A., Wheel Cultivator, 14th December, 1877.
- No. 8219 T. Walsh, Montreal, Que., Water Meter, 14th December, 1877.
- No. 8220 J. M. Gorham, Cleveland, Ohio, U. S. A., "Wash Board," 14th December, 1877.
- No. 8221 R. J. Caron, Ottawa, Ont., and W. Moffat, Pembroke, Ont., "Car Coupler," 14th December, 1877.
- No. 8222 H. B. Dyer, Toronto, Ont., "Joint for Sidewalks," 14th December, 1877.
- No. 8223 L. J. Baker, Boston, Mass., U. S. A. Cornice and Picture Rod Moulding, 14th December, 1877.
- No. 8224 H. Bell, J. Bell, and J. J. Coleman, Glasgow Scotland Food Preserving Process, 14th December, 1877.
- No. 8225 J. L. Maxwell, Bentonville, Ark., U. S. A., "Churn Dasher," 14th December, 1877.
- No. 8226 J. Clayton, Whitby, Ont., "Root Seed Drill," 14th December, 1877.
- No. 8227 J. Stinson, Nelson, Ont., and D. McKerlie, Hanzhsville, Ont., "Plough," 14th December, 1877.
- No. 8228 A. Hershey, Bertie, Ont., "Feed Cutter," 14th December, 1877.
- No. 8229 J. Mann, W. A. Mann, and D. Mann, Buffalo, N. Y., U. S. A., "Connecting Link for Chains," 14th December, 1877.
- No. 8230 F. F. Van Lewen, Murvale, Ont., "Carriage Top Irons," 14th December, 1877.
- No. 8231 C. Hershey, Falls City, Neb., U. S. A., "Feed Cooker," 14th December, 1877.
- No. 8232 G. Brown, Toronto, Ont., "Self-Locking Stove Leg," 14th December, 1877.
- No. 8233 A. Mungle, Newark, N. J., U. S. A. Umbrella and Cane Combined, 14th December, 1877.
- No. 8234 J. Woodley, Quebec, Que., "Boot and Shoe Brusher," 14th December, 1877.
- No. 8235 A. Kleinan, Hamburg, German Empire, "Safety Lock," 14th December, 1877.
- No. 8236 E. S. Iotham, Potsdam, N. Y., U. S. A., "Portable Fence," 14th December, 1877.
- No. 8237 J. G. Baker and T. H. Asbury, Philadelphia, Pa., U. S. A., 14th December, 1877.
- No. 8238 J. D. Imboden, Philadelphia, Pa., U. S. A., "Railway Motor," 14th December, 1877.
- No. 8239 R. M. Marchant, London, England, Pumps and Condensers, 14th December, 1877.
- No. 8240 C. M. Arthur, Ansonia, Ct., U. S. A., "Paper Box," 14th December, 1877.
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- No. 8242 T. J. Hubbell, Tountville, Cal., and J. Doty and R. Doty, Wellsville, N. Y., U. S. A., "Thill Coupler," 14th December, 1877.
- No. 8243 W. B. Noyes, Charlestown, Mass., U. S. A., "Curtain Fixture," 14th December, 1877.
- No. 8244 J. G. Baker, Philadelphia, Pa., U. S. A., "Sad Iron Grinder," 14th December, 1877.
- No. 8245 L. Rose, London, Eng., "Stopper for Bottles," 14th December, 1877.
- No. 8246 W. E. Wright, Rome, N. Y., U. S. A., "Pent Manufacturing Process," 26th December, 1877.

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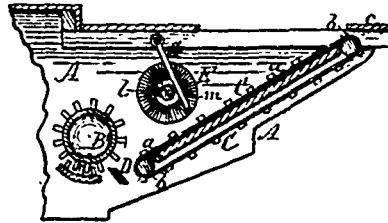
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DECEMBER, 1877.

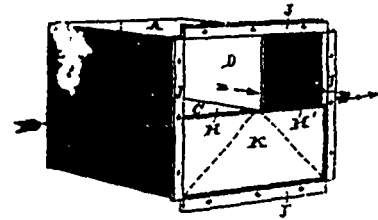
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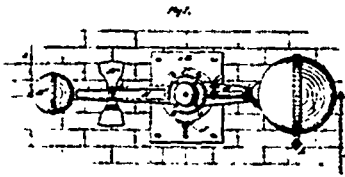
8060 Greacen's Improvements on Wringer Rollers.



8061 Green's Improvement on Threshing Machines.



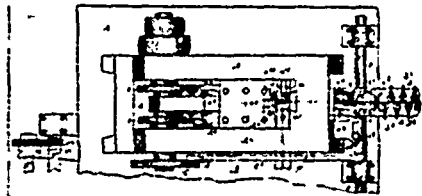
8062 Morton & Winchell's Improvements on Car Ventilators.



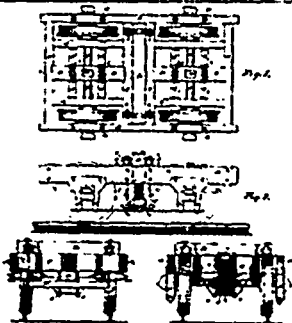
8063 Norcross's Improvements on Steam Boilers.



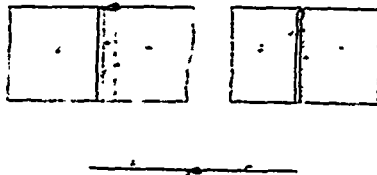
8064 Hyde's Improvements on Wooden-soled Shoes.



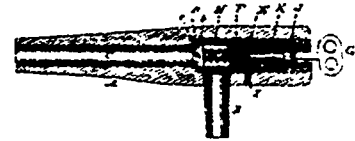
8065 Munson's Improvement on Screw Machines.



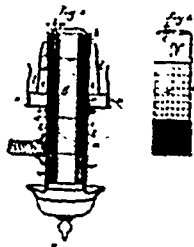
8067 Berry's Improvements on Car Trucks.



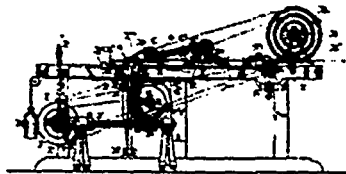
8068 Witcomb & Brackett's Improvements on Seams for Leather Work.



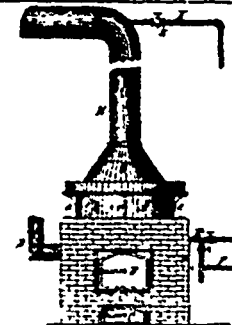
8073 Austin's Improvements on Faucets.



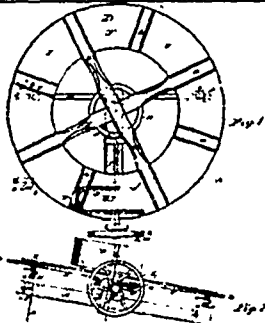
8074 Reistie's Improvement in Lamps.



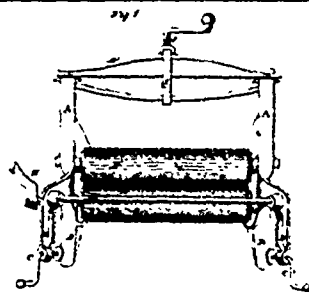
8075 Brandon's Washboard Leg Planing and Grooving Machine.



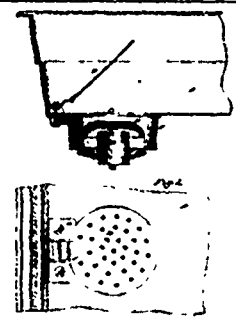
8076 Howell's Apparatus for Treating Ores.



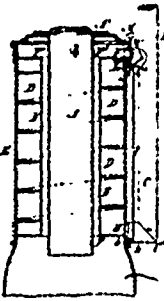
8081 Hamlin's Improvements on Dog Powers.



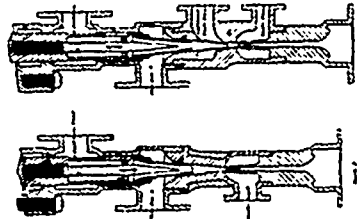
8083 Israel & Hull's Improvements on Clothes Wringers



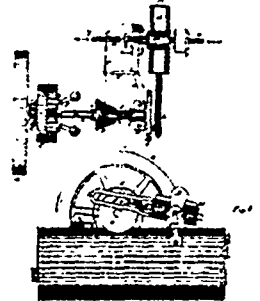
8084 Magee's Improvements on Sink Traps.



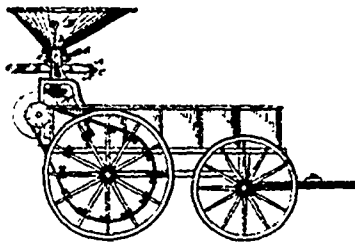
8085 Dion & Baylis' Improvements in Stoves and Furnaces.



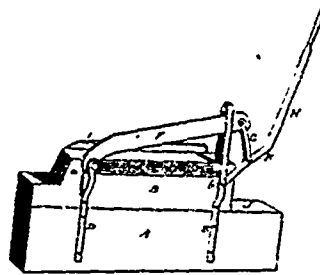
8086 Hamer, Metcalfe, & Davies' Improvements on Steam Boilers.



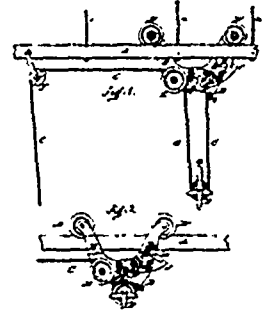
8087 Roe's Improvements in Steam Engines.



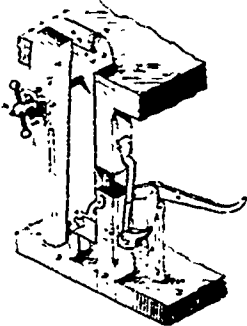
8088 Alden & Bruist's Improvements on Broad Cast Sowers.



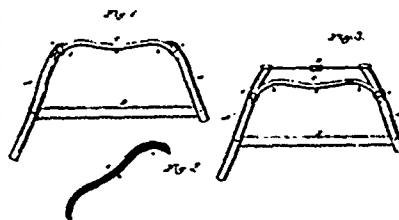
8089 Broderick & Cook's Machine for Cutting Iron and other Metals.



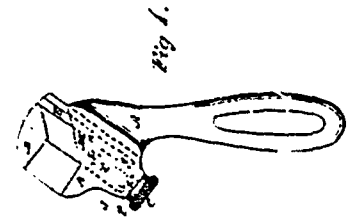
8090 Church's Improvements on Hay Elevators.



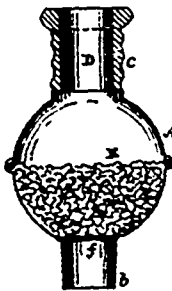
8091 Brower's Improvements on Bench Vises.



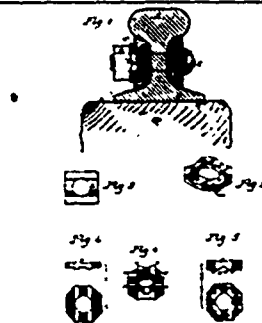
8092 Andrews' Improvement in Saw Frames.



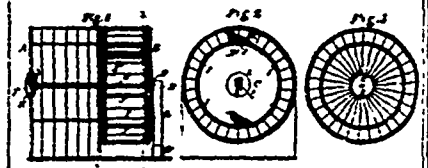
8093 Lipsey's Improvements on Wrenches.



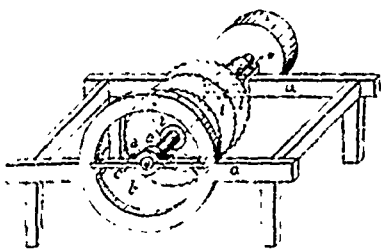
8099 Nugent's Improvements in Water Filters.



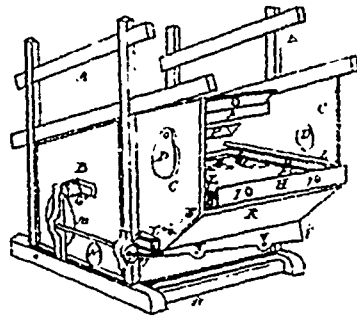
8100 Sawyer's Improvements on Nut Locks.



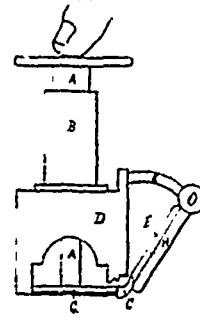
8101 Mook's Improvements on Bird Cages.



6102 Richardson's Improvements on Circular Sawing Machines



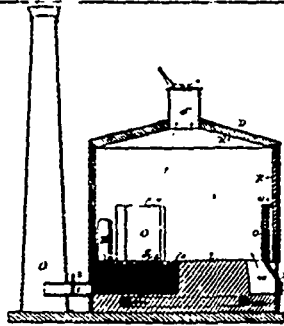
6103 Brown's Improvements on Threshing Machines.



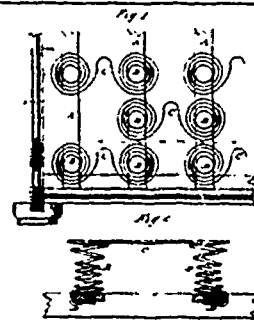
6104 Hawthorn's Improvements on Hand Stamps.



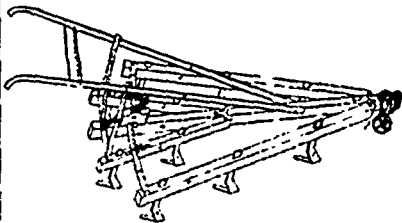
6105 Morgan's Street Stop-Cock for Gas and Water.



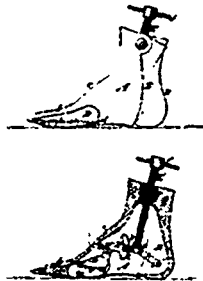
6106 Christy's Improvement in Brick Kilns.



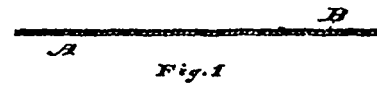
6108 Brown's Improvements on Bed Bottoms.



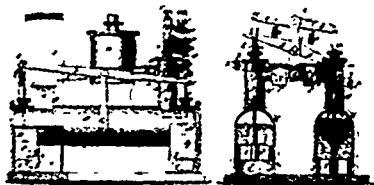
6109 Betts' Improvements on Cultivators



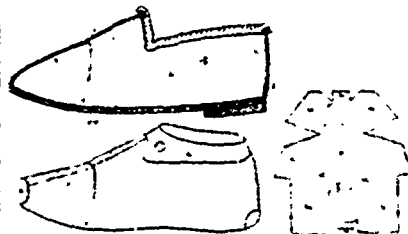
6110 Batley, Keats & Neil's Improvements on Boot and Shoe Lasts.



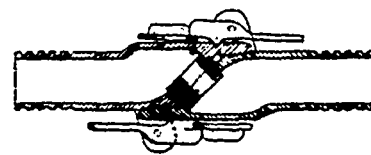
6117 Mackay & Hutbert's Improvements on Strips for Patching Sheet Metal.



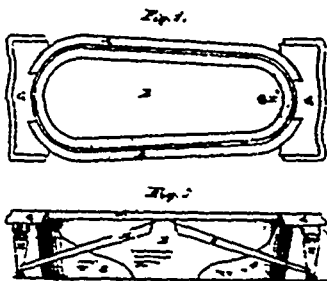
6118 Babbitt's Improvements on Air Compressors.



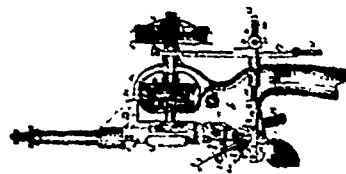
6119 Pelletier's Improvements in Boots and Shoes.



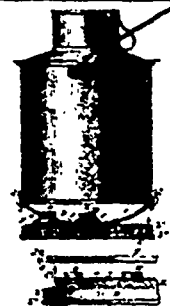
6120 Eames' Improvements on Vacuum-Brakes.



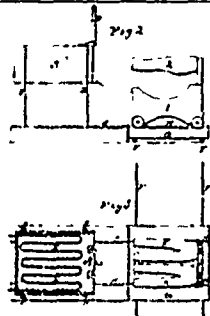
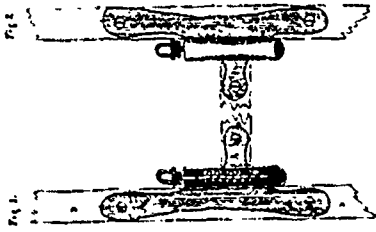
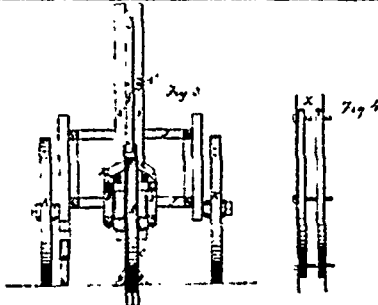
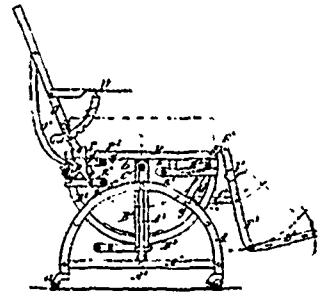
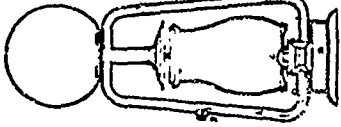
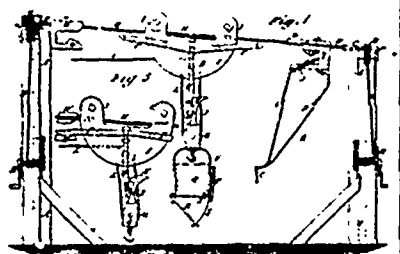
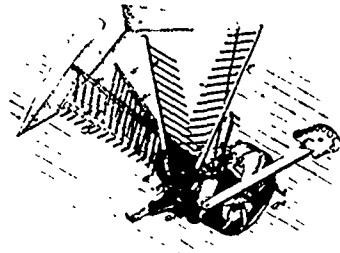
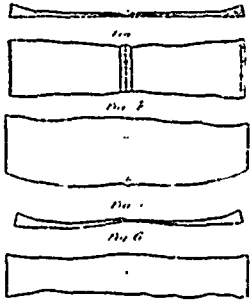
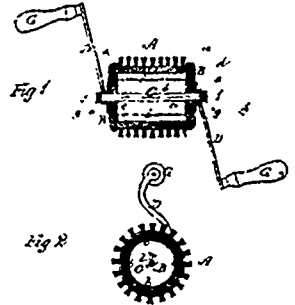
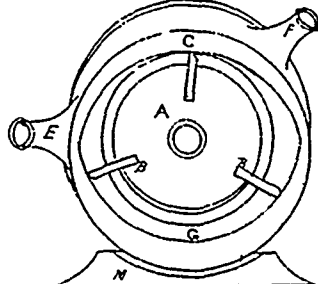
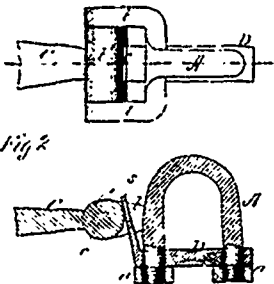
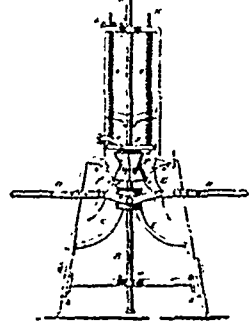
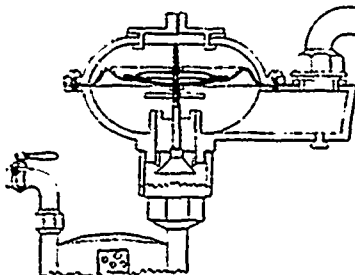
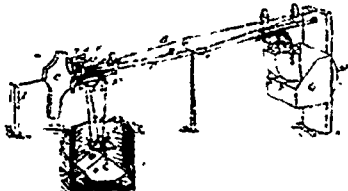
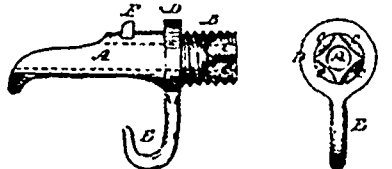
6121 Johnston & Taylor's Improvements on Portable Baths.



6122 Goddu's Nailing and Lasting Machine for Boots and Shoes.



6125 Thorn & Farnsworth's Improvement on Heaters.

 <p>8127 Viets' Apparatus for Shaping Pantaloon.</p>	 <p>8129 Bainton's Improvements on Carriage Whiffle trees.</p>	 <p>8130 Austin's Improvements on Ditching Machines.</p>
 <p>8132 Wilson's Improvements in Adjustable Chairs.</p>	 <p>8135 Sherwood's Improvements in Lanterns.</p>	 <p>8136 Clarkson's Improvements on Hoisting Apparatus.</p>
 <p>8137 Kirby's Improvements in Harvesting and Reaping Machines.</p>	 <p>8138 Huggett's Improvements on Horse Nails.</p>	 <p>8139 Kierster's Improvements on Rotating Brushes.</p>
 <p>8140 Byron's Improvements on Force Pumps.</p>	 <p>8141 Copeland's Improvements on Thill Couplings.</p>	 <p>8142 Cunnings' Improvements on Rock Drills.</p>
 <p>8143 Fisk & Woodruff's Gas Governor.</p>	 <p>8144 Bain's Improvements on Water Elevators.</p>	 <p>8145 Willis' Improvements on Sap Spouts.</p>