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INVENTIONS PATENTED.

No. 7485. Improvements on Hay Presses.

(Perfectionnements aux presses à foin.)

Peter K. Dederick, Albany, N.Y., U.S., 18th May, 1877, for 5 years.
Claim.—1st. The combination of the worm wheel C with one or more cranks D, pitman E and traverser, 2nd. The worm shaft and worm B, provided with a balance wheel, in combination with worm wheel C and crank or cranks; 3rd. The returners h i, either singly or together, and secured to the side of a baling press.

No. 7486. Reefing Fore-and-Aft Sails of Vessels.

(Mode de carguer les voiles auriques des vaisseaux.)

John W. Sharret, Portsmouth, Va., U.S., 18th May, 1877, for 5 years.
Claim.—1st. The mainsail of a vessel provided with a diagonal ridge band upon which the gull is secured, in the act of reefing, by a branch of the brail which reefs the said sail, 2nd. The main-sail M and the reef N having eyes m n in them through which the braills cross each other. 3rd. The braills Q q having branches q q. 4th. The combination of the main portion G of the jib, the bonnet H, the half-yards g h, down haul G and the braills K K. 5th. The jib made of two triangular sections, said sections being united together by lacing and both operated together, or the upper one independently of the lower one.

No. 7487. Improvements on Oil Stoves.

(Perfectionnements aux poeles a petrole.)

Hezekiah P. Malone, Cleveland, Ohio, U.S., 18th May, 1877, for 5 years.
Claim.—1st. The combination of reservoir B provided with supplemental air chamber Bz, wick tube or tubes F, pipes C E and chamber D, the latter furnished with a loose cover; 2nd. The combination with pipe E having two or more wick tubes secured thereto, of an oil reservoir B, supplemental chamber Bz and cock G, and cock or pipe B; 3rd. The combination of reservoir B, chamber Bz, pipe C and cock C; 4th. The combination of the feed port Bz of the perforated cylinder H; 5th. The combination with an oil stove of a reservoir which is air tight when not in use.

No. 7488. Improvements on Vehicles.

(Perfectionnements aux voitures.)

Jeremiah Murphy, Huntington, Que., 18th May, 1877, for 5 years.
Claim.—1st. The double clip A having king bolt D integrally formed therewith, in combination with a bolster F having a sleeve G receiving the bolt; 2nd. The combination of the bolt D having nut E, and bolster sleeve F G having V-groove for holding the parts pivotally when connected; 3rd. The bolster F having a recessed enlargement and bearing for the nut E of the bolt D, and the projections H H to keep the plate when screwed to the head block.

No. 7489. Bolt and Rivet Cutter.

(Machine à couper les boulons et rivets.)

William C. Carlton, Boise City, Idaho, U.S., 18th May, 1877, for 5 years.
Claim.—1st. A bolt or rivet cutter constructed in two sections one consisting of a frame or casing in which are secured and hung the operating handles or levers, the other of a casing carrying the cutting blades and their arms, the two sections being pivoted and secured together by means of suit-

able projections through which the pivots are passed enabling the section carrying the cutting blades to be turned at any angle to the right or left and operated thereat in the manner set forth. 2nd. The combination of the casing B carrying the fixed cutting blade and arm A and movable cutting blade and arm C pivoted therein, and provided with returning spring d and the casing D carrying the fixed arm F and movable lever G pivoted therein, the two parts being pivoted together by means of projections of B Bz and pins m n.

No. 7490. Machine for Cutting Nails.

(Machine à couper le clou.)

Oliver P. Cobb, Aurora, Ind., U.S., (Assignee of Worcester Haddock), 18th May, 1877, for 5 years.

Claim.—1st. The combination of the saddle A, bristles B C, gauges E F and cutting lever G, 2nd. The combination of the lever H, spring I, adjusting screw J and nail nipper K, 3rd. The combination of the die box L, bed piece M and adjusting holding piece N, 4th. The crank disk O, wrist pin P, screws A' B' and nut nuts C' D' F'. 5th. The combination of the subject matter of the foregoing claims with the automatic nail plate feeding device.

No. 7491. Improvements on Sewing Machines.

(Perfectionnements aux machines à coudre.)

John S. Hall, Monterey, Cal., U.S., 18th May, 1877, for 5 years.

Claim.—1st. The combination, together in one instrument, of a shuttle and needle, the former provided with a bobbin and tension, and the needle pivoted to its face and made of a suitable curve to operate in the manner described, produce an overhand stitch with a single thread, 2nd. The combination, with the needle and shuttle above claimed, of the looper F to carry the loop of the shuttle thread down below the point of the shuttle, 3rd. In combination with the shuttle and needle above claimed, the take up lever G constructed and operated in the manner described, 4th. The cloth plate C with its projecting ledge e, as supported for the needle c, and slots to hold and strip the cloth from the needle when combined with the needle and shuttle above claimed, 5th. The overhand stitch formed of a single thread with its loops, laid in the manner described, when produced by means of the mechanism or equivalent.

No. 7492. Improvement on Locks.

(Perfectionnement des serrures.)

Elisha Moore, Canterbury, N.B., 18th May, 1877, for 5 years.

Claim.—1st. The double catch W on the hasp A, 2nd. The combination of the dogs B C, 3rd. The springs.

No. 7493. Improvements on Snow Fences.

(Perfectionnements aux clôtures d'hiver.)

John C. Steele, Alma and James W. Anderson, Elora, Ont., 18th May, 1877, for 5 years.

Claim.—The combination of posts B with slots a d therein, in combination with panel G with top board I and bottom board E projecting, also cap C in combination with post B.

No. 7494. Art of Compounding Cements.

(Art de composer les ciments.)

Samuel Otley and James Otley, Chicago, Ill., U.S., 18th May, 1877, for 5 years.

Claim.—A cement composed of bitarage, yellow ochre, Paris white, plumbago, brick dust and mineral paint, compounded in the proportions and manner set forth.

No. 7495. Rein Supporter.

(Porte-guides.)

Joseph I. Ryder, Heshborough, Me., U.S., 18th May, 1877, for 5 years.

Claim.—A rein guard or supporter placed on a supporting standard or standards of the vehicle shaft or shafts and bent of one continuous piece of metal into a central guide piece b, eyes a and guard tongues d.

No. 7496. Improvements in Corsets.*(Perfectionnements dans les corsets.)*

Lucien C. Warner, New York, and Ira D. Warner, Bridgeport Ct., U.S. 18th May, 1877, for 5 years.

Claim.—1st. Corsets made of several sections of cloth, that is forming pockets in the separate sections, inserting the ribs in each section and then uniting the sections together; 2nd. The breast receptacles formed by uniting several sections extending the entire length of the corset; 3rd. Breast receptacles provided with sections extending the length of the corset, some of which are slit at the ends for the reception of gores *g*; 4th. The breast receptacle stiffened by series of short parallel ribs arranged side by side; 5th. The gores *g* stiffened by parallel ribs; 6th. The combination of the short parallel ribs and long ribs; 7th. A bosom pad corset having an opening *D*, formed between the edges *c c* of each breast receptacle and provided with a flap *I*; 8th. The washer *u* combined with the hooks *e* and with the spread end of the eyelet *r*.

No. 7497. Improvements in Gas and Air Carburetters.*(Perfectionnements dans les carburateurs à gaz et à air.)*

Oscar F. Boomer and Henry R. Randall, Brooklyn, N.Y., U.S., 21st May, 1877, for 5 years.

Claim.—1st. The combination of the central oil distributing chamber *C*, the automatic longitudinally operating valve plug the surrounding zig-zag carbureting passage, interposed annular condensing chamber and the inlet and outlet pipes; 2nd. The combination with the water jacket surrounding the carbureting passage *B*, of the water inlet pipe entering the said jacket at the top thereof, and a water outlet pipe leading from or near the bottom of said jacket, whereby the refrigerated water discontinuously drawn from the bottom of said jacket in order to secure a uniform temperature.

No. 7498. Improvement in the Manufacture of Hoops.*(Perfectionnement dans la fabrication des cercles.)*

David H. Burrell, Little Falls, N.Y., U.S., and John D. McEachen, Gall, Ont., 21st May, 1877, for 5 years.

Claim.—A wooden hoop formed by cutting from a sheet of veneer scarfing one end and pointing the other, then bending it edgewise to such an extent that the curve shall compensate for the taper of the barrel or cask on which it is placed.

No. 7499. Improvements on Metallic Brushes.*(Perfectionnements aux brosses métalliques.)*

John E. Howard and Clarence E. Howard Reading, Mass., U.S., 1st June, 1877, for 5 years.

Claim.—The combination of the flanged rim *C* with the back *A* and facing *B*.

No. 7500. Improvements in Advertising Cards.*(Perfectionnements dans les cartes de publicité.)*

Alexander H. Dixon, Toronto, Ont., 1st June, 1877, for 5 years.

Claim.—A mirror sign or advertising card prepared by painting, printing lithographing or letters, mottoes, designs, &c., in block or skeleton work, or in panels upon the back face of a mirror glass before the silvering is done.

No. 7501. Improvements on Drill and Broadcast Sowers.*(Perfectionnements aux semoirs au sillon et à la volée.)*

John Fraser, Charlottetown, Ont., 1st June, 1877, for 5 years.

Claim.—1st. The combination of seed box *C* with slides *F* and connecting rods *O O*; 2nd. The arrangement of the indented wheels *A A*, sway bars *B B* and their connections with slides *E E* and lever *L*; 3rd. The combination of the reversible harrow teeth *I*, 4th. The combination of hopper board *K* with its connections.

No. 7502. Improvements on Plough Clevises.*(Perfectionnements aux volées de charrues.)*

Clark Robinson, Eau Claire, Wis., U.S., 1st June, 1877, for 5 years.

Claim.—1st. In combination with the clevis *B* provided with the spur *b* and shoulder *b¹* the locking plate *C* having a toothed front edge pivoted upon the bar *A* and capable of vertical motion, so as to enable its notches *c* to engage or be released from engagement with said spur; 2nd. In combination with the clevis *B* provided at its front end with a vertical space *b¹¹¹* which has at its front side notches *h*, the link *E* arranged to loosely fill one of said notches and provided with a horizontally flattened portion *e*, that is capable of passing through said space *b¹¹¹*; 3rd. In combination with the clevis *B C*, the two part sleeve *F* slipping over the iron beam of a plough.

No. 7503. Spring Bed Bottom.*(Fond de lit à ressorts.)*

Girdlestone B. Izzard, Hamilton, Ont., 1st June, 1877, for 5 years.

Claim.—In combination, with a bed bottom, of the continuous wires *d d* secured to the slats *a* the said wires being either plain crimped or curved as shown at *A B* and *C*, and placed either under or over, between or around the said slats in any form.

No. 7504. Furniture Spring. (Resort de meuble.)

George A. Coulson, Wingham, Ont., 1st June, 1877, for 5 years.

Claim.—The combination of the parts *B D* and the rubber band *C*.

No. 7505. Improvements on Quilting Frames.*(Perfectionnements aux métiers à piquer.)*

Henry T. Davis, Sherman, Texas, U.S., 1st June, 1877, for 5 years.

Claim.—The combination of standards or legs *A A A* rollers *B B*, cranks *E E* and crank disks *D D* having locking pins *d*.

No. 7506. Improvements on Lamp Burners.*(Perfectionnements aux bcs de lampes.)*

James G. Hallas and William N. Weeden, Waterbury, Ct., U.S., 1st June, 1877, for 15 years.

Claim.—1st. The deck or chimney rest, constructed with its edge turned inward and enclosing a wire to form the edge of the chimney rest; 2nd. The chimney holding springs formed from wire, the ends of the said springs turned into a horizontal plane with the chimney rest, and secured thereto by turning the edge of the chimney rest over the said ends; 3rd. The combined wick and gas tube, formed complete in a single piece of metal, with a division between the wick and gas tube.

No. 7507. Improvements in Moccasins.*(Perfectionnements dans les moccasins.)*

Guillaume Boivin, Montreal, Que., 1st June, 1877, for 5 years.

Claim.—1st. The open flaps *A B* bearing the buckle and tightening strap attached to the sides of the opening in the moccasin or shoe hose; 2nd. The stuffing *h b*; 3rd. The guard or cord *c c c c*, in combination with the flaps *A B*.

No. 7508. Improvements on Horse Shoes.*(Perfectionnements aux fers à cheval.)*

Seth T. Bane, Chatham, Ont., 1st June, 1877, for 5 years.

Claim.—The combination of a horse shoe provided with a clip or ears forged, cast or otherwise securely attached thereto so as to form a part thereof, and in combination with the same, a weight adapted to fit upon such clip or clips and to be secured thereto by a bolt or bolts.

No. 7509. Improvements on Harvester Rakes.*(Perfectionnements aux râtaux de moissonneurs.)*

David Maxwell, Paris, Ont., 1st June 1877, for 5 years.

Claim.—1st. In combination with the rolling rake head *C*, having the arms *I* and rollers *O*, the cam track *B* having the pivoted or hinged cam gate *X* and latch *K*; 2nd. In combination with the rolling rake head *C*, having the arms *I* and friction rollers *O*, the cam track *B* having cam lug *P* for causing the rake when delivering the gavel; 3rd. In combination with the rolling rake head *C*, the cam track *B* having the gate *X*, the cam lug *P*, the bridge *R* and the gravitating lever latch *K*.

No. 7510. Machine for Cutting Leather on Sewing Machines.*(Machine à couper les cuirs sur les machines à coudre.)*

Joseph I. Pellerin and Hector Pellerin, Montreal, Que., 1st June, 1877, for 5 years.

Resumé.—Les différentes formes *Y Y^o* et *o Y* données aux tranchants des couteaux *A*, ainsi que les trois systèmes de mouvements similaires adoptés dans le but de pouvoir appliquer le mode de levier perpendiculaire *B* porte-couteau *A*, et complètement isolé de la plate-forme de la machine à coudre; l'ergot *u* du couteau *A*, les oreilles *D* et *D^o*, le chien *I* à ressort *f* et arret *h*, les trous *E E*, les glissières *d* axes *j K^o*, ces dits axes, leurs ressorts *l*, les mortaises *d* de réglage *l* et d'attache des dites oreilles; les ressorts *F*, la fourche *L*, guide du bras de levier *B* munie de son ressort; (relève) *HP* du levier *B* dans la machine à zrai et son axe *Jo* le plan incliné *o* du levier et la partie *Bo* pour l'attaque du taquet *M* ou de la came *AM*, ce taquet et cette came; le valet *HP* dans tous ses détails, l'embase demi circulaire *HB* du levier *B* qui, pour la machine à brai, repose sur le plan incliné *HP* du valet; susdit, et les ouvertures *m* pour laisser passer dans les platines *P*, la pièce du couteau *A* et la contre-ouverture *z* de la contre-platine *z o* qui rencontre l'entrée de la navette.

No. 7511. Improvements on Roof Coverings.*(Perfectionnements aux couvertures de toitures.)*

William H. Kershaw, Wides, England, 1st June, 1877, for 5 years.

Claim.—1st. The roof covering or sheathing composed of boards or plates so sawn, moulded, cut or shaped that they lay over or hook on to each other's edges in the manner shown. 2nd. As a joint for timber roof covering the combination of the boards *A* with the metal strip *F* and asphalt *G*.

No. 7512. Improvements on Lamps.*(Perfectionnements aux lampes.)*

John H. Lewars, David McCarthy and Ellwood A. Collins, Philadelphia, Pa., U.S., 1st June, 1877, for 5 years.

Claim.—The combination with the fixed or detachable collar of a lamp, of the valve *d* made of a single piece of elastic sheet metal attached by excess to the collar and covering a vent hole with the other, said valve either lying flat upon the surface of the collar or placed in a counter sunk recess; 2nd. A detachable lamp collar made to screw on to the fixed collar of a lamp and to receive the burner, and provided with a vent hole and valve.

No. 7513. Improvements on Butter Workers.*(Perfectionnements aux appareils à apprêter le beurre.)*

Joseph R. Smith, Brockville, and James H. Merckley, North Williamsburgh, Ont., 1st June, 1877, for 5 years.

Claim.—In combination with the tray *A* having rack bars *B*, the cylinder *C* having collars *G*, bevelled to a sharp edge peripherally, and longitudinal ribs *H* supported by contact therewith.

No. 7514. Improvements on Snow Ploughs.

(*Perfectionnements aux charrues à neige.*)

James Anderson Gouverneur, N.Y. U.S. and John R. Middlemiss, Montreal, Que., 1st June, 1877, for 5 years.

Claim—1st The combination of the series of rotating breakers D the series of elevators G and the fans H, 2nd. A cur A containing machinery for operating the breakers, elevators and fans, having a point B whose lower section slides over the upper section b; 3rd. The series of elevators G having hoods or elbows H changeable to throw the snow in the direction desired; 4th. The shoe 25 secured to the foot of the incline plane C for its protection.

No. 7515. Improvements on Motive Powers.

(*Perfectionnements aux moteurs mécaniques.*)

James S. Nelson, Bradford, Iowa, U.S., 1st June, 1877, for 5 years.

Claim—The combination of the shafts C G, balance wheel L, ratchet wheel K, pawl M, bolts F I treadle E and spring J, whereby the shaft C is rotated in one direction continuously by the operation of the treadle.

No. 7516. Sickle Grinding Machine.

(*Machine à remouler les faucilles.*)

William S. Ingraham, Waukegan, Ill., U.S., 1st June, 1877, for 5 years.

Claim—1st. The sickle holder G composed of a lower and an upper frame between which the sickle bar is held. 2nd. The pivoted arms G, connected together by the pieces t t l and provided with the grooves d and lugs s, in combination with the clamping frame H having recesses n, lugs m, handle H, perforated projection o and set screws f; 3rd. The upright frame E, fulcrumed near its lower end to bearings a attached to the frame A in combination with the gears D D', connecting rod E, sickle holder G and grindstone B, the mechanism for operating the parts being arranged above the grindstone frame.

No. 7517. Improvements on Ventilators.

(*Perfectionnements aux ventilateurs.*)

Charles R. Hicks, Troy (Assignee of Andrew J. Robinson,) N.Y., U.S., 1st June, 1877, for 5 years.

Claim—1st The domes A and B and shield E. 2nd The top and bottom domes A B, provided with flanges projecting from the edges thereof, 3rd. The combination of the domes A B and shield E with the brackets.

No. 7518. Improvements on Churn Dashers.

(*Perfectionnements aux batte-beurres.*)

David N. Ellsworth, London, Ont., 1st June, 1877, for 5 years.

Claim—The combination of rod D, bridge F and thumb screw E.

No. 7519. Improvements in Whiffletrees.

(*Perfectionnements aux palonniers.*)

William Shannon Colborne, Ont. (Assignee of Ambrose B. Coleman) 1st June 1877, for 5 years.

Claim—The combination of the crooked draw levers A A, the strengthening straps B B and the straight draw lever C.

No. 7520. Still for Distilling Petroleum and Other Oils.

(*Alambic pour distiller le pétrole et autres huiles.*)

Thomas Cochran, Petrolia, Ont., 7th June, 1877, (Extension of Patent No. 1520), for 5 years.

Claim—The construction of an oil still, for distilling petroleum and other oils, with one or more horizontal tubes C through it of any diameter.

No. 7521. Wire Fence Barb.

(*Defense de clôture en fil métallique.*)

Jacob Haush, DeKalb, Ill., U.S., 7th June, 1877, for 5 years.

Claim—1st. The double pointed barb B in combination with the strands a of a twisted wire fence rail, 2nd. A double pointed wire fence barb made from a single piece of wire, bent at its centre laterally, so that all its parts lie in the same plane, in the form of the letter S, forming two loops adapted to clasp both strands of the twisted wire.

No. 7522. Improvements on Boots and Shoes.

(*Perfectionnements aux chausures.*)

William S. Childs, Montreal Que., 7th June, 1877, for 5 years.

Claim—1st. The combination of the parts a of the mould having dovetail slide l, with the part of the mould d having pin m; 2nd. The part of the mould a in combination with the slide l, 3rd. The part of the mould a having projection h and reduced recess i; 4th. In the manufacture of boots and shoes' heels and shanks, the combination of the cover p, shank f, heel piece a, plate b with a piece of india rubber and cloth web for web No. 2 placed between the parts a and b and covering the sides of a, and a heel tap of the same material placed below the metal plate b and a piece of the same material placed on the under side of the shank as at a, 5th. The combination of the piece of material p, plate l having openings a with pieces of material a, whereby the union of material forming the parts p and a takes place in the openings a; 6th. The combination of the shank f with the plates t; 7th. The curved and tongued joint K whereby the leverage of the parts over the joints is reduced and a longer joint given, 8th. The heels and

shanks constructed of the parts at f b t, with the parts or covering of rubber and cloth which are then put into a mould and the rubber vulcanized; 9th. The formation of an outer casing or cover of canvas and rubber vulcanized in a mould a b, whereby the rubber is rendered plastic during the process a, l assume the shape of the mould, and afterwards hardened; 10th. The combination of the heel piece a with plate b having projections c and d; 11th. The combination of the heel plate a having covering of web No. 2, plate b and lower heel tap of web No. 2, the rubber parts being vulcanized.

No. 7523. Improvement on Churns.

(*Perfectionnement des barattes.*)

Eliza Brough, Greenville, Michigan, U.S. 7th June 1877 for 5 years.

Claim—1st. The combination of the rockers e and the danged platform A with the churn body E. 2nd. The combination of the interum pins B and the notched lugs, plates or flanges a, with the rockers e of the churn E and with the platform A; 3rd. The combination of the pivoted connecting rod F and the crank shaft D provided with a crank wheel d and a crank d' with a churn body E provided with rockers e. 4th. The combination of the hollow cylinder G with the churn body E. 5th. The combination of one or more flanges h i j and the crank g with the hollow cylinder G and the churn E.

No. 7524. Improvements on Animal Traps.

(*Perfectionnements aux pièges.*)

Sylvester Snell, Watertown, N.Y., U.S., 7th June, 1877 for 5 years.

Claim—1st The box A having trap-doors U and doors C, shaft E, crank F, connecting rods F', arms G and rods H, 2nd. In combination with the trap, the pit B having tubular cage K provided with a trap-door I and bars M.

No. 7525. Process for Refining Iron and Steel.

(*Procédé pour affiner le fer et l'acier.*)

Charles G. Patterson, Boston, Mass., U.S., (Assignee of John E. Sherman), 7th June, 1877, for 5 years.

Claim—1st. The treatment of iron with iodine in connection with chlorine. 2nd. The treatment of iron with bromine in connection with chlorine. 3rd. The treatment of iron with iodine, bromine and chlorine, in connection with each other, 4th. The treatment of iron with iodine, bromine, chlorine and antimony, in connection with each other, 5th. A composition for treating iron containing iodine and chlorine in the proportion stated, with a composition for treating iron containing bromine and chlorine in the proportion stated, 7th. A composition for treating iron containing iodine, bromine and chlorine in the proportions stated, 8th. A composition for treating iron containing iodine, bromine, chlorine and antimony, in the proportions stated.

No. 7526. Improvements on Washing Machines.

(*Perfectionnements aux machines à laver.*)

Lewis Cooley, Appleton, Wis., U.S., 7th June, 1877, for 5 years.

Claim—1st. The circular false bottom Band the rubber B, severally provided with the radial ribs a b and hubs c d projecting beyond the planes of said ribs; 2nd. The combination of the movable bottom B having the radial ribs a b and its face covered entirely with sheet metal, the rubber B provided with the radial ribs b the hub c and sheet metal covered face, the standard C and handle C.

No. 7527. Improvements on Musical Reed Instruments.

(*Perfectionnements aux instruments de musique à anches.*)

Alexander R. Koerber and James Sheridan, Toronto, Ont., 7th June, 1877, for 5 years.

Claim—1st. A musical reed instrument in which the central or accompaniment notes are connected with an independent subdivided section of the reed chamber, subdivided to correspond with the central or accompanying notes, and closed by a variable swell valve, which valve can be operated to open or close one or more, or all, of the subdivisions at the will of the performer, 2nd. The combination with the reed chamber B provided with the subdivided central section B' of the variable slide valves D; 3rd. The pivoted knee lever F, cord F', differential roller E and cords D', in combination with the valves D; 4th. The differential spring roller G and cords G', in combination with the valves D; 5th. The valves D with wedge shaped ends H in combination with the bass swell valves I; 6th. The indicating pointer K K' attached to the valve D.

No. 7528. Machine for Gumming and Sharpening Rotary Saws.

(*Machine à évider et affûter les scies rondes.*)

Samuel Freeze, Doaktown, and John Farley, Ludlow, N.B., 7th June, 1877, for 5 years.

Claim—1st. The frame in which the emery wheel runs, 2nd. The combination of the lever K, wire L, rope F, pulley and weight G.

No. 7529. Improvements on Lamp Extinguishers.

(*Perfectionnements aux éteignoirs des lampes.*)

Charles L. Girard Montreal, Que. (Assignee of Martin P. Flanders), 7th June, 1877, for 5 years.

Claim—1st. The combination of the arc-and burner b pivoted cap f e having bar l attached thereto, 2nd. The combination of the flat burner a having pivoted cap g attached thereto, with the weight d having plates e

attached thereto, with or without spring *h* and with treadle *m* or its equivalent; 3rd. The combination of the flat burner *a*, pivoted cap *g* and plates *e*; 4th. The combination of the flat burner *a*, weight *d* and sliding plates *e*; 5th. The combination of the plate *e* having projections *h*, with the burner *a* provided with cap *g* having slotted hole *f*.

No. 7530. Improvements in Furnaces for Steam Boilers.

(*Perfectionnements aux fourneaux des chaudières à vapeur.*)

Charles D. Smith, Philadelphia, Pa., U.S., 7th June, 1877, for 5 years.

Claim.—1st. The horizontal manifold *H* having projections *a* and vertical column *D*, in combination with the drum *M*, manifold *P*, connected with the drum and pipes *R* and *K* connecting the manifolds *P* and *H* with the top and bottom of the boiler, whereby a circulation of the water is maintained through said manifolds and drum; 2nd. The combination with the drum *M* and manifold *P*, at the rear of the boiler of pipes *N*, connecting said drum and manifold together, the said manifolds communicating with the steam space of the boiler; 3rd. The combination of the fire bridge wall and drum *M*, the manifold *H*, vertical columns *D*, pipe *L*, connecting the bridge wall and manifold, and pipe *A* connecting the bridge wall and boiler.

No. 7531. Machine for Drying Fruit.

(*Machine à sécher les fruits.*)

George A. Johnston, Simcoe, Ont., 7th June, 1877, for 5 years.

Claim.—The combination of the wooden box *H* with the top frame work of wood *A* and *B*, and glass *C* on supports *E* and *F*, and ventilators *G* covered with gauze.

No. 7532. Combined Towel Rack and Wall Protector.

(*Ecran porte-serviette.*)

Edwin Pullan, Detroit, Mich., U. S., 7th June, 1877, for 5 years.

Claim.—A washstand provided with grooved guides *A* *A* having catches *H* *H*, in combination with the sliding frame *B* carrying the wall projecting sheet *D*; 2nd. The sliding frame *B* which is provided with rod *C*, staples *c*, removable wall protecting sheet *D*, lifting knobs *F* *F*, towel rack *G*, in combination with a washstand which is provided with strips *A* *A* and stops *H* *H*.

No. 7533. Improvement on Rein-holders.

(*Perfectionnement aux porte-rénes.*)

Frank E. Hall and Charles W. Richardson, Portland, Me., U. S. 7th June, 1877, for 5 years.

Claim.—1st. The combination of plate *A* having concave under side *a*, *B*, set screws *C* and projection *A* with spring *D*; 2nd. In a detachable device adapted for use on any carriage or vehicle, the combination of a spring *D* with a plate *A* and set screw *C*.

No. 7534. Reversible Hinged Slates.

(*Ardoises à charnières réversibles.*)

Theophilus Van Kannel and Christian F. Rapp, Cincinnati, Ohio, U.S., 7th June, 1877, for 5 years.

Claim.—The combination of the slates *A* *A* with the hinge link *B*; 2nd. The slates *A* *A* having the grooves *a* *a*, in combination with the link *B* the filling piece closing the opening into the grooves; 3rd. In combination with the links *B* or *B*, the frames *A* *A* having a portion overhanging the recess *A*; 4th. In combination with the frames *A* *A* the links *B* or *B* and the barbed or other staples *D*; 5th. In combination with the frame *A* having the overhanging portion, the links *B* or *B* and the staples *D*.

No. 7535. Improvements in Railway Freight Cars.

(*Perfectionnements dans les wagons à fret de railroutes.*)

Richard Eaton, John M. Vernon and George Sanderason, Montreal, Que., 8th June, 1877, for 5 years.

Claim.—1st. The combination, in a railway freight car, of adjustable floors with hoppers and discharge outlets; 2nd. The combination, in a railway freight car, of a central metallic or other chamber provided with inlets in roof, and having inclined floors and discharge valves at the bottom, said central chamber having separate compartments on either side provided with side doors, inlet apertures and adjustable or other floors together with hoppers having chutes and valves; 3rd. The combination, in a railway freight car, of a round or other shaped tank or chambers with side compartments, the chambers being depressed in the centre and elevated at the ends so as to give proper fall, and having suitable valves for control and discharge of cargo; 4th. In a railway freight car comprising a combination of any of the central and side chambers, the inclined planes, delivery chutes and hoppers as before mentioned, in combination with and carried upon six wheels; 5th. A railway freight car without roof and having low sides, in combination with any adjustable floors, hoppers and chutes herein mentioned, 6th. In combination with any kind of freight car the ventilators *L*.

No. 7536. Improvements in Horse Boots.

(*Perfectionnements dans les souliers des chevaux.*)

John B. Hall and James R. Silliman, Toronto, Ont., 8th June, 1877, for 5 years.

Claim.—1st. A horse boot or wrapper constructed with a lining and perforated with holes to allow of ventilation; 2nd. A horse boot or wrapper having a plate as seen at *F*; 3rd. A horse boot or wrapper having sponge, or other soft porous material, for the reception of glycerine held to the bottom of the foot by a metallic spring plate attached to a horse boot.

No. 7537. Improvements on Sawing Stones.

(*Perfectionnements dans le sciage des pierres.*)

Richard A. Tilghman, Philadelphia, Pa., U. S., 8th June, 1877, for 5 years.

Claim.—The use of a mixture of different sizes of grains or globules obtained from melted iron or steel, or their alloys, in the sawing of stone glass pottery and similar hard substances, in place of using grains of coarse uniform size in the same operation, as heretofore supposed to be preferable in practising the said process.

No. 7538. Combined Check and Driving Reins.

(*Faussers-rénes et guides de cheval combinés.*)

James McLean, L'Etéte, N. B., 8th June, 1877, for 5 years.

Claim.—The arrangements and combination of the driving reins *A* and check reins *E*, connected to bit *C* passing through loops *F* at the ears and thence through turret *G* in the back pad intermediate of the driving rein turrets *B*, and thence connecting with the driving reins *A* rearward of the latter.

No. 7539. Improvements in Mowers and Reapers.

(*Perfectionnements dans les faucheuses-moissonneuses.*)

William T. Jones, Doon, Ont., 8th June, 1877, for 5 years.

Claim.—1st. The shear cutting knives *F*, in combination with the axle bar; 2nd. The lever *B* in combination with the recessed collar; 3rd. The connecting rod *D* with block and fitted with anti-friction roller, in combination with the cam on the driving wheel *A*; 4th. The casting *E* fitted to frame *H*, in combination with the elongated axle *C*.

No. 7540. Broom Bag.

(*Sac à balai.*)

James S. McMurray and Thomas K. Fuller, Toronto, Ont., (Assigned to Edward D. Bronson), 8th June, 1877, for 5 years.

Claim.—A broom bag, the lower end of which is provided with the fold *a*, cord *b*, flaps *B* *B* and *C* *C*, one or more of the said flaps being provided with eyelets *E*, for the reception of the projecting cord ends *D*.

No. 7541. Caramel Chewing Gum.

(*Gomme-caramel à mâcher.*)

Frank Sibley and James Holmwood, Jr., Buffalo, N.Y., U.S., 8th June, 1877, for 5 years.

Claim.—A composition of paraffine, coffee, sugar and grape sugar or glucose.

No. 7542. Railway Rail Washer.

(*Rondelle de rails de railroute.*)

John M. MacKay, Quebec, Que., (Assigned to Auguste M. Bécharh) 8th June, 1877, for 5 years.

Resumé.—La platine ou washer *a* qui sert à empêcher de dévisser les écrous, surtout les écrous qui servent à réunir les rails de chemin de fer.

No. 7543. Double-Acting Force Pump.

(*Pompe foulante à double effet.*)

George W. Hooper, Green, Me., U.S., 8th June, 1877, for 5 years.

Claim.—1st. The combination of the cross head *H*, pivoted bar *M* with slotted handle *O* and arm *Q*; 2nd. The combination of the adjustable bar *K* with the grooved guide bars *J*, the rollers *I* and the cross head *H* attached to a piston rod *L* of a pump.

No. 7544. Improvements on Horse Hay Forks.

(*Perfectionnements aux fourches à cheval.*)

William W. Ellis, Salmon Beach, N.B., 11th June, 1877, for 5 years.

Claim.—The curved tines *A* *A*, articulated to toggle bars *B* *B* and centrally pivoted to the extended arms *E* *E* of a head *C* having a lug *F* to which the bar *G* is pivoted.

Lists of Patents issued up to 18th July, 1877, but not yet Officially published in the Patent Office Record.

- No. 7566. H. Redden, New York, U.S.A., "Bag Fastener," 23rd June, 1877.
- No. 7567. R. B. Sheldon, Shortsville, N.Y., U.S.A., "Hay Rake," 23rd June, 1877.
- No. 7568. W. Biggar, and G. Murwin, Fulton, Wis., U.S.A., "Feather Renovator," June 23rd, 1877.
- No. 7569. H. G. Hubbard, Placerville, Cal., U.S.A., "Solder Wire," 23rd June, 1877.
- No. 7570. F. W. Sullivan, Newark, N.Y., U.S.A., "Nut Lock," 23rd June, 1877.
- No. 7571. E. B. Beer, Sussex Vale, N.B., "Improvements on the Wimbledon and Brunel Targets, and Signalling Apparatus," 23rd June, 1877.
- No. 7572. W. W. Gary, Huntingdon, Penn., U.S.A., "Electric Motor," 23rd June, 1877.
- No. 7573. J. Chase, Rochester, N.Y., U.S.A., "Window Shade Fixture," 23rd June, 1877.
- No. 7574. A. B. Shaw, Medford, Mass., U.S.A., "Curtain Fixture," 23rd June, 1877.
- No. 7575. G. Bellamy, Newtonville, Ont., "Waggon," 23rd June, 1877.
- No. 7576. H. Elbe, Niagara Falls, N.Y., U.S.A., "Fire Escape," 23rd June, 1877.
- No. 7577. I. H. Allen, Black Creek, Ont., "Fire Escape Ladder," 23rd June, 1877.
- No. 7578. G. W. Pitt, London, Ont., "Safety Key Lock," 23rd June, 1877.
- No. 7579. J. Bates, Thornbury, Ont., "Combined Table and Clothes Dryer," 23rd June, 1877.
- No. 7580. F. C. Long, Detroit, Mich., U.S.A., "Process of Enamelling Photographs and other articles," 23rd June, 1877.
- No. 7581. M. Palmer, Hamilton, Wis., U.S.A., "Middlings Separator," 23rd June, 1877.
- No. 7582. H. C. Cone, Chicago, Ill., U.S.A., "Combined Line-sized Wood and Paper Parcelling Dish," 23rd June, 1877.
- No. 7583. B. Holland, and R. D. Kennedy, Hamilton, Ont., "Metal Coil Piston Packing," 23rd June, 1877.
- No. 7584. R. S. Penniman, North Village, Adams' Town, Mass., U.S.A., "Process for the Saving of Residual Acids in the Manufacture of Nitro-glycerine," 25th June, 1877.
- No. 7585. G. W. Atkins, and J. D. Harris, Noble's Lake, Ark., U.S.A., "Lap Ring," 25th June, 1877.
- No. 7586. W. Murray, Vicksburg, Miss., U.S.A., "Fireman's Protecting Apparatus," 25th June, 1877.
- No. 7587. A. N. Aubin, Montreal, Que., "Steam Gas Generator," 25th June, 1877.
- No. 7588. N. P. Otis, Yonkers, N.Y., U.S.A., "Oscillating Joint for Machinery," 25th June, 1877.
- No. 7589. J. S. Williams, Riverton, N.Y., U.S.A., "Railway Crossing Switch," 25th June, 1877.
- No. 7590. S. May, Toronto, Ont., "Coal Oil Chandelier for Lighting Billiard Tables," 25th June, 1877.
- No. 7591. E. W. Bateman, Hamilton, Ont., "Bread Making Process," 25th June, 1877.
- No. 7592. M. M. Kellar, London, Ont., "Feather Renovating Machine," 25th June, 1877.
- No. 7593. T. McDonald, Toronto, Ont., "Canister," 25th June, 1877.
- No. 7594. J. Shacleton, Toronto, Ont., "Sand Papering Machine," 25th June, 1877.
- No. 7595. Rev. L. Pulliam, Knob Noster, Miss., U.S.A., "Waggon Spring," 25th June, 1877.
- No. 7596. J. E. Gridley, Saint Paul, Minn., U.S.A., "Heating Stove," 25th June, 1877.
- No. 7597. J. D. McDermaid, Rockford, Ill., U.S.A., "Churn," 25th June, 1877.
- No. 7598. P. Protherve, Surbiton, England, "Anchor," 25th June, 1877.
- No. 7599. J. Forbes, Jr., and W. E. Forbes, Plainwell, Mich., U.S.A., "Spring Bed Bottom," 25th June, 1877.
- No. 7600. C. Taylor, Montreal, Que., "Horse Shoe," 25th June, 1877.
- No. 7601. H. Gillmore, Simcoe, Ont., and J. Heatte, Charlotteville, Ont., "Force and Lift Pump," 4th July, 1877.
- No. 7602. S. L. Rockfellow, Rochester, N.Y., U.S.A., (Assignee of A. Button, East Saginaw, Mich., U.S.A.), "Grocer's Scoop," 4th July, 1877.
- No. 7603. J. B. Lanier, St. Athanasie, Que., "Wax Taper Machine," 4th July, 1877.
- No. 7604. C. King, Pittsburg, Penn., U.S.A., "Dental Plugger," 4th July, 1877.
- No. 7605. R. J. Stead, Lanark, Ont., and W. Moore, Carpe, Ont., "Wind Wheel," 4th July, 1877.
- No. 7606. B. B. Hotchkiss, New York, U.S.A., "Breech Loading Fire-arm," 5th July, 1877.
- No. 7607. C. H. Parker, and J. W. Luggett, Cortland, N.Y., U.S.A., "Oar for Rowing Boat," 5th July, 1877.
- No. 7608. M. Lescarbau, Côte St. Louis, Que., "Pump," 5th July, 1877.
- No. 7609. R. S. Galbraith, and W. Snow, Montreal, Que., "Umbrella and Case," 5th July, 1877.
- No. 7610. A. Young, St. John, N.B., "Combination Iron and Slate Mantel," 5th July, 1877.
- No. 7611. J. N. Smith, Jersey City, N.Y., U.S.A., "Railway Car Axle Box and Boiler," 5th July, 1877.
- No. 7612. P. K. Dederick, Albany, N.Y., U.S.A., "Hay Press," (Extension of Patent No. 1657), 5th July, 1877.
- No. 7613. P. K. Dederick, Albany, N.Y., U.S.A., "Hay Press," (Extension of Patent No. 1657), 5th July, 1877.
- No. 7614. P. K. Dederick, Albany, N.Y., U.S.A., "Baling Press," (Extension of Patent No. 3391), 5th July, 1877.
- No. 7615. P. K. Dederick, Albany, N.Y., U.S.A., "Baling Press," (Extension of Patent No. 3391), 5th July, 1877.
- No. 7616. A. R. Appleman, Washington, D.C., U.S.A., (Assignee of A. Miller, Plogerstown, Md., U.S.A.), "Clover Seed Hulling Machine," 10th July, 1877.
- No. 7617. J. M. Might, and C. W. H. Taylor, Toronto, Ont., "Pen," 10th July, 1877.
- No. 7618. H. Turner, and C. French, St. John's, Que., "Fire Escape Ladder and Truck," 10th July, 1877.
- No. 7619. J. B. Sammis, New York, U.S.A., (Assignee of G. Leverich, Brooklyn, N.Y., U.S.A.), "Elastic Hub," (Re-issue of Patent No. 5289), 10th July, 1877.
- No. 7620. G. Moreau, Victoriaville, Que., "Stove," 12th July, 1877.
- No. 7621. J. L. Griffin, Eastport, Maine, U.S.A., "Packing Case for Transporting Fish," 12th July, 1877.
- No. 7622. C. Powell, Newton Brook, Ont., "Pump," (Extension of Patent No. 1563), 16th July, 1877.
- No. 7623. D. Maxwell, Paris, Ont., "Straw Cutter," (Extension of Patent No. 1558), 16th July, 1877.
- No. 7624. H. K. Flagler, Boston, Mass., U.S.A., (Assignee of J. B. Root, New York, U.S.A.), "Metal Pipe and Tube," 18th July, 1877.
- No. 7625. J. K. Somes, and L. R. Waite, Springfield, Mass., U.S.A., "B'as Measure," 16th July, 1877.
- No. 7626. W. H. Patten, Clockville, N.Y., U.S.A., S. P. Young and C. D. Young, Niagara Falls, N.Y., U.S.A., "Rake," 16th July, 1877.
- No. 7627. E. L. Byron, Moes River, Que., and S. Jameson, Compton, Que., "Hand Truck," 16th July, 1877.
- No. 7628. D. Rodgers, St. Louis de Gonzague, Que., and R. Brickerdike, Montreal, Que., "Screw Propeller," 16th July, 1877.
- No. 7626. F. Roach, Henvilton, N.Y., U.S.A., and H. Dark, Gouth Gower, Ont., "Milk Cooler," 16th July, 1877.
- No. 7630. J. B. Sammis, (Assignee of G. W. Hayes, New York, U.S.A.), "Elastic Hub and Axle Box for Wheels of Vehicles," 16th July, 1877.
- No. 7631. W. Randel, J. W. Clipperly, J. C. Cole, and T. E. Haslehurst, Troy, N.Y., U.S.A., "Button Hole Attachment for Sewing Machine," 16th July, 1877.
- No. 7632. J. A. Caldwell, (Assignee of S. Adlam, Jr., Boston, Mass., U.S.A.), "Hose Strap," 16th July, 1877.
- No. 7633. L. Nicol, and M. Côte, Sherbrooke, Que., "Meat Chopper," 16th July, 1877.
- No. 7634. J. B. Sammis, (Assignee of G. W. Hayes, New York, U.S.A.), "Elastic Hub and Axle Box for Wheels of Vehicles," 16th July, 1877.
- No. 7635. W. J. Stevens, New York, U.S.A., "Air-Brake Coupling," 16th July, 1877.
- No. 7636. E. Wasell, Digby, N.S., "Railway Rail Pier," 16th July, 1877.
- No. 7637. R. Lade, Waterloo, Ont., "Gang Plow," 16th July, 1877.
- No. 7638. L'V. W. Noyes, Batavia, Ill., U.S.A., "Hay Carrier," 16th July, 1877.
- No. 7639. J. A. Caldwell, Boston, Mass., U.S.A., "Hose Strap Fastener," 16th July, 1877.
- No. 7640. E. P. Walker, Belcherstown, Mass., U.S.A., "Butter Worker," 16th July, 1877.
- No. 7641. I. C. G. Rice, Cambri lge, Mass., U.S.A., "Inking Apparatus for Printing Presses," 16th July, 1877.
- No. 7642. J. Heard, Strathroy, Ont., "Stone Walling," 16th July, 1877.
- No. 7643. H. Atkinson, Etchemin, Que., "Apparatus for Preparing Timber for Shipment," 16th July, 1877.
- No. 7644. M. Gelston, East Haddam, Conn., U.S.A., "Cigar," 16th July, 1877.
- No. 7645. J. Wertheim, Bernheim, Germany, "Atmospheric Gas Engine," 16th July, 1877.
- No. 7646. T. Guerin, San Francisco, Cal., U.S.A., "Sewer Trap," 16th July, 1877.
- No. 7647. D. Conroy, Uxbridge, Ont., "Seat for Buggies and other Vehicles," 16th July, 1877.
- No. 7648. R. Mowry, Ashburnham, Ont., W. Forsythe, Ashburnham, Ont., and G. McCannon, Otonabee, Ont., "Grain Threshing Machine," 16th July, 1877.
- No. 7649. A. Tenner, Cincinnati, Ohio, U.S.A., "Fire Extinguishing Compounding," 16th July, 1877.
- No. 7650. J. C. Brightman, Fall River, Mass., U.S.A., "Horse Shoe," 16th July, 1877.
- No. 7651. W. J. Holton, and J. E. Field, Brooklyn, N.Y., U.S.A., "Pencil," 16th July, 1877.

No. 7652. W. A. Weed, Chicago, Ill., U.S.A., "Indelible Ink Apparatus," 16th July, 1877.

No. 7653. G. T. Atkinson, Torquay, England, "Horse Shoe," 16th July, 1877.

No. 7654. J. H. Van Sice, Buffalo, N.Y., U.S.A., "Harness," 16th July, 1877.

No. 7655. O. W. Clark, Appleton, Wis., U.S.A., "Music Leaf Turner," 16th July, 1877.

No. 7656. E. W. Blackhall, Toronto, Ont., "Lamp Chimney Protector," 16th July, 1877.

No. 7657. E. A. Locke, Boston, Mass., U.S.A., "Sealing Device," 16th July, 1877.

No. 7658. J. Fox, Oshawa, Ont., "Wringing Machine," 16th July, 1877.

No. 7659. T. W. Spencer, Circleville, Ohio, U.S.A., "Time Lock," 16th July, 1877.

No. 7660. H. A. Lagriu, New York, U.S.A., "Stop Watch," 16th July, 1877.

No. 7661. J. Smith, Charlestown, Mass., U.S.A., "Leather Crimping Machine," 16th July, 1877.

No. 7662. J. Talley, Jr., Kansas, Miss., U.S.A., "Turbine Water Wheel," 16th July, 1877.

No. 7663. J. Bartlett, and W.M. Murray, London, England, "Litho Type," 17th July, 1877.

No. 7664. B. P. King, Shelburne, N.S., "Butt Bolt," 17th July, 1877.

No. 7665. C. Libby, Chicago, Ill., U.S.A., "Congress Galter," 17th July, 1877.

No. 7666. A. McDiarmid, Howard, Ont., "Plough," 17th July, 1877.

No. 7667. W. B. Hatch, Elmira, N.Y., U.S.A., "Spring Bed," 17th July, 1877.

No. 7668. R. Altken, Brampton, Ont., "Circular Saw Jointer," 17th July, 1877.

No. 7669. A. McLean, Toronto, Ont., "Waterproof Stone," 17th July, 1877.

No. 7670. C. W. Johnson and L. G. Rinehart, Coldwater, Mich., U.S.A., "Bag Holder and Truck," 17th July, 1877.

No. 7671. J. E. Wisner, Friendship, N.Y., U.S.A., "Horse Hay Rake," 18th July, 1877.

No. 7672. H. G. Dayton, Mayville, Ky., U.S.A., "Apparatus for Gauging Whiskey and other Liquors," 18th July, 1877.

No. 7673. J. C. Dillon, Amherst, Mass., U.S.A., "Trace and Chain Coupling," 18th July, 1877.

No. 7674. S. J. Parsons, Benton, N.B., (Assignee of J. P. Poole, Benton N.B.), "Block Locks for Shoe Lasts," 18th July, 1877.

No. 7675. H. R. Newton, Portman Square, England, "System for Regulating the Continual Supply of Purified Water for Use and for Regulating the Continual Discharge of Refuse Waters," 18th July, 1877.

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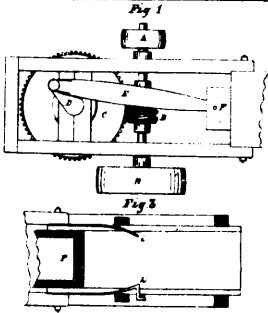
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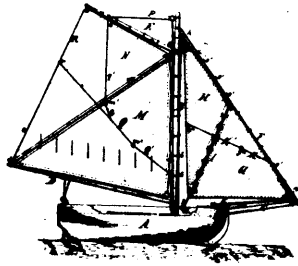
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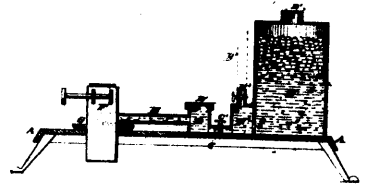
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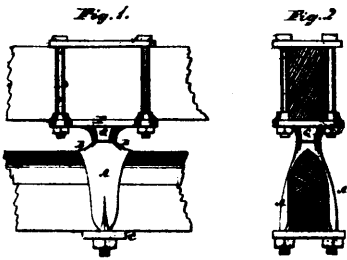
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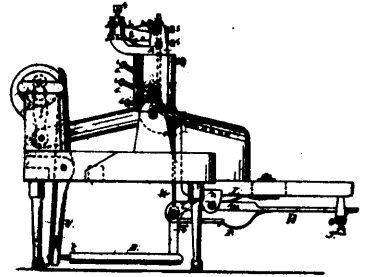
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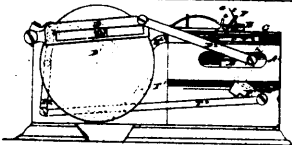
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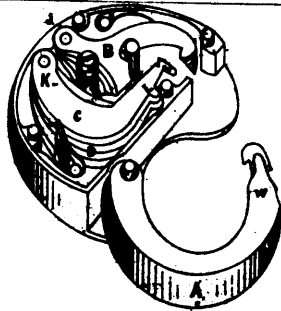
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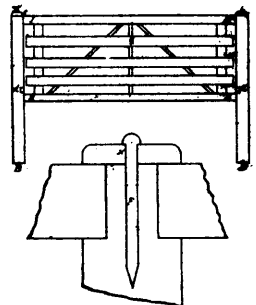
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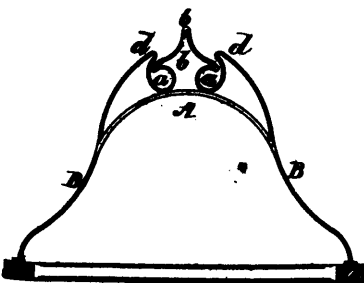
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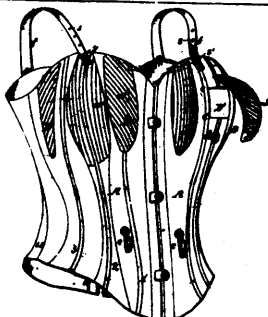
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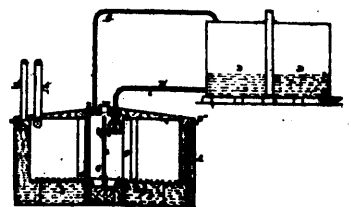
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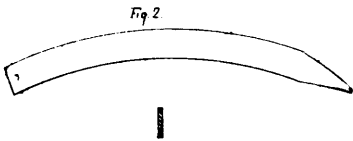
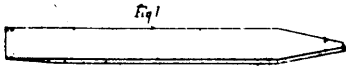
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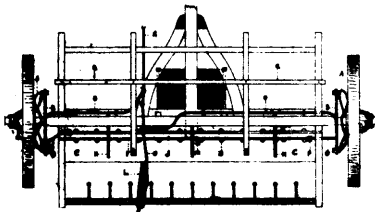
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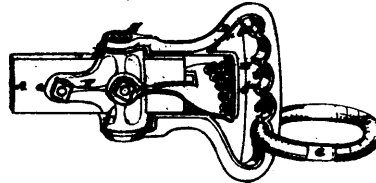
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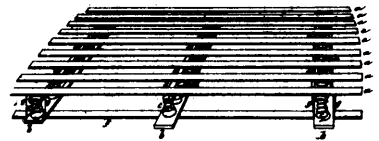
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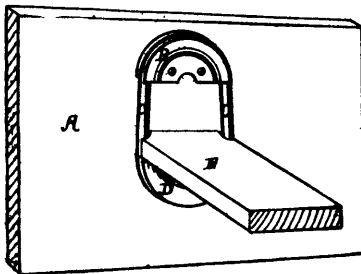
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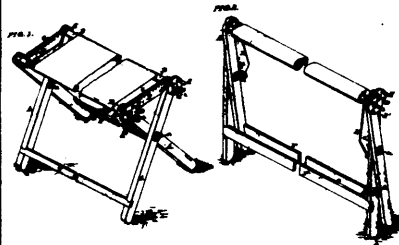
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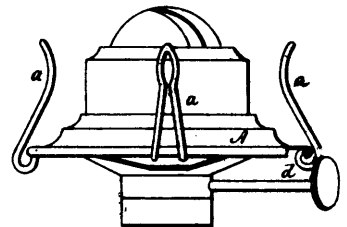
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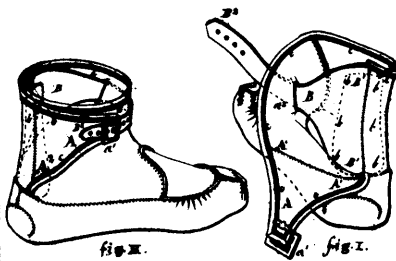
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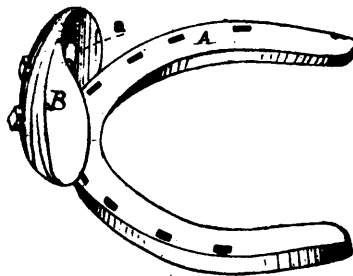
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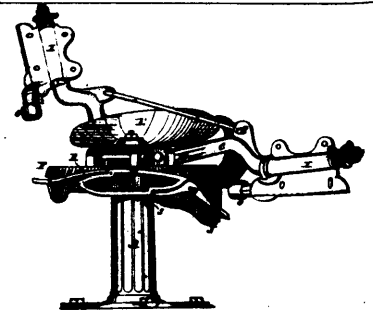
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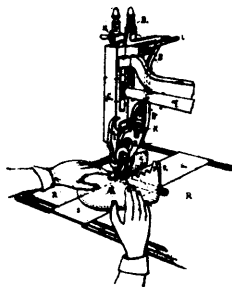
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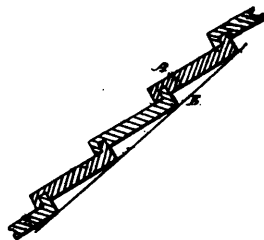
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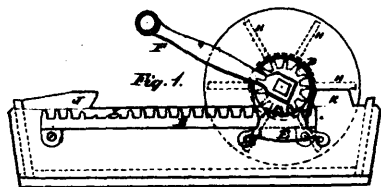
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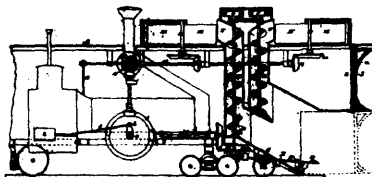
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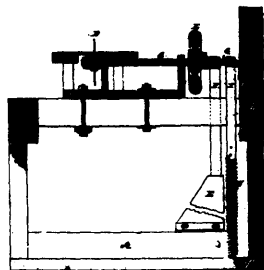
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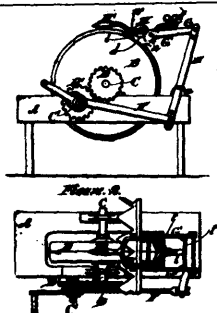
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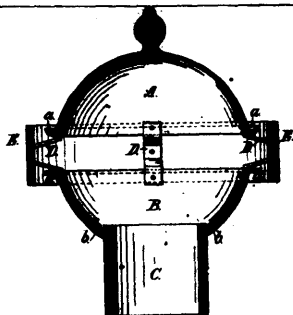
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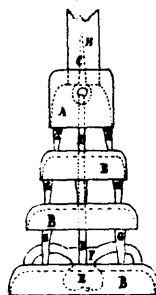
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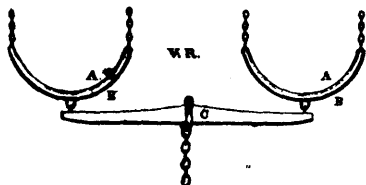
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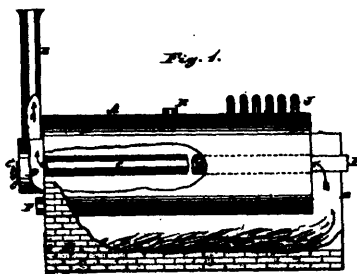
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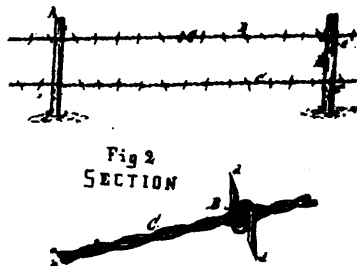
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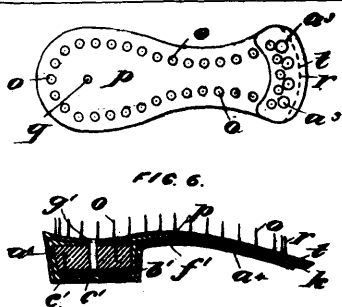
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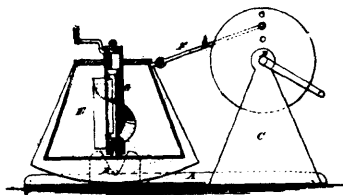
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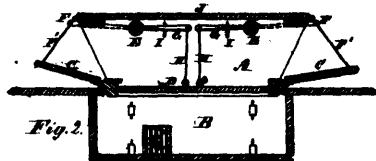
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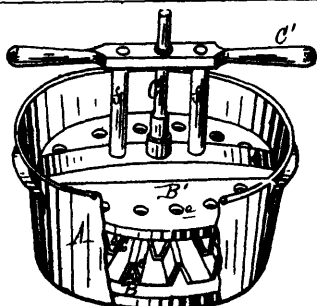
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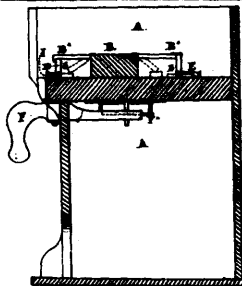
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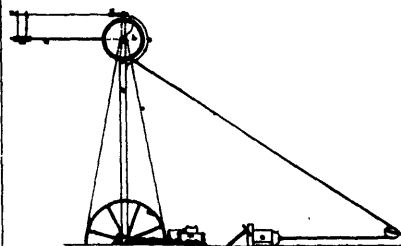
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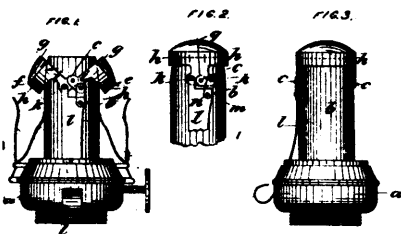
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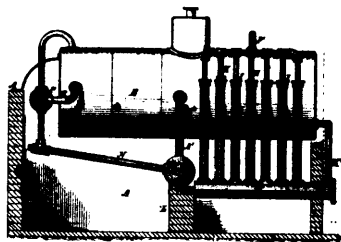
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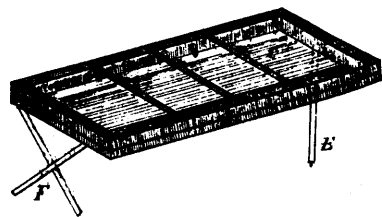
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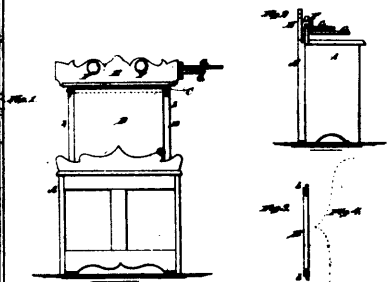
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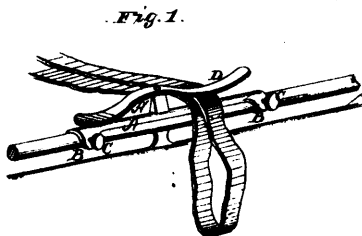
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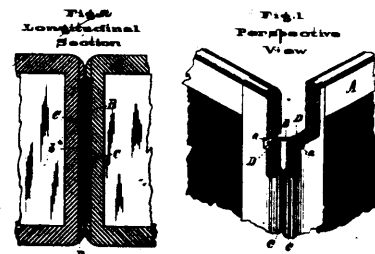
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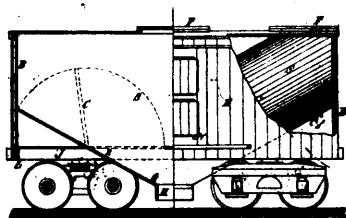
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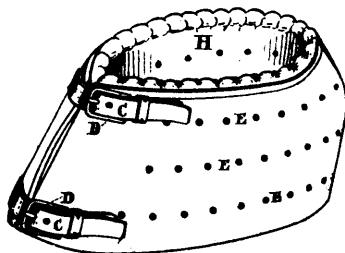
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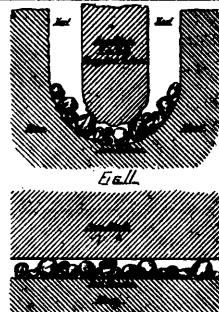
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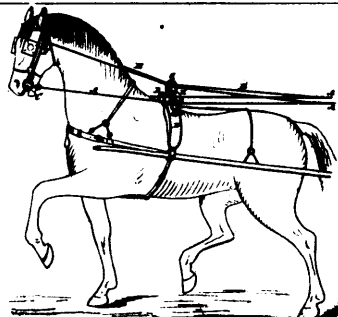
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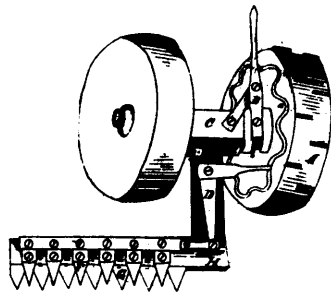
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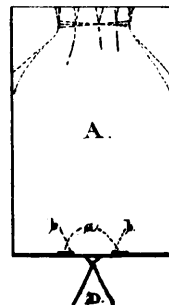
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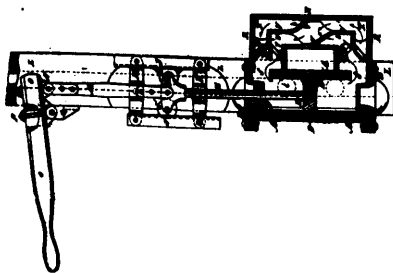
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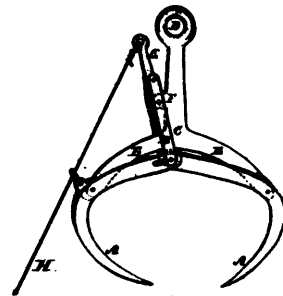
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