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INVENTIONS PATENTED.

No. 9540. Improved Sash-fastener. (*Arrêt-croisier perfectionné.*)

Frederick E Dixon, Toronto, Ont., 9th January, 1879, (Extension of Patent No. 2990), for 5 years.

No. 9541. Improvements in Lifting Jacks. (*Perfectionnements aux crics à vis.*)

John H. Doherty Charles A Schem and George L. Truenkle, Buffalo, N. Y., U. S., 13th January, 1879, for 5 years.

Claim.—The hollow base A provided with an internal screw thread, standard B provided with external thread b, rendering it vertically adjustable in the base of fulcrum bearing C secured to the standard, bifurcated lever D, connecting rods h h and head E constructed, on its underside, with the socket f sliding on the upper end g of the standard.

No. 9542. Improvements in Baking Powders. (*Perfectionnements aux poudres à pâte.*)

William P. Clotworthy, Baltimore, Md., U. S., 13th January, 1879, for 5 years.

Claim.—A compound of exsiccated ammonia-alum, bicarbonate of soda and corn starch mixed in the proportions specified.

No. 9543. Improvements on Lanterns. (*Perfectionnements aux lanternes.*)

Charles T Ham and Freeman D. Clarke, Rochester, N. Y., U. S., 13th January, 1879, for 5 years.

Claim.—1st. In combination with the burner globe, air chamber D and tubes or pipes H, of the air chamber G arranged at or below the top of the globe; 2nd. In combination with the burner globe and pipes H H, of the air chamber G, composed of the ring a and top ring k arranged to leave an angular opening above the ring a; 3rd. In combination with the globe P and pipes H H of the fixed ring l secured to the upper ends of the pipes, and the ring k, sleeve m and top o forming the removable top of the lantern.

No. 9544. Improvements on Buggy Tops. (*Perfectionnements aux soufflets des voitures.*)

Parley J Ayres, Lindsay, Ont., 13th January, 1879, for 5 years.

Claim.—The socket iron B, socket pin C, dovetailed bevel joint in socket pin C, eccentric lever D chair E, corner iron F, button H attached to F, and the manner of securing jointed brace I to backbow and to the corner iron F by means of button H, and the manner of securing jointed brace K to front and back bows, and the support L.

No. 9545. Improvements on Washing Machines. (*Perfectionnements aux machines à laver.*)

Thomas E. McDonald, New Brunswick, N. J., U. S., 13th January, 1879, for 15 years.

Claim.—1st. The sides A provided with slots a, rigid cross tie A' and sliding cross-tie A'' each the bearing holding clamp B whereby the machine may be clamped; the varying in diameter; 2nd. The limiting vibrating frame E having rollers e projecting arms e' and pins e'', in combination with uprights C provided with slots c; 3rd. The limited vibrating frame I, having rollers e and spring hangers F, in combination with the fluted roller D; 4th. The limited vibrating frame E having rollers e and spring hangers F springs F' and the journals d of the roller D, in combination with the spring

holders L having laterally projecting lugs l adapted to work between the coils of said springs; 5th. The combination of the holder L, having lugs l, with the spiral spring F'; 6th. The sides A pivoted at G to uprights C, in combination with the clamp B, on sliding cross-tie A' and cross-tie e', whereby the machine may be folded and clamped when so folded.

No. 9546. Improvements on Hay Presses. (*Perfectionnements aux presses à foin.*)

Alexis Berthiaume, St. Roch (Richelieu), and Joseph Berthiaume, Boucherville, Que., 13th January, 1879, for 5 years.

Claim.—1st. The combination of the vertical press box A, adapted for the reception of hay or other material capable of being compressed into bales or bundles, with the movable platform or follower G, bars a, slots or grooves b b, cover H, doors J K, beams or battens j j, shackles or olives k k w w m and spacers l l; 2nd. The combination with the press box A, fitted and mounted as specified, of the brakes or levers E E, sockets f f, carriages F F, chains D D, connecting links c c, chain pulleys d d provided with shoulders e e, ratchet wheels G G, pawls g g and h h; 3rd. The endless chains D D working on chain pulleys d d and having links c c connecting said chains to bar a; 4th. The ratchet wheels G (1) on upper chain pulleys with detaining pawls h h said ratchet wheels being actuated by the levers E E pivoted upon the axis of the chain pulleys and having the socket f f and the pawls g g taking into the teeth of the ratchet wheels; 5th. A machine for pressing hay or other materials capable of being compressed into bales or bundles, the parts of which are constructed and combined together in the manner set forth.

No. 9547. Improvements in Cigarette Machines. (*Perfectionnements aux machines à cigarettes.*)

John Terrace, Hamilton, Ont., 13th January, 1879, for 5 years.

Claim.—1st. The combination of the cup funnel C with socket C', and the rammer D and the tube A; 2nd. The combination of the cup funnel C, rammer D, outer tube A and inner tube B for making cigarettes.

No. 9548. Improvement in Band Saws. (*Perfectionnement aux scies à ruban.*)

Robert Soper and Joseph F Walmsley, London, Ont., 13th January, 1879, for 5 years.

Claim.—1st. The foot treadle S, arms T T and shaft U, in combination with frame B B, table A, brace C, wheels D G, saw E and arm M; 2nd. In combination with the first claim, the rising screw N, rods O O, shaft X and arm M provided with slots O' O'; 3rd. In combination with the second claim, the adjustable guide bar J, guide F and steel roller Z.

No. 9549. Improvements on Cultivators. (*Perfectionnements aux cultivateurs.*)

Joseph Fillion, Ste. Thérèse-de-Blainville, Que., 13th Jan., 1879, for 5 years.

Résumé.—1o. La combinaison des crampes C, des écrous D avec le corps A; 2o. La combinaison des crampes C avec les plaques E, crochet F et ouïlet G.

No. 9550. Improvement on Grain Binders. (*Perfectionnement aux heuses à grain.*)

Alexander Ross and Samuel J. Parker, Rochester, N. Y., U. S., 13th January, 1879, for 5 years.

Claim.—1st. In combination with a self-raking reaper, an automatic grain binder constructed and operated to take from the ground and bind the grain delivered by the rakers; 2nd. In a self-raking reaper, an automatic binding device constructed and arranged to bind the grain of one swath while the reaper is cut up an other; 3rd. In combination with a self-raking reaper, provided with an automatic grain binder constructed to take from the ground and bind grain delivered thereon by the rakes, a sheaf carrying device G; 4th. A combined reaper and grain binding device constructed to admit of the lateral distance, as described, between the cutter bar of the reaper and said binding device, being regulated at will by the driver by means of a hand lever; 5th. A combined reaper and grain binding device constructed to admit of the lateral distance between the cutter bar of the reaper and the binding device, as described, being increased or diminished at pleasure; 6th. In combination with a self-raking reaper provided with an automatic grain binder, constructed to take from the ground and bind grain delivered there-

on by the rakes, an automatically operated bundle carrier G; 7th. In combination with an automatic grain binding device, capable of lifting and binding grain previously deposited upon the ground by a reaper and sheaf carrier G, an automatic sheaf mover R, the whole forming attachments to said reaper. 8th. In combination with a self-raking reaper, an automatic binding device capable of being tilted laterally so as to be kept parallel with the surface of the ground over which it moves. 9th. In combination with a self-raking reaper, a combined lifting and binding device constructed and arranged to be vertically adjusted at different distances from the ground; 10th. The combination with a reaper of a series of bars L secured to a rotating shaft b, together forming a device by means of which cut grain deposited upon the ground may be lifted therefrom with suitable driving mechanism for the same. 11th. In combination with a reaper, an automatic binding device capable of binding grain deposited upon the ground that may be disengaged from its driving mechanism. 12th. In combination with a reaper an automatic binding device constructed to operate as described, that may be thrown out of or into gear by the driver by means of a ton lever G, 13th. In combination with a reaper, an automatic lifting device capable of raising cut grain deposited upon the ground, constructed and operated to continuously rake or comb the swath. 14th. A reaper provided with an automatic binding device that may be detached from said reaper conveniently when the same is used for a mower. 15th. In combination with an automatic grain binder and lifting device capable of raising and binding grain deposited upon the ground, a supporting frame H for said binder and lifting device. 16th. The combination in a grain harvester of an automatic binding and lifting device, and frame H with levers S, with which to adjust the said lifting and binding device with reference to the ground. 17th. In combination with the adjusting levers S and frame H, a steadying bar T connected with the frame H by a ball joint, 18th. An attachment to a reaper, an automatic grain lifter and binder that may be regulated by the driver at will, so as to control the amount of grain taken up and bound in a sheaf; 19th. In combination with a grain lifter, the gear e, sprocket K, provided with the rocking pin m, fixed cams n and y and gauge-c d, 20th. The combination of the gears e and a, cams y and n, sprocket K and shaft d with supporting pieces l and b, 21st. In combination with the pin k up and binder, the shaft d with the gears a and e provided with pins r and the detent springs u. 22nd. An automatic binding arm of a grain binding harvester, provided with coogs or teeth, with which to rotate a wire twister at each descent of the arm. 23rd. The fork of jaws n, provided with slots to receive the journals of the spool i for the purpose of allowing a free vertical adjustment of the same, in combination with said spool and cylinder c, 24th. In combination with the spool i, cylinder c and fork n, a pivoted roller holder o for the wire hung so as to be capable of freely turning toward either end of the spool as the wire is drawn therefrom; 25th. In combination with a binder arm, cord carrier q and drum c, operated by the carrier q by means of a cord f, a gravity adjusting spool i for the band material; 26th. In combination with a grain binding arm and shaft g, a cord carrier q, cord f, drum c and fork n. 27th. An attachment to an automatic grain binder consisting of a spool i, drum c and roller holder o constructed to cause the strand of wire passing from the spool to the binder arm to pass between said roller and drum. 28th. An automatic grain binding attachment to a reaper, the combination of a rotating wire twister a, and tucking wheel b with suitable driving mechanism for the same. 29th. The cutting blade z projecting from the tucking wheel b acting in concert with the wire twister a, to sever the wire. 30th. A hook wire twister head a, provided with a ledge z having a notch or hook z, for the purpose of catching and binding the spool end of the wire after the same has been severed. 31st. In combination with a rotating twister a, a grain binder, a rotating part b provided with groups e, m, n of pivoting blades caused to enter successively into cavity of the head, the blades forming the groups increasing in length from front to last; 32nd. In combination with a toothed binding arm O and supporting pieces I, a grain binder or pointed shaft g, and tucker t, shaft p and twister a, and connecting gears k, j and b; 33rd. As a part of a grain binder, a pulley or roller j for the wire to pass over, having its ends resting in recesses. 34th. The combination of the roller j, plate d, pin u and block holding said parts.

No. 9551. Machine for Forming Boot and Shoe Stiffeners. (*Machine à former les contre-forts des chaussures.*)

Louis Côté, St. Hyacinthe, Que., 13th January, 1879, (Extension of Patent No. 3036), for 5 years.

No. 9552. Machine for Forming Boot and Shoe Stiffeners. (*Machine à former les contre-forts des chaussures.*)

Louis Côté, St. Hyacinthe, Que., 14th January, 1879, (Extension of Patent No. 3036) for 5 years.

No. 9553. Improvements in the Manufacture of Articles of Felt. (*Perfectionnements dans la fabrication des objets en feutre.*)

Henry A. House and Dwight Wheeler, Bridgeport, Ct., U. S., 14th January, 1879, for 5 years.

Claim.—1st. The blocking and stretching the material by automatic mechanism, 2nd. Stretching and blocking the material, while under the influence of a surrounding fluid hot, until the body is formed and set and then cold; 3rd. Subjecting the body, while being stretched, to the action of a surrounding hot fluid and then displacing said fluid by cold air, 4th. The combination with a closed chamber containing the body stretching and forming mechanism, of a steam pipe and a pump or its equivalent whereby steam may be quickly introduced into and withdrawn from said chamber. 5th. The combination with the crown and rim forming blocks, of grippers and appliances whereby said blocks and grippers are operated to draw the brim over the brim block and the crown is forced inward. 6th. The combination with the blocks and grippers, of a cord or band and appliances for tightening the same after the brim has been drawn over the blocks; 7th. The combination of the arms H H', blocks and cord i carried by one set of arms. 8th. The arms H having blades h, in combination with the slotted arms H' and block supporting appliances, and with operating devices. 9th. The casing A provided with passages for admitting and discharging the fluids and enclosing the appliances, for automatically holding and stretching the body of the blocks.

No. 9554. System of Metallic Lettering for Stone and Marble. (*Lettres métalliques pour la pierre et le marbre.*)

Thomas Johnson, Toronto, Ont., 14th January, 1879, for 5 years.

Claim.—The securing of metallic letters in marble or stone or other material, with dovetails e d e f which secures the letter I as shown in the drawings.

No. 9555. Improvements on Grain Drying Kilns. (*Perfectionnements aux fours à sécher le grain.*)

Charles Boynton, Chicago, Ill., U. S., 14th January, 1879, for 5 years.

Claim.—1st. The combination of one or more furnaces S S and C combined with the air chamber U, main flue E and its branches F F', nipple L L and deflector K, 2nd. The two part drying room T T', two part hopper L L', two part flue E F F', cold air drafts J J', cut off D and trunnions S S C, whereby the drying process is continued in one room while the other is being emptied, 3rd. The trays m consisting of the frames n n', transverse bearers C, longitudinal bearers f f' and wire cloth attached to the frames.

No. 9556. Improvements on Blueing Packages. (*Perfectionnements aux paquets de pierre bleue.*)

Henry Sawyer, Chelsea, Mass., U. S., 14th January, 1879, for 5 years.

Claim.—1st. A box containing two or more packages of granulated or powdered blueing and a bottle, the contents of each package and the capacity of the bottle being relatively such that the bottle filled with water and the contents of a package constitute a package of liquid blueing of due strength ready for use. 2nd. The package for producing liquid blueing set forth, composed of a bottle and two or more boxes of powdered or granulated blueing, the boxes having mouths adapted to fit into that of the bottle, the capacity of the bottle and the contents of each of the boxes being such as to make, when the latter is combined with a bottle full of water, a bottle of liquid blueing all enclosed in one box.

No. 9557. Improvements on Cheese Presses. (*Perfectionnements aux presses à fromage.*)

William R. Hayden, Ashfield, Ont., 14th January, 1879, for 5 years.

Claim.—The combination of ropes E, pulleys F, reel H with weight G.

No. 9558. Improvements in Hot Water Radiators. (*Perfectionnements aux tuyaux à distribution de vapeur.*)

Donald McPhie, Hamilton, Ont., 14th January, 1879, for 5 years.

Claim.—A hot water radiator for heating apartments, constructed as shown and provided with a partition F the same being placed across the chamber A, or longitudinally, or the equivalent thereof.

No. 9559. Improvements on Water Filters. (*Perfectionnements aux filtres à eau.*)

William R. Campbell, Montreal, Que., 14th January, 1879, for 5 years.

Claim.—The combination of the ends C C', provided with regular bore threads, and which is reversible, and the nozzle B, washers G G', perforated gauze F F' and the charcoal z placed between the perforated gauze F F'

No. 9560. Improvements on Mowing Machines. (*Perfectionnements aux faucheuses.*)

William A. Kirby and David M. Osborne, Auburn, N. Y., U. S., 14th January, 1879 (extension of Patent No. 3144), for 5 years.

No. 9561. Improvements on Mowing Machines. (*Perfectionnements aux faucheuses.*)

William A. Kirby and David M. Osborne, Auburn, N. Y., U. S., 14th January, 1879 (extension of Patent No. 3144), for 5 years.

No. 9562. Improvements on Lighters and Extinguishers. (*Perfectionnements aux allumeurs-étouffoirs.*)

George P. Ganster, Reading, Pa., U. S., 21st January, 1879, for 5 years.

Claim.—1st. A clock mechanism having suitable provisions for turning on and off the flow of gas at the proper periods, connected directly to a motor operated by a continuous flow of gas to a subordinate burner. 2nd. The independent pipes or conduits a a', one for the small continuous flame and the other for the strong periodic flame, in combination with a motor B arranged to be operated by the gas which supplies the small continuous flame. 3rd. The small orifice or contraction j, in the passage, supplying gas to the small continuous flame, in combination with the taper extension j', beyond it, arranged to allow the latter to serve as the burner for the small flame; 4th. The cams g h and arms g' h', connected so that the adjustment of the one cam insures the corresponding adjustment of the other; 5th. The employment, in combination with the operating cam h and adjusting h', of the ring h' loosely enclosing the cam h and allowing the latter to be adjusted within the former and secured by the pinching screw k or its equivalent. 6th. The year wheel U and connection V, in combination with the arms g' h', cams g h and suitable clock mechanism M adapted to automatically induce the required changes in the periods of commencing and discontinuing the illumination. 7th. The clearing probe b, having an end-wise movement in the small burner B, in combination with suitable operating mechanism and with the main burner. 8th. The clearer or probe b, automatically moved at intervals as specified, in combination with a gas burner B having a small orifice adapted to maintain a continuous flame for the ignition of gas in a large burner. 9th. In combination with the probe b and suitable connections to a withdrawing spring C, the quick moving piece G actuated as specified and adapted to communicate its blow to the probe b and induce a quick reciprocation. 10th. The wheel M, arm G and operating spring J, in combination with the probe b and its spring C, actuating lever

D₁ adapted for operation in connection with the burners B A and a suitable motive power, 11th. The combination of a clock with mechanism for winding the same by the motion of a gas motor actuated by the flow of gas to a burner or burners, 12th. The clock dial N, clock hands M₁ M₂ and actuating spring L, in combination with means H₁ I for winding the same by the motion of gas, a provision for slipping to avoid over winding, one or more gas burners C, a provision as for allowing a continuous small flow of gas, and a shield D for protecting the flame when reduced; 13th. A motor actuated by the motion of gas, a clock wound up thereby means for contracting the volume of the flame at a certain period of time for enlarging at another period of time, both determined by the clock, and means for adjusting one or both periods at will; 14th. In combination with a clock actuated by the motion of gas and serving to enlarge and contract the flame at adjustable periods, the dial N, ordinary clock hands M₁ M₂, adjusting handles V W and pinching nut X, the latter being adapted to hold the adjustable parts rigidly, 15th. A clock mechanism, with suitable impelling means and connections for lighting and extinguishing the main flame in combination with a small continuous flame adapted to impart heat and avoid an extreme low temperature under any conditions.

No. 9563. Improvement on Farm Gates.
(*Perfectionnement aux barrières.*)

William A. Carpenter and Billow Walrath, Townsend, Ont., 21st January, 1879, for 5 years.

Claim—The combination of the pivot post c supporting the horizontal bar F, with weighted end G attached to it, and supporting the upright E attached to gate frame K, which is fastened by the sliding bar I worked with handle H.

No. 9564. Improvements on Belt Fasteners.
(*Perfectionnements aux joints des courroies.*)

William W. Glover, Aurora, Ill., U. S., 21st January, 1879, for 5 years.

Claim—1st. A bed or plate provided with straight teeth C made oblong in cross section, disposed with the longer part of their bases in the direction or line of pull of the belt and having linear entering ends or tips; 2nd. The bed or plate provided with the straight teeth C made oblong in cross section, the longer part of their bases being in the direction or pull of the belt and having sharp entering ends or tips, and provided also with the central transverse bar or projections.

No. 9565. Process of Refining and Packing Catechu.
(*Procédé pour raffiner et envelopper le cachou.*)

Edward Wells, Albert E. Richardson, William J. Van Patten and Henry Wells, Burlington, Vt., U. S., 21st January, 1879, for 5 years.

Claim—1st. Placing the catechu in a vessel containing a sufficient quantity of water then subjecting it to the action of steam heat, at the same time introducing into the mass steam of a high temperature, thereby liquifying the catechu and forcing the lighter substances to the surface, then skimming, straining and settling and finally placing the catechu, while still liquid, in boxes holding certain specified quantities, 2nd. Re-bined and concentrated catechu incased in a tight integument or envelope.

No. 9566. Improvements on Horse Blankets.
(*Perfectionnements aux couvertures de cheval.*)

Israel H. Hodgson and William Beatty, Gray, Me., U. S., 21st January, 1879, for 5 years.

A blanket having a cord firmly attached entirely around it near its edges, and formed into loops, which project through suitably faced holes in the corners thereof.

No. 9567. Improvement on Plough Attachment.
(*Perfectionnement aux trains des charrues.*)

John McBride, Des Moines, Iowa, U. S., 21st January, 1879, for 5 years.

Claim—1st. In combination with a plough beam A and a hinged axle C, the lever B having the combined rack and feeder y, and lever B₂ provided with the spring latch z; 2nd. The adjustable extensible and jointed fulcrum C adapted to support the lever B₂ and to clamp the coupler w z to the plough beam; 3rd. The vertical lever B having the combined rack and feeder y and the gravitating latch h, the hinged axle C carrying the wheel D and rack g; the jointed fulcrum C clamping the coupler w z, the horizontal lever B₂ having a spring latch at its rear end and carrying a castor wheel at its front end, the hinged and adjustable brace m; 4th. The revolving block s₂ having trunnions at its sides and an opening through its centre, in combination with a plough beam and the shaft s of an adjustable and revolving castor wheel beater to form a flexible connection between the castor wheel and the governing lever B₂; 5th. The curved beater b carrying the shaft friction roller a, in combination with a plough beam A and vertical lever B. 6th. The combination of the beater b carrying a wheel or roller a, the pivoted brace c having a hook or fastening device at its free end, and a plough standard. 7th. The combination of the gravitating scraper d, beater b and roller a.

No. 9568. Improvements on Pressing Machines.
(*Perfectionnements aux machines à presser.*)

Joshua W. Jones, Harrisburgh, Pa., U. S., 22nd January, 1879, for 5 years.

Claim—1st. A press proper for compressing laminated material, as paper into packages, at a high degree of compactness and solidity by a hydraulic power pressing machine, in combination with an automatic electric pressure indicator to secure the parts under strain against breaks, 2nd. The hydraulic cylinder head J, provided with the annular seat n about ram B to readily insert packing O₂ in combination with the foot H of the press frame. 3rd. The follower C, in combination with the guides H₁ H₂ W₁ in trough B₁. 4th. The end board C₃ in combination with central counter-sink or recess C₂. 5th. End boards for bundles of sheets tied under pressure, provided with rounded outer edges and with or without set metal chips. 6th. The peculiar combination and arrangement of two reciprocating force pumps Q Q₁, alternately drawing liquid from a common reservoir R₂, connected by a ram with the ram chamber O by a main A₄ into which the pumps discharge alternately to secure the continuous travel of the ram B. 7th. In a pressing machine and sheet tie, the compressing heads D₁ constructed with cross way D₂ centrally

arranged through them 8th. The inclined press bed or trough B₁ provided with longitudinal slots B₄ in its sides, in combination with the press heads D₁ having through them the cross ways D₂ correspondingly arranged with said slots. 9th. The press head D₁ connected by pedestals D₁ with the follower C and made to travel as a plunger, in combination with bed B₁. 10th. In combination with the press bed B₁ the device of a set of removable ledges H₁ H₂ W₃ or a set of adjustable guide rolls I₅. 11th. The process described for treating folded printed sheets of paper in dry pressing, the same consisting of subjecting a collection of such sheets to pressure without the use of fuel or press boards, and while under such pressure, tying them into compact bundles with end boards, then removing them immediately from the press and allowing them to remain tied sufficiently long to complete dry pressing and attain the desired state of surface.

No. 9569. Improvements on Spring Carriages.
(*Perfectionnements aux voitures à ressorts.*)

Charles W. Schultz, Sheeldon, Ont., 22nd January, 1879, for 5 years.

Claim—1st. The mode of interposing side springs B having curved ends b by securing their terminations to the axles or to the axle and head block, for superposing the body A of the bars H H, 2nd. The mode of interposing end springs B having curved ends b₁ by securing their terminations to bars H, or their equivalent on which the buggy body A is superposed and centrally to the axle or head block.

No. 9570. Improvements on Buckle Clasps.
(*Perfectionnements aux agrafes des boucles.*)

Mary A. C. Holmes, Boston, (Assignee of Francis D. Ballou, Marlboro,) Mass., U. S., 22nd January, 1879 for 5 years.

Claim—1st. The combination of a plate provided with slots and ridge as formed by E, with a hinged leaf whose edges enter into the slots and the means of fastening the same in place. 2nd. The combination of a plate provided with a slot or slots, a strip or strips fastened to the same to rough the slot or slots, a hinged leaf and means for fastening the same. 3rd. The combination of a plate having a ridge angular in cross section, a hinged leaf corresponding thereto in shape and means for fastening the same in place. 4th. A buckle clasp composed of a plate having a rigid leaf to shut over the same, a sliding catch provided with a spring end for holding the leaf.

No. 9571. Improvements on Belt Gear.
(*Perfectionnements à la communication du mouvement par courroie.*)

John T. Hawkins, Brooklyn, James H. Covell and Gibbons L. Kelly, New York N. Y., U. S., 22nd January, 1879 for 5 years.

Claim—1st. The art of transmitting power, for operating driving shafts of machines or lines of machinery, by means of toothed pulleys upon said shaft connected by an endless gearing of teeth or cogs secured by rivets, bolts or equivalent fastenings, to a belt of one or more continuous strips of material without blinged joints, preferably metal sufficiently thin or tempered to conform to the curves of said pulleys without permanent set, 2nd. A system of endless gearing a pulley or pulleys having upon the face or faces thereof non-rolling, non-sliding and frictionless teeth or cogs of the involute form described gearing with or interlocking corresponding teeth upon an enveloping belt.

No. 9572. Improvements in Threshing Machines.
(*Perfectionnements aux machines à battre.*)

Thomas Quillivan, Coghill's Creek, Victoria, Australia, 22nd January, 1879, for 5 years.

Claim—1st. The addition to threshing machines of a carrier A for conveying the sheaves from the stack to the machine; 2nd. The combination and arrangement of the endless travelling platform E with the endless rake F and slotted shield G.

No. 9573. Improvements on Floating Docks.
(*Perfectionnements aux bassins de radoub.*)

Josiah L. Clark and John Standfield, Westminster, England, 22nd January, 1879, for 5 years.

Claim—1st. Constructing a floating dock with the buoyant sides or portions of the sides A attached to the body C of the dock by vertical grooves or slides, or by hinges so that these portions can be raised or lowered independently. 2nd. Constructing a floating dock with a body C, fixed buoyant portions of sides B and sliding or hinged buoyant portions A.

No. 9574. Moulds for Casting Cast Steel.
(*Moules pour couler l'acier.*)

Aaron J. Nellis, Pittsburgh, Pa., U. S., 22nd January, 1879, for 5 years.

Claim—1st. A mould composed of metallic sections and intermediate separate and detachable sections formed of core material. 2nd. A mould composed of metallic sections and intermediate separate and detachable sections formed of core material, with suitable means for at once connecting the metallic and supporting the core sections.

No. 9575. Moulds for Casting Cast Steel.
(*Moules pour couler l'acier.*)

Aaron J. Nellis, Pittsburgh, Pa., U. S., 22nd January, 1879, for 5 years.

Claim—Sand moulds cores and matrices for casting metal composed of sand with or without binding or adhesive materials, and of benzine, or its equivalent, highly combustible and readily ignitable liquid.

No. 9576. Improvements in Canal Boats.
(*Perfectionnements aux bateaux pour les canaux.*)

William Hewitt, Hamilton, Ont., 22nd January, 1879, for 5 years.

Claim—1st. In combination with a track B, of an elevated rack rail K constructed thereon and with movable segments opposite crossings and bridges, &c. 2nd. In combination with the rack of the elevated rail K of the cog wheel J meshing into the same for steadying the engine. 3rd. In combination with the main D of the elastic clutch I, notch e and lever Q. 4th. In combination with the elevated rail, of the grooved pulley T for running on the bevelled top of the rack; 5th. In combination with the shaft D, of the cog wheels H & J, 6th. In combination with the main shaft D, of the journal

plate F at top, and journal and steady plate L at bottom; 7th In combination with the engine, of the shaft M with cog wheel O and pinion P attached for gearing, with the wheels H and J respectively. 8th The device described for sawing and discharging, or the equivalent thereof, consisting of the track B with an elevated pinion rack and K boiler A and engine with shafts D and cog wheels L and J, R, double clutch I, plate A and engine pulley T, plate L, lever Q pivoted on a spring b.

No. 9577. Cylinder Paper Making Machine.
(*Machine à cylindre pour la fabrication du papier.*)

Jonathan Hunt, South Whitham, Ct., U. S., 22nd January, 1879, for 5 years.

Claim.—1st. The combination with the stationary part of the vat, of the cylinder revolving therein and the oscillating side pieces B, of the oscillating bottom E attached to the said side pieces. 2nd. The combination with the oscillating bottom E, the attached side pieces B, and the stationary part of a cylinder paper making machine of oscillating supports for the said bottom. 3rd. The combination with the oscillating bottom E, the attached side pieces B, and the stationary part of the vat, of the flexible connector F. 4th. The combination of the cylinder and vat of the cylinder paper making machine and the adjustable plate H for adjusting the transverse sectional area of parts of the channel between the bottom of the vat and the cylinder. 5th. The combination, with the receiving box for the mixed pulp, water and size having compartments for the separation of froth, of a gate O for regulating the head of said mixture in that compartment of the said box from which the said mixture flows to the vat. 6th. The combination, with the outlet of a cylinder paper making machine and a pump for conveying the overflow of the vat back to a receiving box, of a box J, having the compartments R and R, communicating by the passage P, the said compartment R being connected with the pump. 7th. The receiving box for mixed water, pulp and size placed higher than the general level of the liquid in the vat for maintaining a head of the said water, pulp and size in the said box. 8th. This receiving box for receiving pulp, water and size to be fed to the vat of the machine, provided compartments K, K, K, K, passages m, m and the perforated bottom floor or septum N. 9th. A cylinder for a paper making machine constructed of a shaft S, wheel spiders or rims T, bars U attached to, or inserted in the edges of the said wheels, spiders or rims and a wire basis V attached to the outer parts of the said bars for the support of the wire cloth of the cylinder. 10th. The combination of the blanket H, an eccentric roller J for producing uniform velocity of the current and regulating the velocity thereof. 11th. The combination with the pulp and water receiving box D of the perforated septum or partition E for distributing the pulp equally to the cylinder. 12th. The combination with the vat A and cylinder B of the apron G for preventing the deposit of pulp and the formation of paper on the cylinder before entering the current. 13th. The combination with the vat and the cylinder, of the dividing bar or partition K for preventing the drawing of the web off from the emerging portion of the cylinder. 14th. The combination with the vat of a cylinder paper making machine, of one or more oscillating side pieces in the sides of the said vat for producing lateral and forward movement of the water and pulp in the said vat.

No. 9578. Improvements in Railway Brakes.
(*Perfectionnements aux freins des railroads.*)

Gavin Marshall, Hamilton, Ont., 22nd January, 1879, for 5 years.

Claim.—1st. In combination with a car wheel axle, the brake levers F F, thereon and provided with anti friction rollers c, said levers also being provided with pulleys G G, and the chain I passing from the arm of the lever F around the pulley G and secured to the pulley H, and the chain P passing from one arm of the lever P to pulley G on the opposite lever F to pulley H; 2nd. In combination with a car axle, a stationary central wheel A, the pulleys E E, and the grooved pulleys B B, the latter being provided with anti-friction rollers next the axle to prevent wear; 3rd. The pulleys C C, the same being connected to the pulleys B B by chains D D; 4th. In combination with a car truck, the brake beam levers J J, attached to shafts H H and H H, and operating the pulleys H H, with their respective chains connected thereto. 5th. The chains and springs S S, attached to shafts O and O, respectively, and end truck lever Z for counteracting the pressure on the pulleys C C; 6th. The chain M which passes from the lever J, to pulley K on the lever J to brake stem L. 7th. The chain T fastened to the chain M and passing around the pulley Y on the centre truck beam X of the last car of a train to the locomotive. 8th. The chain P attached to shaft O, and to the brake stem chain of the next car. 9th. The chain N attached to the shaft O and the brake beam lever Q. 10th. The chain I which passes from the pulley H around pulley G, to the end of the axle lever F, and chain H, which passes from pulley H around the pulley G to the end of the axle lever F, to operate said levers. 11th. In combination with the brake levers F F, the stay rods 3 3 3 securing said levers to the bottom of the car to prevent oscillation. 12th. The combination of the pulleys C C, B B, E E, wheel Z, brake levers F F, chains D D, I, M, T, P, S, S, to brake the axle in addition to the putting of the brakes on the wheels.

No. 9579. Twist Drill Rolling Machine.
(*Machine à cintrer les drilles à vis.*)

Simon P. Graham, London, Ont., 22nd January, 1879, for 5 years.

Claim.—1st. A roll made in ring form and bored tapering, to fit the end of the shaft and held on the same by a nut. 2nd. The die formed in, by and being a part of, the rolls at an angle of about 45° so as to bring the cutting edges of the drill at the J int of the rolls, for the purpose of rolling a sharp edge on the drill or bit. 3rd. The combination of the sleeve P and journals M M, for the purpose of raising and lowering the rolls. 4th. The combination of block Q; 4th. The application of slide plate S with attachment of centre gear, for the purpose of throwing the bead rolls W at any angle, when rolling the twist in drills or bits.

No. 9580. Machine for Cleaning Wheat.
(*Machine pour nettoyer le blé.*)

Wilson Ager, John W. Craig and George I. Hill, Washington, D. C., U. S., 22nd January, 1879, for 5 years.

Claim.—1st. A grain scouring machine having a revolving screen provided with grain elevators, and a stone or stones revolving and mellowing in the grain, the mechanism for producing and directing the blast or current of

air into and through the screen and falling grain. 2nd. The packing or its equivalent, for preventing the current of air from passing round between the screen and the case. 3rd. The slotted revolving discharge gate for regulating the discharge and the amount of scouring while the grain is passing through the machine. 4th. The outer case closed at the bottom and having a dust chamber with dust discharge for removing the dust from the lower part of the machine or case.

No. 9581. Machine for Rebating Tenons and Cutting Wedges.
(*Machine pour tailler les tenons et les coins.*)

John Costin, Brantford, Ont., 22nd January, 1879, for 5 years.

Claim.—1st. The saw frame D in combination with bars E and F and tightening screws G. 2nd. The combination of bars H fastened to the top and bottom of saw frame D with rod h forming a frame in which bars L, I work also radius block K moving on table I is moved, rod M passing through it and the radius bars N, at each end of rod forming levers to sub bars F with saws as the work proceeds, also movable pin n. 3rd. The application of block O. 4th. The application of circular saw L combined with radius links V W and guide bar Y and worked by handle X.

No. 9582. Improvements on Lubricating Pumps.
(*Perfectionnements aux pompes à lubrification.*)

Edward G. Felthousen, Buffalo, N. Y., U. S., 22nd January, 1879, for 5 years.

Claim.—The bowl A, cylinder C, piston G, and the shaft F formed with the bowl A and cylinder C in one piece, said cylinder being passed through the bowl and provided with the filling aperture I.

No. 9583. Improvements in Electric Fuses.
(*Perfectionnements aux fusibles électriques.*)

Henry J. Smith, Mountain View, N. J., U. S., 22nd January, 1879, for 5 years.

Claim. 1st. A metallic or other band connecting the fuse wires and holding them rigidly in place. 2nd. Tinning or coating the ends of the fuse wires. 3rd. The cap or shell E having safety bands formed therein. 4th. The combination of the fuse wires A with tinned ends A, tinned and grooved ends A, resistance wire B and band G. 5th. The combination of the fuse wires with tinned ends and grooved tips, resistance wire, securing band explosive shell or cap with safety band and cement filling.

No. 9584. Improvements on Chromatrope Toys.
(*Perfectionnements aux jouets chromatrope.*)

James B. Erwin, Milwaukee, Wis., U. S., 22nd January, 1879, for 5 years.

Claim.—1st. The discs C C C and discs C C C, provided with color K L M and eyelets A A A; 2nd. The combination of two or more colored discs C C C constructed and arranged as specified. 3rd. The combination of the colored discs C C C, discs C C C, screws D, disc A, axle B cord E and circular frame I.

No. 9585. Improvements on Quilting Frames.
(*Perfectionnements aux métiers à piquer.*)

Andrew W. Ritchie and William J. Hitchcock, Bardonia, N. B., 22nd January, 1879, for 5 years.

Claim.—The slotted adjustable extension bars E and clamp screws F G, in combination with the rollers C and legs A.

No. 9586. Improvements in Horse Shoes.
(*Perfectionnements aux fers à cheval.*)

Granville C. Shaw and Samuel T. G. Morse, Washington, D. C., U. S., 22nd January, 1879, for 5 years.

Claim.—1st. In combination with a horse shoe and pad, sides and toe clips removably connected to both shoe and pad. 2nd. In combination with a horse shoe having the recesses a, of a removable side and toe clips attached to the shoe and supporting a pad lying in the opening of the shoe. 3rd. In combination with a horse shoe having the recesses a, of the pad D having flange a and recesses e, e, toe clip B and side clips C. 4th. A shoe having the clip C provided with the shoulder O and bent portions m n. 5th. A shoe having the toe clip B provided with the shoulder o and upward projection s. 6th. The pad D provided with the flange a and recesses e.

No. 9587. Improvements on Sulky Ploughs.
(*Perfectionnements aux charrues à siège.*)

Joseph M. Payne, Dallas, Texas, U. S., 22nd January, 1879 for 5 years.

Claim.—1st. The combination of the plough beam A, axle D secured rigidly thereto, and having the segmental rack J and lever E pivoted to the axle D and carrying the wheel G upon its short arm; 2nd. The combination of the plate O having segmental rack Y, lever W having segmental rack V and spring catch Z sliding slotted rack R and castor wheel I swivelled in bearings in plate O and in the rack R. 3rd. The vertically adjustable wheel B arranged near the heel of the plough between the mould board and the land side. 4th. The wheel G adjustable by the crank lever E vertically adjustable castor wheel L and vertically adjustable wheel B, the latter arranged near the heel of the plough between the mould board and the land side.

No. 9588. Improvements on Alarm Clocks.
(*Perfectionnements aux réveille-matin.*)

Henry J. Davies and Walter D. Davies, Brooklyn, N. Y., U. S., 22nd January, 1879, for 5 years.

Claim.—1st. In combination with the winding arbor b and main spring D, the ratchet wheels g and h having a fixed and loose relation respectively with said arbor and provided with one or more engaging studs or stops k and l, the loose main alarm driving wheel e and the pawls f. 2nd. The alarm setting spindle M made capable of independent adjustment in combination with the alarm releasing device or trip Q arranged to relate loosely upon

or around said spindle; 3rd. The combination of the gears *N P* with the hour hand on its sleeve and the alarm trip *Q*, 4th. The combination of the alarm engaging and disengaging spring hook or lever *E* the loose wheel *N* with its attached notched trip *Q*, arranged to rotate in unison with the hour hand of the clock and the independently adjustable alarm setting spindle *M* having a stud or projection *f*.

No. 9589. Lard and Fruit Presses and Sausage Stuffers. (*Presses à fruits et saindou et bourre-saucisson.*)

Simon J. Keim, Catsaquis, Pa., U. S., 22nd January, 1879, for 5 years

Claim.—1st. The combination of the lever having the flanged eccentric with the forcer or plunger having slotted head provided with ears or lugs *d d* and rollers or castors *e e f*, 2nd. In a fruit or lard press and sausage stuffer the combination with the table *A* and hopper *H* having about *S* and interior perforated vessel *V*, or the standard *B* having slot *b b* pivoted lever *L* having flanged eccentric *E*, and plunger *D* having head *C* provided with projections *c, c*, lugs *d d* and rollers *e e f*, 3rd. The combination of the standard *B* having slot *b b* with plunger head *C* having projections *c, c*, lugs *d d* and rollers *e e f* and the pivoted lever *L* having eccentric *E* provided with a flange *f* broken at *g* so as to permit the removal of the plunger.

No. 9590. Improvements in Refrigerator Buildings. (*Perfectionnements aux garde-manger.*)

William M. Mixer, New York, U. S., 22nd January, 1879, (Extension of Patent No. 3119), for 5 years.

No. 9591. Improvements on Refrigerator Buildings. (*Perfectionnements aux garde-manger.*)

William M. Mixer, New York, U. S., 22nd January, 1879, (2nd Extension of Patent, No. 3119), for 5 years.

No. 9592. Improvement on Nut Locks. (*Perfectionnement aux serre-croues.*)

Samuel E. St. O. Chapleau, Ottawa, 23rd January, 1879, for 5 years.

Claim.—1st. The combination, with rail *A* having plates *B B*, of a nut lock *D* provided with lock *F*; 2nd. The combination, with lock plate *D* having lock *E*, of a compressor *F*.

No. 9593. Improvements on Book Binding. (*Perfectionnements dans la reliure des livres.*)

Howard M. Hoyt, New York, U. S., 23rd January, 1879, for 5 years.

Claim.—1st. A back of flexible material, bent inwards at the edges, in combination with curved pins *A* adapted to be inserted through the back margin of the matter to be bound and projecting under the bent edges of the back to hold it in place; 2nd. Inserting the binding wires *A* straight and near the back edge of the book, clinching such wires and bending the wires into the arc of a circle.

No. 9594. Improvements in Marble Veneering. (*Perfectionnements dans le placage en marbre.*)

Archibald O. Glass, (Assignee of Thomas Swartwood), Chicago, Ill., U. S., 23rd January, 1879, for 5 years.

Claim.—The method of placing the colours in a composition for artificial marble by the use of a syringe before pouring it onto the surface to be ornamented, consisting of the combination prepared as described, that is to say mix while separate with warm water, glue and sugar of lead, water and afterwards commingle the whole.

No. 9595. Improvements on Piano Pedals. (*Perfectionnements aux pédales des pianos.*)

Louis Mathias, Toledo, Ohio, U. S., 23rd January, 1879, for 5 years.

Claim.—The footstool *A* provided with supplemental pedals *C C* connected by rods *D* to the levers *E* for operating the pedals of a piano.

No. 9596. Improvements on Washing Machines. (*Perfectionnements aux machines à laver.*)

Timothée Bertrand, Montreal, Que., 23rd January, 1879, for 5 years.

Claim.—1st. In an oscillating machine, the friction bars *M M*, metal blocks *m b*, screw bolts *C c*, straps or hooks *C C*, lever *D*; 2nd. The friction box *J*, slot *L* and stop pin *R* in the said box *A*.

No. 9597. Combination for the Manufacture of Boot and Shoe India Rubber Soles. (*Composé pour la fabrication des semelles de chaussures en caoutchouc.*)

Aimé N. N. Aubin, Montreal, Que., 23rd January, 1879, for 5 years.

Claim.—Mixing with the ingredients now used in the manufacture of india rubber shoes, emery or other gritty substances previously covered with an adhesive varnish.

No. 9598. Improvements on Ships Carrying Cattle. (*Perfectionnements aux navires transportant le bétail.*)

Godfrey J. Radolph, Liverpool, Eng., 23rd January, 1879, for 5 years.

Claim.—1st. The combination of the upper and lower decks *b c* of a ship or vessel with stanchions, standards or securing agents, such as *d*, which pass down each side of the neck of each beast; 2nd. The combination of the upper and lower decks *b c* of a ship or vessel with stanchions, standards or

securing agents, such as *d*, which pass down the sides of each beast near its stern or buttocks; 3rd. The combination of the upper and lower decks *b c* of a ship or vessel with stanchions, standards or securing agents such as *d d*, 4th. The combination of the upper and lower decks *b c* with the stanchions, standards or securing agents, such as *d d d*, with the feeding trough *m*.

No. 9599. Improvements on Gate Posts.

(*Perfectionnements aux poteaux des barrières.*)

Alfred F. Wright, Toronto, Ont., 23rd January, 1879, for 5 years.

Claim.—1st. A gate and fence post having a watertight compartment in the base *B* formed by the sides and bed plate; 2nd. A gate and fence post with the body or post proper *A*, in combination with the base *B*, the bed plate *e* and cap *C*; 3rd. A gate and fence post constructed with the post proper *A* having perforated transverse strengthening bridges *l l*, guides *R R*, ribs *n n* and socket *A* the base *B* having a collar *b* and watertight compartment and anchor cases *d d* the bed plate *e* having the bar anchors *g g* the combination therewith of the tie bars *f f*, keys *m m*, cotter *di* and anchors *d*; 4th. The keys *m m* as answering the purpose of a key for strengthening structures and the purpose of a hinge bolt on which the gate is hung; 5th. The anchors *d h h*.

No. 9600. Machine for Enriching and Economizing Gas. (*Machine pour enrichir et économiser le gaz.*)

George T. Strong, Port Hope, Ont., 23rd January, 1879, for 5 years.

Claim.—1st. The gas inlet pipe *B*, discharging into the chamber *C* at the top of the float *E* in combination with the tubes *D* for the purpose of conveying the gas down into the hydro-carbon contained in the vessel *A*; 2nd. The float *E* having tube *G* passing through the cork bottom *F* and top chamber *C*, in combination with the pipe *B* and vessel *A* containing hydro-carbon; 3rd. A float *E* supported in hydro-carbon, in combination with the indicator *H* and glass tube *I*.

No. 9601. Improvements on Mill Motors.

(*Perfectionnements aux moteurs de moulins.*)

John Diemert, Belfort, Ont., 23rd January, 1879, for 5 years.

Claim.—1st. The combination of the two rollers *g* and *g g* with guide *h h* and *h h*, and the two weights *r* and *s*; 2nd. The combination of the four pistons *k k k k* and *k k k k* on the arms *m* and *n* fastened to the rollers *g* and *g g* with the arrangement on said pistons, viz: knee *y*, ring *o*, screw *p*, spring *w* protected by the iron cases *z z z z*; 3rd. The combination of the lever *e* on arm *f* fastened at the roller *g* and said lever *e* also fastened at the lower end to the driving wheel *a*, which is connected by belting *b* with pulley *c* on shafting *d*.

No. 9602. Improvements on Millstone Dresses. (*Perfectionnements au rhabillage des meules.*)

Eilbert S. Cox, Jonesborough, Ten., U. S., 23rd January, 1879, for 5 years.

Claim.—The peripheral finishing or flouting plane surfaces *a a* and inclined scouring and cracking bottom surfaces *b b*, in combination with the tangential straight furrows *c c*, shallow and broad at the skirt, running straight to the eye, with constantly increasing depth and decreasing width.

No. 9603. Machine for Cutting Down.

(*Machine à ébarber la plume.*)

Charles Ballinger, White Mills, Pa., U. S., 23rd January, 1879, for 5 years.

Claim.—1st. A revolving feed cylinder or drum for the feathers, intermittently reciprocating grippers and intermittently acting shearing or cutting knives; 2nd. The combination of a revolving wire gauze feed cylinder with interior reciprocating stirrers for causing the stems of the feathers to stick out through the meshes; 3rd. A revolving feed drum or cylinder divided by circumferential bands into narrow sections, each supplying a set of grippers and knives; 4th. The combination of the intermittently reciprocating and opening and closing grippers *D* with a guide support *D* having fixed side knives *E*, and with reciprocating or revolving cutting knives *E*; 5th. The combination of the forked and rack shaped rear arm of the lower gripper finger, and of the weighted and pivoted rear arm of the upper finger with a revolving arm wheel having sectional toothed parts, raised central arm part and centrally grooved part for withdrawing, opening and closing the grippers; 6th. The combination of the extended rear arms of the grippers, the actuating arm wheel constructed as set forth, the retaining side levers and the returning spring and guides to withdraw and retain grippers for cutting off the down from the feathers and return the grippers.

No. 9604. Improvements on Churns.

(*Perfectionnements aux barattes.*)

William Stover, Auburn, N. Y., U. S., 23rd January, 1879, for 5 years.

Claim.—1st. The staff holder *B* constructed with upper and lower sockets *b b*, at one end, and grooved jaws or boxes *f f*, at the opposite end, in combination with the stationary bar *D* up and down, which said holder is free to slide; 2nd. The combination of the locking pin *C* with the joint pin *e*, the upper and lower sockets *b b* of the sliding staff holder *B*, the staff sections *A* and the stationary bar *D*; 3rd. The dasher *H* constructed of slotted radial arms *k*, side bars *l* and solid radial arms *n*.

No. 9605. Improvements on Bit Braces.

(*Perfectionnements aux vibrequins.*)

Charles M. Knowles, New London, Ct., U. S., 23rd January, 1879, for 5 years.

Claim.—The combination with the split spring socket *D* having a conical extremity *G*, of a primary clamping ferrule *G* having a conical interior bearing *h*, and a secondary clamping ferrule *h* having an oval or oblong opening *i* through it and a male screw thread *k* on its exterior arranged to fit a female screw thread *l* on or in the interior of the primary clamping ferrule *G*.

No. 9606. Improvements on Railway Joints. (Perfectionnements aux joints des railrotes.)

Arcatus A. Wilder, Detroit, Mich., U.S.A., 23rd January, 1879, for 5 years.

Claim.—1st. The fish plates B B and the slotted bolts c for the purpose of securing abutting ends of railway rails together, said bolts being secured in place by a tapering key, 2nd. In combination with the rail, A A fish plates B B and bolts C, the wedging key D having a twist between its smallest end and bolt.

No. 9607. Improvements on Sawing Machines. (Perfectionnements aux scieries.)

Marshall J. Egery and The Egery Iron Company, Bangor, Me., U. S., 23rd January, 1879, for 5 years.

Claim.—1st. The combination of the movable saws d e and shippers h i with the endless chains k l and sprocket wheels m n; 2nd. The combination of a series of movable saws d e and actuating mechanism, with hand wheels r, mounted on telescoping shafts p q and operating to move either of said saws separately; 3rd. In combination with a movable saw, an adjustable guide or gauge t u secured to, and moving with the saw shipper h.

List of Patents issued up to 14th February, 1879, but not yet Officially published in the Patent Office Record.

- No. 9608. W. F. Feetzel, Kincardine, Ont., "Remedy for Dyspepsia," 23rd January, 1879.
- No. 9609. C. M. Arthur, Ansonia, Ct. U.S.A., "Paper Box," 23rd January, 1879.
- No. 9610. W. E. Brooks, Trenton, N. J., U. S. A., "Saw Tooth," 24th January, 1879.
- No. 9611. A. Kay, Georgetown, Ont., "Reaping Machine," 24th January, 1879.
- No. 9612. M. W. Marsden, Connellville, Pa., U. S. A., "Brush Binder," 24th January, 1879.
- No. 9613. G. W. Radebaugh, Detroit, Mich., U. S. A., "Saw Mill Dog," 24th January, 1879.
- No. 9614. S. Collinson, St. Catharines, Ont., "Reaper Sickle Cutter," (Extension of Patent No. 3067.) 31st January, 1879.
- No. 9615. S. Collinson, St. Catharines, Ont., "Tongs," (Extension of Patent No. 3064.) 31st January, 1879.
- No. 9616. G. M. Skinner, Gananoque, Ont., "Trolling Spoon," (Extension of Patent No. 3067.) 3rd February, 1879.
- No. 9617. W. H. Cutler, Buffalo N. Y., U. S. A., "Inhaling Tube" (Extension of Patent No. 3169.) 4th February, 1879.
- No. 9618. S. Hill, Greensboro, and B. B. Trentice, Hardwick, Vt., U. S. A., "Milk Cooler," 4th February, 1879.
- No. 9619. Jn. H. Guest and G. Guest, Toronto, Ont., "Water Pipe Attachment," 4th February, 1879.
- No. 9620. Jno G. Malcolm, Inverkip, Ont., "Stove Heating and Ventilating Attachment," 4th February, 1879.
- No. 9621. Jas. Graham and D. Corey, (Assignees of Jno. Sweeney.) New Haven, Ct., U. S. A., "Journal Bearings," 4th February, 1879.
- No. 9622. J. W. Hewitt and W. J. Hewitt, Jackson, Mich., U. S. A., "Carriage Spring," 4th February, 1879.
- No. 9623. H. Astor, Toronto, Ont., "Potato Planter," 4th February, 1879.
- No. 9624. W. Chicken, Boston, Mass., U. S. A., "Bark Cutting Machine," 4th February, 1879.
- No. 9625. H. L. Horse, San Francisco, Cal., U.S.A., "Cooking Stove or Range," 4th February, 1879.
- No. 9626. F. A. Hubel, Detroit, Mich., U. S. A., "Capsule Cutting Machine," 4th February, 1879.
- No. 9627. C. S. Piersons and C. Ferris, Sandy Hill N. Y., U. S. A., "Harness," 4th February, 1879.
- No. 9628. T. Clark, Truro, N.S., "Feed Cutter and Grinding Mill Combined," 4th February, 1879.
- No. 9629. Jno. L. Jones, Greensborough N. C., U. S. A., "Plug Tobacco Manufacturing Machine," 10th February, 1879.
- No. 9630. G. Wells and G. Staples, Montreal, Que., "Fountain Pens," 10th February, 1879.
- No. 9631. Jno H. Ainsworth, Philadelphia, Pa., U. S. A., "Railroad Switch," 10th February, 1879.
- No. 9632. L. J. Bennett, Buffalo, N. Y., U. S. A., "Disintegrating Mill," 10th February, 1879.
- No. 9633. C. A. Bangs, Richmond, and G. H. Pierce, Cleveland, Ont., "Soldering Clamp," 10th February, 1879.
- No. 9634. C. T. Stephens, Ithaca, N. Y., U. S. A., "Meat Tendering Mallet," 10th February, 1879.
- No. 9635. W. H. Truen, Minneapolis, Min., U. S. A., "Water Wheel Governor," 10th February, 1879.
- No. 9636. J. H. Rae, New York, U. S. A., "System of Amalgamating Precious Metals," 10th February, 1879.
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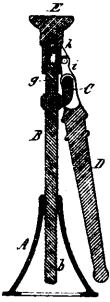
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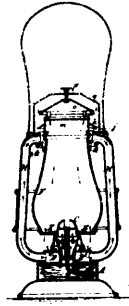
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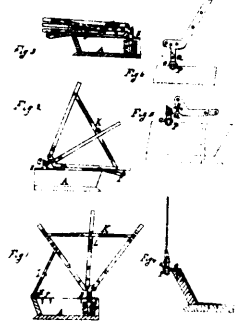
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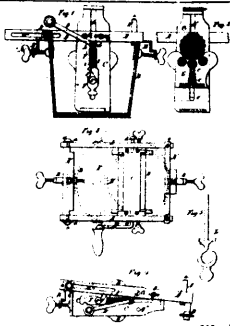
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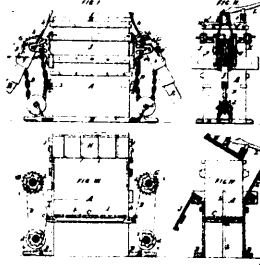
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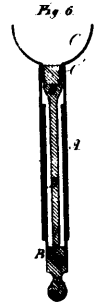
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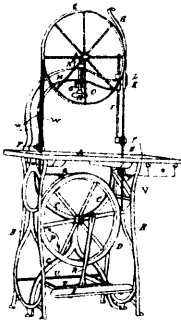
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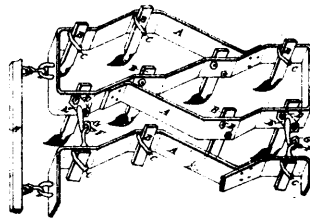
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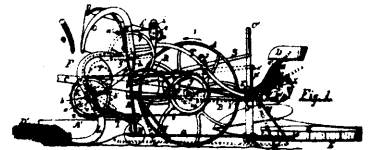
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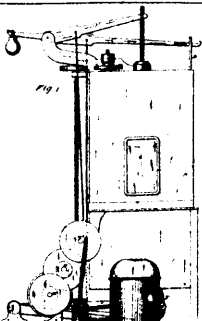
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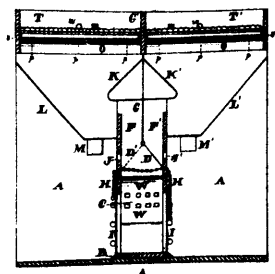
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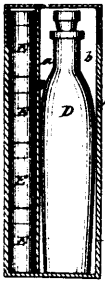
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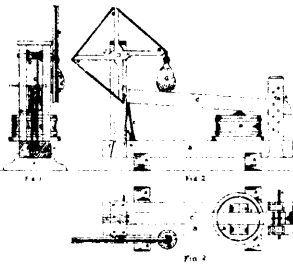
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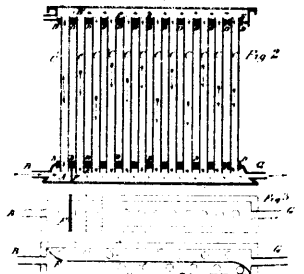
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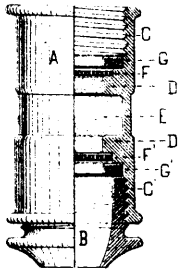
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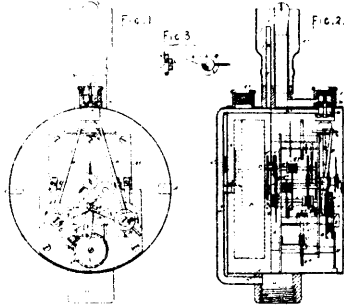
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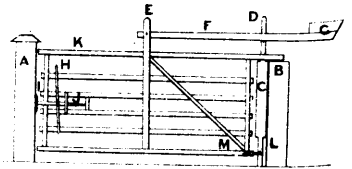
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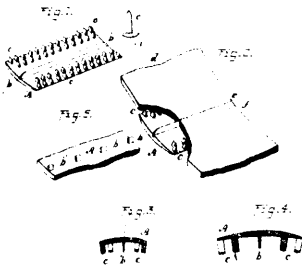
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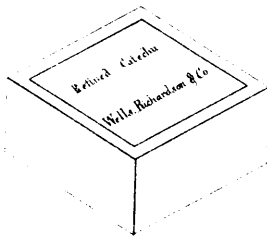
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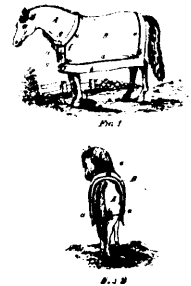
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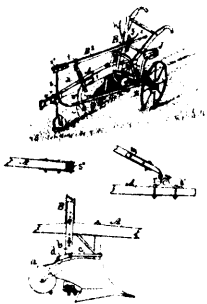
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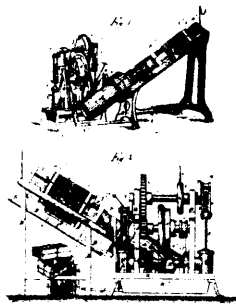
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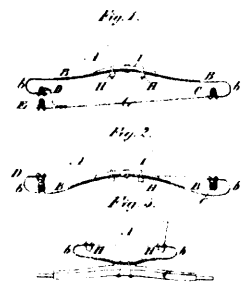
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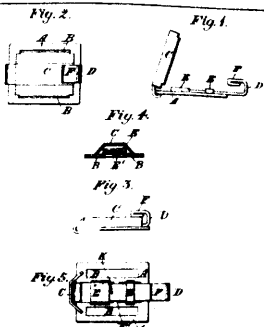
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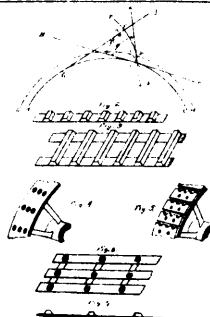
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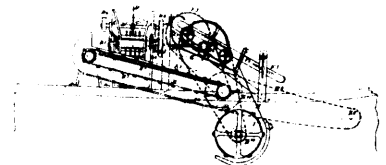
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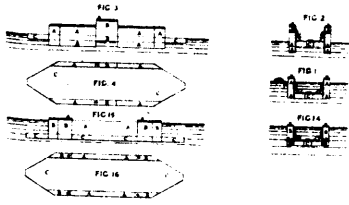
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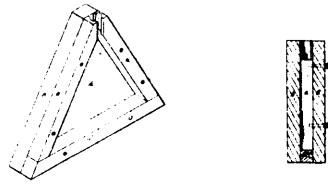
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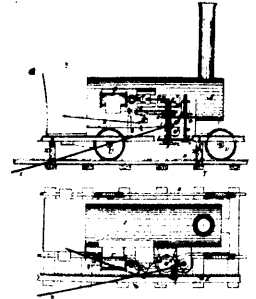
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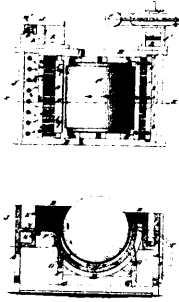
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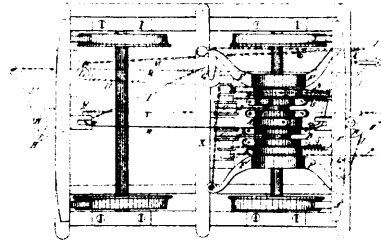
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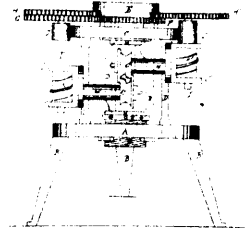
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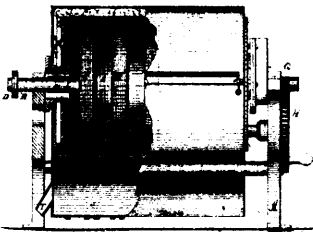
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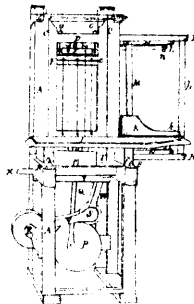
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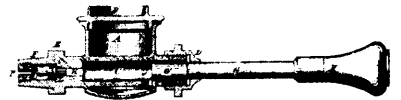
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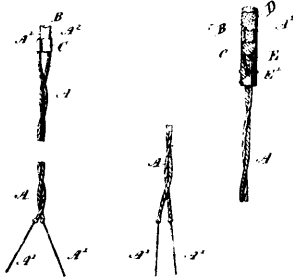
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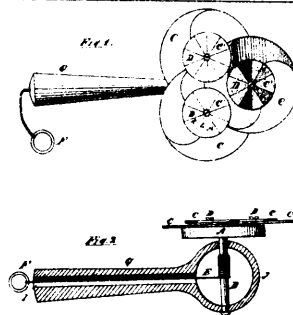
9581 Costin's Machine for Relating Tenons and Cutting Wedges.



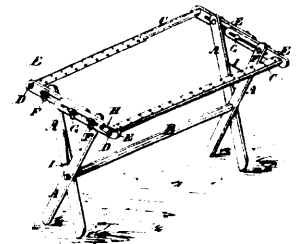
9582 Felthousen's Improvements on Lubricating Pumps.



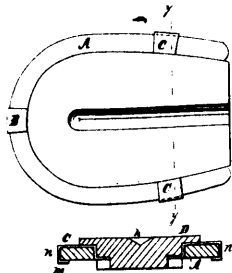
9583 Smith's Improvements in Electric Fuses.



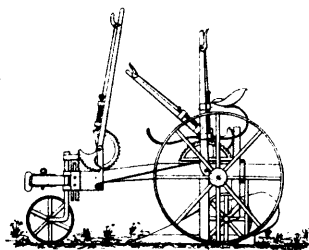
9584 Erwin's Improvements on Chromatrope Toys.



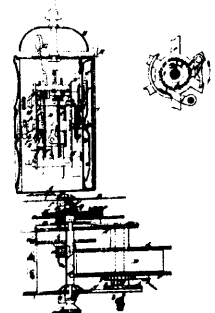
9585 Ritchie & Hitchcock's Improvements on Quilting Frames.



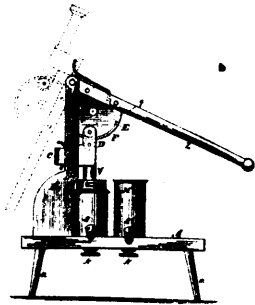
9586 Shaw & Morsell's Improvements in Horse Shoes.



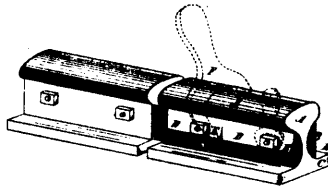
9587 Payne's Improvements on Sulky Ploughs.



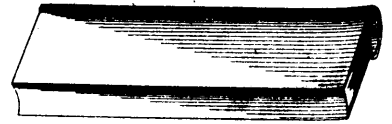
9588 Davies' Improvements on Alarm Clocks.



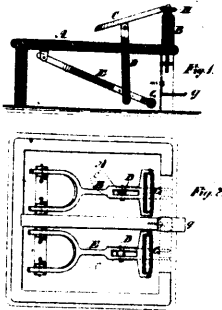
9589 Keim's Lard and Fruit Presses and Sausage Stuffers.



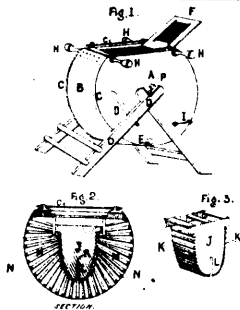
9592 Chapleau's Improvement on Nut Locks.



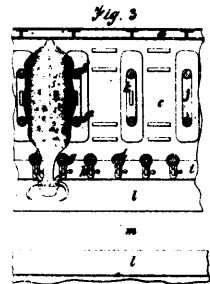
9593 Hoyt's Improvements on Book Binding.



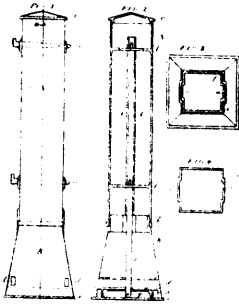
9595 Mathias' Improvements on Piano Pedals.



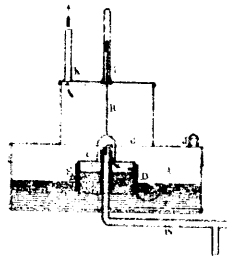
9536 Bertrand's Improvements on Washing Machines.



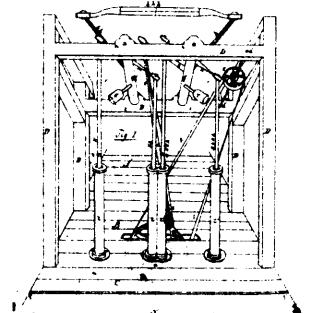
9598 Rudolph's Improvements on Ships Carrying Cattle.



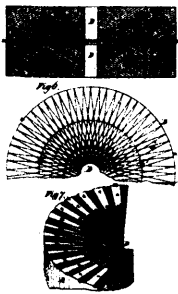
9599 Wright's Improvements on Gate Posts.



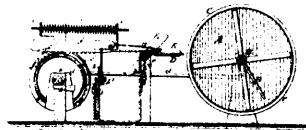
9600 Strong's Machine for Enriching and Economizing Gas.



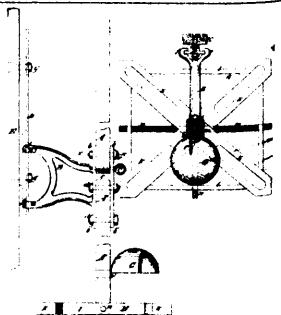
9601 Diemert's Improvements on Mill Motors.



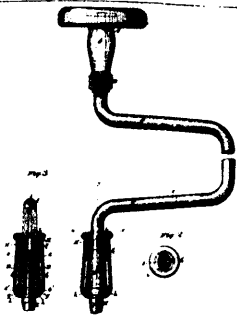
9602 Cox's Improvements on Millstone Dresses.



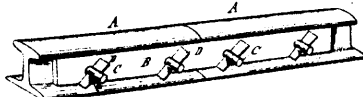
9603 Ballinger's Machine for Cutting Down.



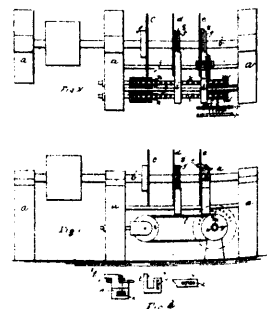
9604 Stover's Improvements on Churns.



9605 Knowl's Improvements on Bit Braces.



9606 Wilder's Improvements on Railway Joints.



9607 Egery's Improvements on Sawing Machines.