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## RECORD




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### INVENTIONS PATENTED.

#### No. 10,477. Improvements on Weather Strips.

(Perfectionnements aux bourrelets des portes.)

Eugene Denehey, Yarmouth, N. S., 22nd September, 1879, for 5 years.

*Claim.*—The combination of the bar D with two cams, and held in position and travelling upon the blocks B B, and worked by the jam of the door and the spring F, and the tongue or drop G with two slots, and held in position by the springs C C, and travelling upon and guided by the blocks B B and worked by the bar D and springs C C, all attached to the base A and to be fastened to the doors of houses, the said weather strips can be made either of wood or metal or partially of each.

#### No. 10,478. Improvements on Glass Vessels.

(Perfectionnements aux vases de verre.)

Daniel W. Norris, Elgin, Ill., U. S., 24th September, 1879, for 5 years.

*Claim.*—1st. The combination of the neck casing B and top casing C, locked together by interlocking projections and recesses; 2nd. The combination of a neck casing and top casing, locked together, and a side casing jointed to the top casing, the latter being supported by the inclosed vessel; 3rd. An inclosed vessel having a pouring neck near the edge of the top, the neck casing applied to the vessel with one edge bent down over the side thereof; 4th. The mode of incasing vessels, to wit, locking one edge of the side casing with the edge of the top casing, placing the vessel within the casings thus interlocked, then placing the bottom casing within the side casing and against the inclosed vessel, and afterward locking the edge of the side with the edge of the bottom casing.

#### No. 10,479. Improvements in Mowers and Reapers.

(Perfectionnements aux faucheuses-motsonneuses.)

George Sweanor and Edward W. Benthner, Montreal, Que., 24th September, 1879, for 5 years.

*Claim.*—The combination, with a face cam, wave, or corrugated wheel D secured to, or made in one with driving wheel, of the bar E pivoted centrally to the frame carrying, in its ends, rollers F F impinged upon, alternately, by the projections of said wave or cam wheel, and operating through suitable connections to give reciprocating motion to the knife.

#### No. 10,480. Improvements on Railway Switches.

(Perfectionnements aux aiguilles de chemin de fer.)

Alexander E. McDonald and Oliver G. Brady, New York, U. S., 24th September, 1879, for 5 years.

*Claim.*—1st. A switch for railway, in which the free end of the switch-rail is arranged to be brought into coincidence with the ends of two or more fixed rails adjacent thereto, the arrangement, beneath the entire length of the switch-rails, of a metallic plate, or plates, upon which the switch-rails and the fixed rails adjacent to the joint rest directly and to which they are attached, said plate or plates being wide enough to form a bed for the switch-rails to play upon; 2nd. The combination of the plate or plates D D, the switch-rails C C resting upon said plates and connected therewith at their pivoted ends, their free ends being arranged to coincide with two or more fixed rails adjacent thereto, the rails A A jointed to said switch-rails and the rails B B secured to the plates D D; 3rd. The combination of the plate or plates D D, arranged to extend under the fixed rails at each end, the fixed rails A B secured rigidly to the said plates, and the switch-rails C C arranged to rest upon the plates D D, with their free ends adjacent to the

ends of the rails B B; 4th. The combination of the rails B or C provided with lugs b b, with the plates D D provided with apertures or sockets to receive said lugs; 5th. The combination, with the movable switch-rails C C, of an oscillating shaft G, arranged thereunder at substantially right angles thereto, and provided with fixed ears c c adapted to project up beside and in contact with the switch-rails, and thereby to prevent their lateral displacement; 6th. The chair, consisting of the base i and tongue piece k provided with elongated holes for the bolts, in combination with rails having thickened and vertically slitted ends adapted to fit the tongue k, and bolt holes adapted to coincide with the holes in the tongue.

#### No. 10,481. Improvements in Car Trucks.

(Perfectionnements aux trains des wagons.)

E. Richard Esmond, Brooklyn, N. Y., U. S. (Assignee of William H. H. Sium), 24th September, 1879, for 5 years.

*Claim.*—1st. A car truck suspended to the axle-boxes, in such a manner that each axle, with its boxes and wheels, is free to move transversely independently but is firmly held in relation to the truck body as regards longitudinal movement; 2nd. A car truck connected to the body of a car, in such a manner as to be free to move in a longitudinal direction and turn or swivel on a point at or near its centre; 3rd. The combination of the suspension connection constructed to allow it to move longitudinally in relation to the car body and turn or swivel on a point at or near its centre, with the axle suspension connections constructed to admit of the free independent transverse movement of each axle; 4th. The links e e, pivoted to the axle boxes, in combination with the longitudinal girders h h of a car truck; 5th. In combination, the reverse standards m m secured to the bottom of a car, the standards k k secured to the truck and the connecting links i i with their connecting bolts; 6th. The cross beam g, connected to the car body, in combination with the girders h h and links e e; 7th. As a suspension connection to be applied between the body of a car and its truck frame, the combination of the reverse standards m m, shaft j, links i i, shaft l and standards k k; 8th. In combination, the links e e connecting the axle boxes to the truck frame, the links i i, the shaft j secured to the truck, and the shaft l secured to the cross beam n or to the bottom of the car.

#### No. 10,482. Improvements on Valves and Cocks.

(Perfectionnements aux valves et aux robinets.)

Adolphe Lepage, Montreal, Que., 26th September, 1879, for 5 years.

*Résumé.*—1o. Dans une bête de valve ou de robinet à barillet conique quelconque, la position du côté du dit barillet, sommet du cône situé vers la poignée de manipulation K, en combinaison avec un clef de réglage L, et avec la transformation o linéaire E d de la base du dit côté, et du trou M sur la tête E et du dit barillet d'ou la saignée N, le dit trou M et la dite partie cylindrique r, plus l'équivalent de la dite clef K; 2o. Dans une bête de valve ou de robinet, à barillet conique quelconque, 1o un paquetage H tel que placé dans la gorge h, mi-partie sur la tête du collet D et mi-partie sur la partie de la poignée K ou sur l'équivalent de la dite poignée, en combinaison avec la clef L dans le trou M de la tête E du barillet, 2o un paquetage G appliqué dans la gorge g de la partie cylindrique E, 3o un chapeau O; 3o. Dans une bête de valve ou de robinet, à barillet conique quelconque ou non conique, la cloison F conjointement et telle que placée au centre de la porte sphéroïdale 9; 4o. Dans un barillet conique quelconque ou non conique, la partie E3 transformant le quelconque des dits barillets en barillet valve, par la création de deux galeries d'écoulement P P; 5o. Dans une tête de barillet quelconque, l'évidement I de la tête E, tel qu'existant dans la dite tête, et l'évidement J de la base du barillet.

#### No. 10,483. Improvements on Fence Posts.

(Perfectionnements aux pieux des clôtures.)

Jacob Frazier, Centralia, Ill., U. S., 26th September, 1879, for 5 years.

*Claim.*—The fence post A, having twisted wires C held to the middle thereof by nails B and extended beyond each side of the post in the form of bows D.

#### No. 10,484. Oil Tank.

(Réservoir à huile.)

George W. Aldrich, Brooklyn, N. Y., U. S., 26th September, 1879, for 5 years.

*Claim.*—1st. The combination, with the tank for oil or other liquids and the measure below the same, of a small air tube l, rising above the level of

the liquid in the tank, the three way-cock and pipes from the same to the tank and measure respectively; 2nd. The barrel *d* and plug *e*, having two passage ways 4 and 5 and movable stop *z*, in combination with the pipes *f* and *g* opening through the barrel of the cock and the discharge *h*; 3rd. The combination, with the tank, of a pump barrel placed within the tank, the pump rod passing through the top of the tank and the inlet pipe to the pump through the side of the tank.

**No. 10,485. Concealed Jointed Brace for Carriage Tops.** (*Gousset à joint caché pour soufflets de voitures.*)

David W. Baird, Geneva, N. Y., U. S., 26th September, 1879 (Extension of Patent No. 3,934), for 5 years.

**No. 10,486. Bag Holders.** (*Accroche-sacs.*)

Leonard Crofoot, Pavillon, N. Y., U. S., 26th September, 1879 (Extension of Patent No. 3,995), for 5 years.

**No. 10,487. Machine for Washing or Separating the Heavier Ores or Metals.** (*Machine à laver ou séparer les minerais ou métaux lourds.*)

William B. Frue, Silver Islet, Ont., 27th September, 1879 (Extension of Patent No. 3,974), for 5 years.

**No. 10,488. Improvements in Oil Cans.** (*Perfectionnements aux bidons à huile.*)

Jacob Rhule, Jr., and William H. Cameron, Pittsburgh, Pa., U. S., 9th September, 1879, for 5 years.

*Claim.*—1st. An oil can composed of the bottle A, stand B, ring C, rods *a*, *a*, stopper D, washer *f*, valve rod E, valve F, hanger *g*, spiral spring *h*, spout H, hooked rods *i* and staples *o*; 2nd. In combination with the bottle A, stand B, and ring C of an oil can, the layer of felt or equivalent material *b*; 3rd. In combination with the stopper D and staples *o*, the hooked rods *i*, provided with spiral springs *s*; *s* for permitting the lifting of the stopper under pressure of gas in the can.

**No. 10,489. Improvements on Gas Regulators.** (*Perfectionnements aux régulateurs à gaz.*)

Henry S. Servos, St. John, N. B., 27th September, 1879, for 5 years.

*Claim.*—1st. A casing, with communicating chambers, one above the other, in connection with an adjustable diaphragm affixed to the stem in one chamber, and with separately vibrating cap valve or valves sliding on the stem in the other chamber, to jointly control the supply and regulate the pressure of gas; 2nd. The cup-shaped valve E, having a conical top part forming contact only at point of connection with stem to prevent sticking.

**No. 10,490. Improvements on Carriage Axles.**

(*Perfectionnements aux essieux des voitures.*)

Henry Killam, New Haven, Conn., U. S., 27th September, 1879, for 15 years.

*Claim.*—1st. The combination of an axle arm and box, the arm reduced in diameter at its forward end and the box correspondingly chambered, so that corresponding shoulders are formed on both, axle and bar, with a spring in the space between the axle and box and bearing on both said shoulders, a nut on the end of the axle, a second nut serving as a cover for the axle nut and both nuts bearing upon the outer end of the spring each independent of the other; 2nd. The combination of the axle arm and box, the two recessed to form corresponding shoulders, with a nut on the axle and ring screwed into the box, the said nut and ring to form respectively shoulders corresponding to the shoulders on the axle and box and a spring in the said recess; 3rd. The combination of the axle arm and box, the two recessed to form corresponding shoulders, with a nut on the axle and ring screwed into the box, the said nut and ring to form respectively shoulders corresponding to shoulders on the axle and box, and a spring in the said recess and a covering nut screwed on over the end of the box.

**No. 10,491. Thrashing and Grain Separating Machine.** (*Machine à battre et à séparer les grains.*)

Jacob Morse, Clinton, Ont., 27th September, 1879, for 5 years.

*Claim.*—1st. The cap A constructed integrally of cast iron, or of cast and wrought iron united in parts; 2nd. The combination of the shaft D, eccentrics F, caps G fitting thereon, pitman J and bar K for operating the shoe; 3rd. The hangers I in combination with the bar K and pitmans J, for giving an inclined motion to one end of the shoe; 4th. The shaft M provided with eccentric discs N for inclining the sieves; 5th. The bracket castings O having bifurcation G and jaws *f*, for holding the sieves; 6th. The hinge O' composed of duplicate parts *a b* having lugs *c d*.

**No. 10,492. Improvements on Glass Vessels.**

(*Perfectionnements aux vases de verre.*)

Daniel W. Norris, Elgin, Ill., U. S., 1st October, 1879, (Re-issue of Patent No. 8580).

*Claim.*—1st. An incased glass vessel, for containing and transporting liquids, having an elastic metallic rim extending under the edges of the bottom, for the purpose of furnishing a support for the vessel without excluding light through the bottom when the incased vessel is raised; 2nd. In the combination of a glass vessel, paper side casing and metal top covering; 3rd. The combination of the lifting bail or handle and the inclosing case, with the vessel having a screw neck, and cap or ring screwing or otherwise secured around said screw neck and lapping over the top casing, whereby in lifting the vessel, the whole or a portion of the weight is supported by the screw-neck; 4th. An incased glass vessel, provided with one or more supply and discharge necks having external metal coverings screwing or otherwise secured around said neck or necks and attached to the top casing, in combination with a lifting bail or handle, whereby in carrying the vessel

the whole or a portion of the weight is supported by the glass neck or necks; 5th. An incased glass vessel having a glass discharge neck, a metallic collar permanently attached to the periphery of said neck and also to the casing, and having a pouring spout permanently attached to said peripheral collar; 6th. A glass vessel having, near one side of its top, a tapering metal pouring tube projecting upwardly and inclined outwardly, said metal tube being affixed to the glass top of the vessel by a cemented screw connection; 7th. An incased glass vessel having, on one side of its top, a projecting, tapering and outwardly inclined metal pouring tube affixed, by a cemented screw connection, to the glass top of the vessel and having, at another place, on its said top, an independent filling orifice closed and opened by a metal screw cap which screws upon a metal surface permanently attached to the glass top of the vessel; 8th. In combination with the incased glass vessel, the supplemental wooden bottom; 9th. In combination with a glass vessel, a fixed metal cover provided with ears for the carrying bail.

**No. 10,493. Key for Water Cocks.**

(*Clef de robinets d'aqueduc.*)

Louis E. Morin, Montreal, Que., 2nd October, 1879, for 5 years.

*Resumé.*—1o. Une clef de robinet à plusieurs orifices de distribution composée d'un emboîtement conique D, d'une tige *f* et d'un repère ou indicateur F sur la barette F; 2o. En combinaison avec une clef de robinet à emboîtement conique, une tête de robinet C de forme correspondante, permettant d'ajuster la clef sur la tête du robinet, et servant à indiquer quels orifices du robinet sont ouverts ou fermés; 3o. Dans une clef de robinet à orifices multiple, un indicateur ou repère F servant à indiquer la position exacte des orifices du barillet correspondant à ceux du robinet; 4o. En combinaison avec une tête de robinet du modèle C G ou R, une clef de forme correspondante, et une plaque chiffrée P destinée à indiquer au dehors la position des orifices du robinet.

**No. 10,494. Improvements in Bottle Stoppers.**

(*Perfectionnements aux bouchons des bouteilles.*)

Henry Barrett, London, England, 2nd October, 1879, for 5 years.

*Claim.*—1st. In the mode of stoppering bottles, for containing aerated or gaseous liquids, by means of an internal stopper *b*, of greater diameter than the opening of the neck and formed within or introduced into the bottle in combination with an elastic seating in the neck of the bottle; 2nd. In the use and employment of a ring *i* of combined hard and soft rubber, for forming a seating in the neck of bottles stoppered by means of an internal stopper; 3rd. In the improved tools for forming, within a bottle, a spherical stopper having a greater diameter than the neck of the bottle; 4th. The stopper *k* for stoppering bottles intended to contain beer and other malt liquor.

**No. 10,495. Galvanized Iron Monument.**

(*Tombe en fer galvanisé.*)

Richard Chappell, Alliston, Ont., 2nd October, 1879, for 5 years.

*Claim.*—The combination of the sheets B, plates C and the recessed ribs A.

**No. 10,496. Improvements on Grain Separators.** (*Perfectionnements aux séparateurs des grains.*)

Edward S. Higgins, Ottawa, Ont., 2nd October, 1879, for 5 years.

*Claim.*—1st. The fan-wheel having fans D, set obliquely to each other, to drive the currents of air diagonally in alternate directions, from side to side of the mill; 2nd. The wheel casing C, provided with hinged doors V having a sliding section W; 3rd. The movable section E, constituting the upper front portion of the mill, having a lateral sliding motion and carrying a number of sieves; 4th. The feed board *f* and section E connected by double angled brackets *g*; 5th. The section E carried by eyes *h* and rod *k*, and sliding on bearings *j*, and operated by an elbow lever K, fulcrumed to section E and frame A; 6th. The side A having two rack bars *b*, near the extremities, operated by pinions *c* on a shaft *d* by hand wheel *e*; 7th. The wind boards F G having an elbow-arm engaging with quadrant *r* for adjustment; 8th. The pinion I having a grooved arm *n* with adjustable sliding block to connect with pitman O by a wrist-pin; 9th. The pinions I M having a grooved arm with adjustable sliding blocks, to connect with pitmans N O by a wrist-pin; 10th. The combination of the driving wheel H, gear pinions I J, gear wheels K L and M, for operating the pitmans N O, for shaking the section E, lower sieves S and driving the fan wheel D, simultaneously.

**No. 10,497. Improvements in the Art of Painting Pictures.** (*Perfectionnements dans l'art de peindre les images.*)

Thomas Doney, Chicago, Ill., U. S., 2nd October, 1879, for 5 years.

*Claim.*—In the process of painting photographs, lithographs or other pictures, on a transparent medium attached to the back of said picture by use of the described mixture.

**No. 10,498. Improvements on Cutter Bars for Harvesters.** (*Perfectionnements aux lames des moissonneuses.*)

Robert Whiting and Miles Weathered, Chantry, Ont., and William Weathered, Toledo, Ohio., U. S., 2nd October, 1879, for 5 years.

*Claim.*—A cutter bar A, having a longitudinal groove B and inserted section bars C, to which the sickles D are severally fastened, and a locking and binding screw for clamping the section bars endwise in the groove B.

**No. 10,499. Improvements on Hat Holders.**

(*Perfectionnements aux porte-chapeaux.*)

Charles Nelson, Port Huron, Mich., U. S., and Joseph S. Kite, London, Ont., 2nd October, 1879, for 5 years.

*Claim.*—A metal spring A, knob D, leather strip E and projecting tongue F attached, by screw B, to back of pew or other surface.

**No. 10,500. Improvements on Horse Shoes.***(Perfectionnements aux fers à cheval.)*

William Zartman, Petaluma, Cal., U. S., 2nd October, 1879, for 5 years.

*Claim.*—1st. In combination with the horse shoe A, the dovetailed clip a formed on said shoe and adapted to fit into a weight provided with a dovetailed recess, whereby the use of bolts, straps or screws is dispensed with, in securing the weight to the shoe; 2nd. The horse shoe A with its dovetailed clip a, in combination with the weight B having a dovetailed slot b, whereby the weight is secured on the foot and is made self-fastening.

**No. 10,501. Improvements on Hold-Backs.***(Perfectionnements aux ragots de limonnières.)*

Joshua Knight and Heddie Hilliard, Musquash, N.B., 2nd October, 1879, for 5 years.

*Claim.*—1st. The metal shell attachment A; 2nd. The metal hook F.

**No. 10,502. Improvements on Tubular Rivets.***(Perfectionnements aux rivets tubulaires.)*

Bartolo L. d'Aubigne, Waterbury, Conn., U. S., 2nd October, 1879, for 5 years.

*Claim.*—As an improved article of manufacture, a rivet, struck up from a suitable metallic blank, having a solid flanged head and a tubular shank divided into vertical sections.

**No. 10,503. Improvements in Boot Counters.***(Perfectionnements aux contre-forts des chaussures.)*

Frank Avery and Carlos B. Randall, Garden Prairie, Ill., U. S., 2nd October 1879, for 5 years.

*Claim.*—1st. The combination of a thin metal plate and a piece of leather or pasteboard, the one covering the other, to form a boot counter; 2nd. In the construction of a boot counter, the metal plate A, with inwardly curved top edge and nicked and inwardly bent lower edge, in combination with the lining B made of leather, pasteboard or some other suitable material.

**No. 10,504. Improvements in Nut Locks.***(Perfectionnements aux arrêto-noix.)*

Joseph A. Quesnel, Arthabaskaville, Que., 2nd October, 1879, for 5 years.

*Claim.*—1st. The key plate D, having the slot or key-hole a and bolt holes b b; 2nd. The combination of the rails A, fish-plates B, nut lock plate C, bolts E and key F, with the key-plate D having the key-hole a and bolt holes b b.

**No. 10,505. Improvements on Sash Fasteners.***(Perfectionnements aux arrêto-croisées.)*

Andrew A. Armstrong, Milford, Pa., U. S., 2nd October, 1879, for 5 years.

*Claim.*—In a sash-lock formed of the case D notched to receive the bar F, the pivoted latch E, the spring G and the notched catch-bar F, whether the said catch-bar F be made short or long.

**No. 10,506. Brine Evaporator. (Evaporateur d'eau de mer.)**

Henry Ransford, Brighton, England, 4th October, 1879, for 5 years.

*Claim.*—The combination, with the lower pan or pans a and the upper V form or roof-like pan or pans b, of a curtain or curtains c.

**No. 10,507. Process for Preserving Food.***(Procédé pour la conservation des aliments.)*

Richard Jones, Berkeley, England, 4th October, 1879, for 5 years.

*Claim.*—1st. The process of preserving animal flesh in the carcass which consists of depriving the animal of sensibility and circulating through the system boracic acid, or other preservative solution, at about a blood-warm temperature while the action of the heart and pulsation continue, whereby the body becomes permeated by the preservative solution; 2nd. The combination of a receptacle E, tubing G and stop cock E, having steel pointed tube D, inlet C and outlets A B; 3rd. Coating the carcass or out surfaces thereof with nacreline or with boracic acid dissolved in gelatine, to prevent exterior or interior moulding.

**No. 10,508. Improvements in Traction Engines. (Perfectionnements aux machines de traction.)**

Frank L. Fairchild and Charles G. Cooper, Mount Vernon, Ohio, U. S., 4th October, 1879, for 5 years.

*Claim.*—1st. The combination of the engine shaft, the rear axle carrying on each end an automatic clutch or pawl and ratchet arrangement, the truck wheels mounted loosely on said axle and actuated through the medium of the said pawl and ratchet arrangement, and the inclined shaft geared at one end directly to the engine shaft and at the other end directly to the axle; 2nd. The inclined shaft geared, at one end, directly to a rear axle carrying loose truck wheels, automatic pawl and ratchet arrangements, for imparting movement from the axle to the respective wheels and, at the other end, directly to the engine shaft through the instrumentality of a shafting or adjustable gear which can be moved to disconnect said inclined shaft from the engine shaft when desired; 3rd. The rear axle, arranged below the boiler and in front of the fire-box, in combination with the truck wheels mounted loosely thereon, the pawl and ratchet arrangement for imparting movement from the axle to the respective wheels, the inclined shaft and the engine shaft; 4th. The combination, with the power driven axle and the truck wheels mounted loosely thereon, of a double pawl and ratchet mechanism for imparting movement to the wheels, in either direction, and mechanism whereby the pawls may be not only shifted, but also held entirely out of engagement with their ratchets, when necessary; 5th. The

rear truck axle B, in combination with mechanism for rotating the axle by the main engine shaft D, the wheel hubs b provided with ratchets J a double set of pawls I I and mechanism for shifting the pawls at will; 6th. The rear truck axle B, in combination with the flanges H, the double set of pawls I I and the ratchet hubs b; 7th. The flanges H, fast on the axle, in combination with the pivoted pawls I I provided with pins i, the hand wheel H provided with cam slots M N and the ratcheted hubs J; 8th. The flanges H, on the axle, in combination with the double set of pawls I I; springs K, ratchets J and a mechanism for shifting the pawls at pleasure; 9th. The inclined shaft E, driven by the engine shaft and provided at its lower end with the level pinion z, in combination with the loose axle B, gear wheel G rigidly secured thereto, flanges H, pawls I I, ratchet hubs J and pawl shifting wheel L.

**No. 10,509. Improvements on Metal Cans.***(Perfectionnements aux boîtes métalliques.)*

Francis A. Walsh, Chicago, Ill., U. S., 4th October, 1879, for 5 years.

*Claim.*—The combination, with the body A provided with the flange e, annular ring C provided with the burr f, and removable cover D, of the diaphragm B extending to or beyond the outer circumference of the body A, and united thereto without the use of solder.

**No. 10,510. Machine for Manufacturing Tobacco. (Machine à fabriquer le tabac.)**

The Adams Tobacco Company, Montreal, Que. (Assignees of Edgar McMullen), 4th October, 1879, (Extension of Patent No. 4,862), for 5 years.

**No. 10,511. Mode of Carriage on Allied Land and Water Routes. (Mode de transport par voie mixte de terre et d'eau.)**

Oliver A. Howland, Toronto, Ont., 4th October, 1879, (Extension of Patent No. 3,920), for 5 years.

**No. 10,512. Dies for Heading and Squaring Bolts. (Estampes pour entêter et écarrire les boulons.)**

James B. Clark &amp; Lucas C. Clark, Plantsville, Conn., U. S., 7th October, 1879, (Extension of Patent No. 5,177), for 5 years.

**No. 10,513. Dies for Heading and Squaring Bolts. (Estampes pour entêter et écarrire les boulons.)**

James B. Clark &amp; Lucas C. Clark, Plantsville, Conn., U. S., 7th October 1879, (Extension of Patent No. 5,177), for 5 years.

**No. 10,514. Apparatus for Projecting Stones and Arrows. (Appareil pour lancer des pierres et des flèches.)**

Orville H. Curtis, Milwaukee, Wis., U. S., 7th October, 1879, for 5 years.

*Claim.*—1st. The handle A, provided with rings D and D' and arms B and B' having rings or loops C and F, respectively, in combination with the elastic strap J; 2nd. The combination of the elastic strap J with the pocket K and spiral curved loops C D F, so constructed as to admit an endless band; 3rd. The combination of the arrow rest G, provided with central loops I and hooks H H', with the looped ends of the arms B B'; 4th. The combination of the handle A, provided with rings D, arms B B' provided with loops or rings C F, arrow rest G, provided with central ring I and hooks H H', elastic strap J having pocket K.

**No. 10,515. Improvement on Mowers and Reapers. (Perfectionnement aux faucheuses-moissonneuses.)**

Demas L. Grover, Groton, N. Y., U. S., 7th October, 1879, for 5 years.

*Claim.*—1st. The combination, with the guard or finger A having a recess a, of the leger plate C formed with the downwardly curved shank D, and having its heel F extended to the rear end of the guard and fastened by a bolt d; 2nd. The leger plate C having a horizontal bearing in the rear of the curved shank D, for the purpose of receiving and guiding the rear end of the knives.

**No. 10,516. Process of Treating Bed and Cushion Stuffings, &c. (Procédé pour préparer la bourre des lits et coussins, &c.)**

Wm. N. Blakeman, Jr., New York, U. S., 7th October, 1879, for 5 years.

*Claim.*—1st. The process of treating bed, cushion and like stuffings and carpet linings, consisting of covering, permeating or filling the same with oleaginous, viscous or gelatinous matter, whereby the stuffing and lining qualities of said materials are improved; 2nd. The process or method of imparting to bed, cushion and like stuffings and carpet linings, additional or artificial elasticity, spring or body, consisting of treating said materials with one or more of the oils, gums and gelatines described, and causing the same to dry thereon; 3rd. The process of treating bed, cushion and like stuffings and carpet linings, consisting of applying to said materials a compound of glue and glycerine, one or both, and a drying, indurating or oxidizing agent or agents; 4th. The process of treating bed, cushion and like stuffings and carpet linings, consisting of applying to said materials an elastic cover or filler.

**No. 10,517. Improvements on Gang Circular Saw Mills. (Perfectionnements aux scieries à scies circulaires multiples.)**

John W. Morris, Moss Point, and Mark A. Dees, Scranton, Miss., U. S., 7th October, 1879, for 5 years.

*Claim.*—1st. The standard A, pulley B, vertical arbor C, circular saws D D, collars at a, rods b b, head blocks E E, rods d d, cog wheel f, f.

pawls *g g* and racks *A A*; 2nd. The standard *A*, pulley *B*, vertical bar *C*, circular saws *D D*, collars *a a*, rods *b b d d*, head blocks *E E*, cog wheels *f f*, pawls *g g* and racks *A A* in combination with the circular saw *G*; 3rd. In sawing lumber, the combination of circular saws *D D G*, the former being vertically adjustable and cutting at right angles to the latter, for the purpose of producing joists, boards, &c., of any required width and thickness at one operation.

### No. 10,518. Process of Cleansing Millstones.

(*Procédé pour nettoyer les meules.*)

Harvey B. Varns and James P. Willett, Washington, D. C., U. S., 7th October, 1879, for 15 years.

*Claim.*—1st. The mode of cleansing millstones with hydrofluoric acid; 2nd. In cleansing millstones, hydrofluoric acid in any of its compounds.

### No. 10,519. Improvements on Wheel Hubs.

(*Perfectionnements aux moyeux des roues.*)

Apollon Merrick, Fulton, N. Y., U. S., 7th October, 1879, for 5 years.

*Claim.*—The arrangement and combination of the body or barrel *A*, flange *B* and fillets *C* with the removable flange *E* and bolts *F*.

### No. 10,520. Grain Separator. (*Séparateur des grains.*)

Lyman Morgan, Port Washington, Wis., U. S., 7th October, 1879, for 5 years.

*Claim.*—1st. In a cookie separator, a table set horizontally and arranged to be shaken and horizontally revolved at the same time; 2nd. A horizontally placed concave or conical table constructed in sections each formed with cavities and arranged to tilt separately for emptying the impurities; 3rd. The combination of the table formed in sections, shaft *D* and cam *H*; 4th. A series of trays formed with indented floors and pivoted between the hub *O* and rim *P*; 5th. The combination of the frame *A*, vibrating frame *B* and revolving table.

### No. 10,521. Improvements on Horse Rakes.

(*Perfectionnements aux râteliers à cheval.*)

Dennis P. Sharp, Ithaca, N. Y., U. S., 7th October, 1879, for 5 years.

*Claim.*—1st. The combination, with the rims *J J* attached to the driving wheels, of the shaft *I I*, mounted upon or connected with the rider bar, and connecting directly with said rims by the forked heads *g g* of said shafts; 2nd. The combination of the rims *J J*, attached to the driving wheels, the rock shaft *I I*, mounted upon or connected with the rider bar and provided with forked heads embracing said rims, the crank *h*, connection *i* and foot lever *k*; 3rd. The combination, with the rock shafts *I I* and rider bar *F*, of the swinging links *K K* pivoted to the rider bar and supporting the rock shafts; 4th. The combination, with the clearer bar *L* and thills *E E*, of the links *m n* and *o* connecting said clearer bar, respectively, with the thills and the rake head, and so arranged as to cause said clearer bar to move inward and downward as the rake teeth are raised.

### No. 10,522. Improvements on Shingle Machines. (*Perfectionnements aux machines à bardeaux.*)

William Goldie, Fentonville, Mich., U. S., 7th October, 1879, for 5 years.

*Claim.*—1st. In a shingle or veneer cutting machine, the combination, with the cutting knife, of a pressure-bar in rear of the same having a movement away from the knife when the cut is completed; 2nd. In combination with a vertically reciprocating cross-head, the cutting blade or knife, recessed upon its outer face and in the upper half thereof, and provided with bearers; 3rd. The compression roller consisting of a shaft upon which are alternately sleeved larger and smaller rings; 4th. In combination with a vertically reciprocating cross-head, carrying a cutting knife, and with a compression roller, a series of fingers; 5th. A wood outting machine provided with an automatic locking intermittent feed and, in combination therewith, a cutting knife and a compressing device; 6th. A wood outting machine with an intermittent feed and adapted to alternately cut the tip and butt of a shingle from a bolt and, in combination therewith, a knife and compressing device; 7th. In a shingle outting machine, the laterally reciprocating slide *P*, provided with a T shaped slot *m* and actuated by cams *O* upon the shaft *N*, serving motion to the head block, when desired, and to discontinue such motion, when necessary; 8th. A cross-head *E* having a vertically reciprocating motion and carrying a cutting knife, compression roller or bar and a slotted shield; 9th. In a shingle machine wherein the shingles are cut with a knife, a compression roller or bar, the axis of which will be in rear of and below the plane of the cutting edge of the knife; 10th. In combination with a vertically reciprocating knife and a series of fingers, the throat for the discharge of debris; 11th. The combination, with the main driving shaft, of the bevel wheels *f g*, pinion *h* and shaft *M*, for the purpose of communicating motion from said driving shaft to the feed mechanism.

### No. 10,523. Improvements on Churn Powers.

(*Perfectionnements aux moteurs des barattes.*)

Albert Switzer, Nepesin, Ont., 7th October, 1879, for 5 years.

*Claim.*—1st. The combination, with the frame *A*, of the shafts *B C* geared to the wheels *H I*, power wheel *E*, having anti-friction roller or stud *J*, horizontal bar *K* with longitudinal groove, receiving said roller secured to block *L* sliding in vertical guides *M M* and connected to working beam *O* by rods *N N*; 2nd. The combination, with the shaft *B* and crank handle *D*, of the arm *E*, curved rods *S T* and radial arm *u*; 3rd. The working beam *O*, composed of bars *a b* endwise connected by intermediate block *d*, the bar *a* receiving the fulcrum bolt and the bar *b*, the eye to which the operating rods *N N* are connected, the ends of the bar *a b* projecting over the said rods; 4th. The bent slotted casting *c*, secured to the working beam *O* for suspending the dasher shaft *Q* by a bolt; 5th. The dasher *W*, on shaft *Q*, constructed of a central hub *g*, rectangular spokes *A*, set anglewise, and a circumferential flat ring *i*, said spokes being beveled to produce spaces *k* with parallel sides.

### No. 10,524. Cast Iron Skylight. (*Lunette de toiture en fonte.*)

Emil Vogelsang, Berlin, Ont., 7th October, 1879, for 5 years.

*Claim.*—1st. The flange *B B*, rim *E E* forming water channels *F F* by raising channel rims *N N*; 2nd. The sash *H*, hinged to posts *J J* and supported by supporter *G* and fastened by pin *M*.

### No. 10,525. Improvements in Paper Files.

(*Perfectionnements aux serre-papier.*)

John J. Christie, Henderson, Tenn., U. S., 7th October, 1879, for 5 years.

*Claim.*—1st. The clip composed of the concave head *A*, the oval springs *B*, secured to said head, and the clamps *C* extending the length of the clip head and secured each to a leg of the spring; 2nd. The combination, in a paper file, with the head *A*, oval springs *B* and clamp jaws *C*, of the plates *D D*, pivoted to the said jaws, the former having the eye *b* and slot *c*, and the latter, the pin *i* working in said slot.

### No. 10,526. Improvements on Axle and Journal Boxes. (*Perfectionnements aux boîtes d'essieux et de tourillons.*)

William L. Eveland, Fingal, Ont., 7th October, 1879, for 5 years.

*Claim.*—An axle, or journal box, having interior annular grooves *E*, intervening recessed space *F* and an inserted rotary frame constructed of rings *C* with projecting edges travelling in the guide grooves *E*, and rollers *D* running on the plain cylindrical surface *F* and journalled in the rings.

### No. 10,527. Improvements in Reaping Machines. (*Perfectionnements dans les moissonneuses.*)

Jephth Garrard, Cincinnati, O., U. S., 7th October, 1879, for 5 years.

*Claim.*—1st. The combination of a hinged rake, rake stale, moving lever, spring and a lug on the rake cam frame; 2nd. In a sweep rake, a rake head hinged to and vibrating on its stale, so as to impart an accelerated movement to the heel or inner end of the rake, while moving the grain from the platform; 3rd. The combination, with a grain platform and a sweep rake, of a gaveling platform, consisting of one or more vibrating sections, an inclined slotted guard and a seat, or support for the binder, located facing and in close proximity to the slotted guard, so as to bring the binders laps in position to receive the grain; 4th. The combination of a supplemental platform, composed entirely of vibrating fingers, with a sweep rake and a main platform upon which the grain accumulates in the intervals of motion of the supplemental platform, and from which it is delivered upon and transversely to said vibrating fingers in their intervals of rest; 5th. In combination with the grain platform of a harvesting machine and a sweep rake, a gaveling platform, having two or more vibrating consecutively acting parts working in an open frame; 6th. In the combination of a grain platform, a sweep rake, a vibrating gaveling platform and a slotted shield; 7th. The combination of a main platform and sweep rake delivering the grain, in a horizontal path, to one side of a supplemental platform, transverse thereto, delivering the grain in the direction of motion of the machine, and a seat, or support for the binders, located behind the main frame or delivering wheels of the machine.

### No. 10,528. Manufacture of Albumen. (*Fabrication de l'albumine.*)

Tolf O. Alsing, Koping, Sweden, 7th October, 1879, for 5 years.

*Claim.*—1st. A commercial albumen made from fish spawn; 2nd. The process for manufacturing commercial albumen, viz.: by the washing, crushing, extraction, separation and evaporation of fish spawn.

### No. 10,529. Improvements on Feed Cutters. (*Perfectionnements aux coupe-paille.*)

William A. Rife, Valley Mills, Va., U. S., 7th October, 1879, for 5 years.

*Claim.*—1st. The frame of the straw cutter composed essentially of the legs *a*, casting *b i*, spider *c* and connecting bolts, the box for the shaft *f* being made in the two castings; 2nd. The combination of the shaft *f*, box *j* and the feed mechanism, the feed being connected to the end of the shaft; 3rd. The combination of the shaft *f*, disk *h*, plate *r*, connecting rod and the feeding device; 4th. The feed device *t* having the pronged extensions *v*, fixed prongs *x* and operating mechanism, the parts being combined as specified; 5th. The curved knife *l* in combination with the supports *o c*.

### No. 10,530. Improvements in Washing Machines. (*Perfectionnements aux machines à laver.*)

Leslie A. Porter, St. Catharines, Ont., and Charles F. Farlin, Toledo, O., U. S., 8th October, 1879, for 5 years.

*Claim.*—The rollers *D* (with 11 corrugations) and *E* with the endless ropes *F* and loops *G*, attached thereto, with the mode of working them in the box or frame, also the movable apron *B*, with the spiral springs *H* and also the movable gudgeons *T*.

### No. 10,531. Improvements in Wire Rope Splicing. (*Perfectionnements dans l'épissure des câbles métalliques.*)

William P. Healey, New Orleans, La., U. S., 8th October, 1879, for 5 years.

*Claim.*—1st. One or more portions of the hempen core being removed and fusible metal cast into, between and around the strands and into the space of spaces from which the core was taken; 2nd. The improved mode of making a wire rope splice with fusible metal, such consisting in removing, from the part or parts to be encompassed by the fusible metal, the heart piece or core of the rope and employing a mould and casting fusible metal into, and between and about the strands; 3rd. The improved mode or process of making a wire rope splice with fusible metal, such consisting in removing, from the part or parts to be encompassed by the fusible metal, the hempen heart or core of the rope and compressing and welding such parts, and sub-

sequently applying to them a mold and casting therein and upon and within them, fusible metal; 4th. The clamps made for compressing together the parts to be covered by fusible metal and for enabling the welding wire to be applied to the said parts, while they may be within the clamps.

### No. 10,532. Railway Car Ballast and Earth Unloader. (*Wagon de railroute pour décharger le gravier et la terre.*)

George P. Merrill and Patrick Dowling, Toledo, O., U. S., and Elisabeth A. Gossage, St. Thomas, Ont., 8th October, 1879, for 5 years.

*Claim.*—1st. The combination of the plough, the jack-screw for hoisting and reversing plough on car, the friction rollers to lighten draft while the plough is in operation, the nose casting formed in one piece and forming radii for side sheets, as a plough made entirely of iron; 2nd. The aprons to fasten between cars, to prevent gravel and earth from falling on the track between the cars A T, rails fastened to car, for guiding plough, extended twelve inches beyond car and sharpened to a point, so as to receive the nose casting travelling from one car to another.

### No. 10,533. Improvements in Nail Forging Machines. (*Perfectionnements aux machines à forger le clou.*)

David Armstrong, Chicago, Ill., U. S., 8th October, 1879, for 5 years.

*Claim.*—1st. The combination of two revolving series of separately rotary die heads N and the anvil b; 2nd. The combination, with the separately revolving die heads, of the die w; 3rd. The combination, with the separately rotating die heads and dies w, of the chisel for clipping the points of the nails; 4th. The combination, with the rotating die heads, of the nail holding devices, the cutters for severing the nails from the rod; 5th. The combination of the rotating die heads, the dies and the chisels with the anvil b, and the forging hammers; 6th. The double pinions O p combined with the shaft M, springs v v, bushing n, nuts L, sleeve b b and rotating heads N; 7th. In combination with rotary heads N, having cutters thereon, the nipper 9 and seat 7 for grasping the nail ll and carrying it to the discharge spout 16; 8th. The nipper 9, pivoted to a rotating and concentrically revolving cutter head, in combination with the cutter 5, for severing the nail from the rod, and with the punch 12, for removing the nail from under the nipper 9; 9th. The cylinder D, having holes through it, radially, to receive the shanks d, for the support of the ear lugs h g, in combination with screw sleeve c, nut and screw f, for adjusting the rotary dies.

### No. 10,534. Clothes Wringer. (*Essoreuse à linge.*)

William T. Bunnell, Ottawa, Ont. (Assignee of Anson G. Ronan), 10th October, 1879 (Extension of Patent No. 3934), for 5 years.

### No. 10,535. Grate Bars. (*Barres de grilles.*)

Henry C. Kerstins, Cleveland, Ohio, U. S., 10th October, 1879. (Extension of Patent No. 3937), for 5 years.

### No. 10,536. Improvements on Thrashing Machines. (*Perfectionnements aux machines à battre.*)

John Abell, Woodbridge, Ont., 10th October, 1879, (Extension of Patent No. 3936), for 5 years.

### No. 10,537. Improvements on Fishways. (*Perfectionnements aux passes migratoires.*)

Marshall McDonald, Lexington, Va., U. S., 13th October, 1879, for 5 years.

*Claim.*—1st. The method of utilizing the velocity of a head of water, at the dam for the ascent of the fish, which consists in directing said head of water through a series of openings upon an incline discharging upwardly; 2nd. A way, for the ascent of fish, consisting of a series of upwardly inclined plates forming discharging openings, a set of subjacent chambers communicating therewith, and a parallel series of buckets opening into the general level of the way, at the top, and into the subjacent chambers of the discharge-openings, at the bottom; 3rd. The combination, with the walls and bottom of the way, of the cross-bars or cleats a, the longitudinal partition D resting thereupon, the reversely inclined partitions G and F forming buckets and chambers communicating with each other beneath the partition D and the inclined plates E.

### No. 10,538. Improvements on Rail Joints. (*Perfectionnements aux joints des rails.*)

Thomas H. Tracy, London, Ont., 13th October, 1879, for 5 years.

*Claim.*—The tapering bolt or key, passing through the fish plates, and the slots in the rails.

### No. 10,539. Improvements on Rail's Brakes. (*Perfectionnements aux freins des chemins de fer.*)

Henry Empey, Detroit, Mich., U. S., 13th October, 1879, for 5 years.

*Claim.*—The combination of the rods H, their coupling chains M and the chains I for connecting the same with the drums F, whereby the latter can be operated by a motor at the end of the train.

### No. 10,540. Improvements on Boots. (*Perfectionnements aux bottes.*)

Owen T. Jones, Port Dinorwic, Wales, 13th October, 1879, for 5 years.

*Claim.*—1st. The top of that portion of the boot which covers the leg being double or about double the size of the bottom; 2nd. One or more vertical creases in the side, back or other part of that portion of the boot which covers the leg; 3rd. The back or forward fold or folds caused by the said crease or creases.

### No. 10,541. Improvements in Pumps.

(*Perfectionnements aux pompes.*)

Alexander Porteous and John Irvin, Port Perry, Ont., 13th October, 1879, for 5 years.

*Claim.*—1st. The combination of the rock shaft D, having crank sector F, and rack bar K attached to the pump rod I, for operation by the handle G; 2nd. The combination of the shaft D, crank sector F, rack bar K and anti-friction roller M with the boxed sides B C of the pump; 3rd. The combination of the rack bar K, connected to pump rod I, working in guide J, and to rod O, sliding in guide L, anti friction roller M and rock shaft D having crank sector F operated by the handle G.

### No. 10,542. Improvements on Ventilators.

(*Perfectionnements aux ventilateurs.*)

William H. Loop, Joseph James and Enoch James, Montreal, Que., 13th October, 1879, for 5 years.

*Claim.*—The combination of the cones E C B and B H B and the convex band D, also part of cone E with channel F and outlets K K.

### No. 10,543. Machine for Making Lacing Hooks for Boots and Shoes. (*Machine à faire les agrafes pour les lacets des chaussures.*)

Stephen N. Smith, Providence, R. I., U. S., 13th October, 1879, for 5 years.

*Claim.*—1st. First necking and indenting a narrow strip of metal and punching lengthwise therefrom, end to end, a series of flat blanks, each embracing at opposite ends a neck and an indented portion; 2nd. First preparing the stock in narrow strips with tubular necks at regular distances apart; secondly, indenting the strips, thirdly, punching the blanks lengthwise from the strip, so that each embraces one of the necks and one of the indented portions, and lastly, bending the blanks into shape and indenting them on the back; 3rd. The combination of the scouring, indenting and cutting punches and a feed mechanism, arranged to move the prepared stock from the first two punches to the last; 4th. The combination of the cutting punch, the carrier, the sliding anvil and the vertically and horizontally moving slides, arranged to act successively and bend the blank over the anvil; 5th. The combination of the anvil O and the two slides, arranged to act successively and double the blank thereon; 6th. In combination with the carrier slide and the sliding anvil, the yielding presser foot, arranged to act upon and hold the blank; 7th. In combination with the blank forming devices, the presser foot, the bar having a spring connection with the foot and means for imparting a reciprocating movement to the bar; 8th. The blank carrier, having the notched end to receive the tubular necks of the blanks, in combination with the tongue adapted to close said notch and sustain the blank; 9th. In combination with the scouring and cutting punches and the feeding finger, the grooved guide H provided with the hole g and spring h; 10th. The anvil, having the notched or recessed end, in combination with the bending slide having a rounded or pointed shoulder to indent the back end of the hook; 11th. A punch arranged to indent the stock, to give roundness to the end of the hook, previous to the punching of the blank therefrom.

### No. 10,544. Improvements on Pumping Machinery. (*Perfectionnements aux mécanismes des pompes.*)

George H. Corliss, Providence, R. I., U. S., 13th October, 1879, for 5 years.

*Claim.*—1st. A steam pumping apparatus; 2nd. The oscillating lever D, having a fixed axis, at one end, and a connection with a crank and fly-wheel, at the other end, in combination with a reciprocating pump piston or plunger connected to said lever at a convenient point between its ends, whereby to give to the crank and its connection an increased throw, as compared with that of the pump; 3rd. The receiver H, connecting the high and low pressure cylinders A A of a compound engine, in combination with the regenerator H; 4th. The receiver H, connecting the high and low pressure cylinder A A of a compound engine together with the regenerator H, in combination with the subtracting apparatus H<sup>6</sup> H<sup>7</sup>; 5th. The regenerator pipes, receiver and pump with suitable operating means for the latter, in combination with additional circulating means, whereby the regenerator may be used for heating feed or other water; 6th. The curved tubes H<sup>1</sup> H<sup>2</sup>, with contracted necks h<sup>1</sup>, the end chambers H<sup>3</sup> and holding bolts h<sup>3</sup>; 7th. The hand lever I<sup>6</sup>, with suitable holding means and having a slotted bearing I<sup>8</sup>, in combination with a speed governor and the valve gear of a steam engine, so arranged and constructed that, when the hand lever is clamped, the speed governor I<sup>7</sup> may independently operate to shorten the cut-off, but cannot lengthen it beyond the point fixed by the hand lever I<sup>6</sup>; 8th. The hand lever I<sup>6</sup>, with suitable holding means and having a slotted bearing I<sup>8</sup>, in combination with a pressure governor I<sup>5</sup> and the valve gear of a steam engine, so arranged and constructed that, when the hand lever is clamped, the pressure governor may independently operate to shorten the cut-off, but cannot lengthen it beyond the point fixed by the hand lever; 9th. The hand lever I<sup>6</sup>, with suitable holding means and having a slotted bearing I<sup>8</sup>, in combination with the valve gear of a steam engine and with both a speed governor and a pressure governor, so arranged that, when the hand lever is clamped, either of the governors may independently operate to shorten the cut-off, but neither can lengthen it beyond the point fixed by the hand lever or other governor; 10th. The two adjustable differently formed cams i<sup>1</sup> i<sup>2</sup> in combination with the liberating valve gear of a steam engine, so arranged and constructed that this difference of profile of the cams shall be operative to compensate for the peculiar irregularities in the movement of the steam piston, and thereby secure the liberation of the steam valves at points equally distant from the commencement of the in and out strokes of the said piston; 11th. The two adjustable differently formed cams i<sup>1</sup> i<sup>2</sup> in combination with each other and with the swivel guides K<sup>10</sup>, the steel pointed followers K<sup>1</sup> K<sup>2</sup>, the springs K<sup>12</sup>, for keeping each cam and its followers in contact, and the liberating valve gear of a steam engine; 12th. The rocking lever K<sup>16</sup>, carrying the light lever K<sup>8</sup> with the steel shoulder K<sup>9</sup> engaging with the catch piece K<sup>15</sup> on the valve arms K<sup>14</sup>, the whole moving on a common axis with the valve to be operated, in combination with the adjustable stop K<sup>6</sup>; 13th. The circular sliding exhaust valves L<sup>2</sup>; 14th. A steam cylinder and an outer casing, joined at or near the ends by flexible flanges a<sup>1</sup> a<sup>2</sup>, in combination with the screw thread joints a<sup>3</sup> a<sup>4</sup>, compressing bands a<sup>5</sup> a<sup>6</sup>; 15th. The com-

posite lever D, oscillating upon a fixed bearing at one end *d* and connected to a crank rod *d'* at the other end, in combination with a link applied at an intermediate point *D<sub>o</sub>*, between the ends; 16th. A wheel made in sections and having the inner ends of its separate arms so formed as to embrace the shaft: 17th. The pump barrel *C<sub>1</sub>* supported, in a pump box *C<sub>2</sub>*, by partitions *C<sub>5</sub>* which brace the sides of the box and which serve to secure, for each section of the inlet valves *C<sub>6</sub>* *C<sub>7</sub>*, close and near equal proximity to both the water supply and the vacuum chambers *C<sub>7</sub>*; 18th. The pump box *C<sub>2</sub>* supporting the crank shaft *E<sub>1</sub>* and recessed to accommodate the sweep thereof, strengthened, longitudinally, by the walls and bottom of said recess and, transversely, by the partitions *C<sub>3</sub>* which also serve to secure, for each section of the delivery valves *C<sub>5</sub>*, close and nearly equal proximity to the air chambers *C<sub>7</sub>*; 19th. The two pump boxes *C<sub>2</sub>* in combination with the air pipe *C<sub>9</sub>* connecting their air chambers *C<sub>7</sub>*; 20th. The conical chamber *M<sub>1</sub>* and the compressible lip *M<sub>2</sub>*, in combination with a pump plunger and rod: 21st. The helical spring guide *c<sub>4</sub>*, made elastic in the direction of the valve movement and rigid in transverse directions, in combination with a stationary abutment and a lifting valve.

### No. 10,545. Improvements on Animal Powers.

(*Perfectionnements aux manèges.*)

James J. Heenan, Ops. Ont., 13th October, 1879, (Extension of Patent No. 9907), for 5 years.

### No. 10,546. Improvements on Animal Powers.

(*Perfectionnements aux manèges.*)

James J. Heenan, Ops. Ont., 14th October, 1879, (Extension of Patent No. 9907), for 5 years.

### No. 10,547. Machine for Cutting Cheese.

(*Machin à couper le fromage.*)

Robert S. Selby, Toronto, Ont., 14th October, 1879, for 5 years.

*Claim.*—A cheese knife *G*, bolted to the cross-head *C* provided with a rack *D*, and operated by the toothed quadrant *E* and handle *F*, in combination with the circular table *H* having friction rollers *h* and pivoted to the bed-plate *A*.

### No. 10,548. Improvements in Carriage Springs

(*Perfectionnements aux ressorts des voitures.*)

George D. Griffin, Hamilton, Ont., 14th October, 1879, for 5 years.

*Claim.*—The combination, with the body and shafts of the vehicle, of the metallic loops formed of the two parts *D B* hinged together, the auxiliary springs, arranged between the front end of said loops and the shafts, and the elliptical springs *E*, arranged between the shafts and axle.

### No. 10,549. Improvements in Smtut Machines.

(*Perfectionnements aux émotteurs.*)

Benjamin Barter, Toronto, Ont., 14th October, 1879, for 5 years.

*Claim.*—1st. Corrugated beaters or friction plates *D*, arranged in pairs between a disk *C C<sub>1</sub>*, in combination with the brushes *E* placed between each pair of beaters *D*, near the disc *C<sub>1</sub>*; 2nd. A drop box *J*, at the end of the air trunk *K*, in combination with the valve *L*.

### No. 10,550. Suspension Rings and Hooks.

(*Innaux et crochets de suspension.*)

Eleanor M. Fine, Philadelphia, Pa., U.S., (Assignee of Isaac Fine), 14th October, 1879, for 5 years.

*Claim.*—1st. The ring *A* formed with a loop *B* turned up from the body thereof and having a locking end *a*; 2nd. A suspension ring formed of the ring *A* and loop *B* adapted to fold within, or nearly within the confines of the pamphlet, or other article to which it is applied.

### No. 10,551. Improvements in Stove Backs.

(*Perfectionnements aux derrières des poêles.*)

Edward L. Parsons, St. John, and H. Le Baron Smith, Fredericton, N.B., 14th October, 1879, for 5 years.

*Claim.*—The slits *a a*.

### No. 10,552. Improvement on Sash Locks.

(*Perfectionnement aux arrête-croisées.*)

George F. Thompson, Jr., (Administrator of Michael W. Thompson), and Hartwell A. Crosby, Saint John, N. B., 14th October, 1879, for 5 years.

*Claim.*—1st. The shield *A*, hook *B*, rod *D*, thumb-piece *C*, spring *H*, box or lock *F*, key *G*, rack *J*; 2nd. The thumb-piece *C*, rod *D*, spring *H* and key *G*, in combination with the rack *J* that is provided with a deep cut or hole *O*; 3rd. The rack *J* provided with a deep cut or hole *O* near its lower end.

### No. 10,553. Improvements in Nut Locks.

(*Perfectionnements aux arrête-noix.*)

Saul Laporte, Ottawa, Ont., 14th October, 1879, for 5 years.

*Claim.*—1st. In a bolt nut, the grooves *a* and *b*; 2nd. The lock plate *B* having the arms *c* and *d*; 3rd. The notches *e*; 4th. The combination of the bolt nut *A*, having the grooves *a b*, with the lock plate *B*, having the arms *c* dovetailed or riveted to the nut, and arms *d*; 5th. The combination of the nut *A*, lock plate *B* with the notches *e* formed in the surface of the article that is bound by the bolt.

### No. 10,554. Method of Propelling Vessels by Steam.

(*Système de propulsion des vaisseaux par la vapeur.*)

Richard Smith, Sherbrooke, Que., 16th October, 1879, for 5 years.

*Claim.*—1st. The contractile propeller *A A<sub>1</sub>*; 2nd. The propulsion of vessels by the direct lineal thrust of a propeller; 3rd. The contracting an

expanding of the propeller *A A<sub>1</sub>* by means of the independent steam chambers *E<sub>1</sub>* *E<sub>2</sub>* and the pistons *G<sub>1</sub>* *G<sub>2</sub>*, or equivalent device; 4th. The combination of the cranks *N N* and links *O O<sub>1</sub>*, in a direct line with the rod *B* and spindle *M*, for the purpose of locking the propeller *A A<sub>1</sub>* in an open or closed position.

### No. 10,555. Process of Treating Ores.

(*Procédé pour traiter les minerais.*)

Farnham M. Lyte, London, England, 18th October, 1879, for 5 years.

*Claim.*—1st. The separation of metals, such as silver, lead, zinc and copper, in ores containing them, by treating the ores with acid and brine; 2nd. In the treatment of ores containing antimony or bismuth mixed with lead, or lead and silver, the separation of the silver and lead by means of the hot brine treatment and the cooling thereof; 3rd. The mode of employing brine as a carrier and depositor of silver and lead by means of alternate heatings, decantations and coolings; 4th. The use, in the process of treating mineral ores or metallic mixtures, of apparatus arranged and employed in the manner described; 5th. That part of the improved process referred to which relates to the causing the lead, or lead and silver to remain almost entirely in the attaching vessels and not to be carried over with the acid liquors employed, the said acid liquors being carefully neutralized before decanting them finally into the tank which receives them, thus retaining the lead or lead and silver with the gangue ready for extraction by the brine; 6th. The employment of metallic lead as a precipitant for the silver in the brine or the acid solution of the soluble chlorides.

### No. 10,556. Improvements on Waggons.

(*Perfectionnements aux waggons.*)

John F. Drew, Barnston, Que., 18th October, 1879, for 5 years.

*Claim.*—The arrangement of the hounds *D* with the circle *F* and reach *G*; 2nd. The peculiar arrangement and construction of the axle wood *A* with the superimposed rocker-plate wood *B*, whereby a stronger and more durable axle-stock is obtained; 3rd. The reach *G*, having the hinge clasp *b* secured thereto, in combination with the circle *E*.

### No. 10,557. Improvements in Pruning Knives.

(*Perfectionnements aux sécateurs.*)

Justus Smith, Hamilton, Ont., 18th Oct., 1879, for 5 years.

*Claim.*—1st. The combination of the malleable iron socket *A*, hook *C*, chisel *E*, brace *H* and recess *F*; 2nd. The combination of the malleable iron socket *A*, hook *C*, chisel *E*, brace *H*, recess *F*, handle *B*, lever *N*, connecting rod *L*, curved knife *J* and saw *G*.

### No. 10,558. Blotter Bath for Copying Presses.

(*Bain au papier buvard pour les presses à copier.*)

Benjamin B. Hill, Springfield, Mass., U.S., 18th October, 1879, for 5 years.

*Claim.*—1st. The walls *B* inclosing a bottom or floor *A*, provided with cells or cavities communicating with each other so that water may circulate freely therein, from one to the other, when a series of blotter sheets are placed upon the bottom in combination with a presser *D*; 2nd. The combination of the cellular receptacle *A* and the presser *D* adapted to hold, closely packed together, a series of blotter sheets while being dampened; 3rd. A bottom and four inclosing walls *B*, one or more of which is provided with an extension or off-set *e*, to facilitate the removal of the blotter sheets therefrom; 4th. A blotter sheet having both sides porous, to absorb water and moisture readily, and having a gum applied to its edges.

### No. 10,559. Machine for Cutting and Planing Hoops.

(*Machin à tailler et planer les cerceles.*)

Harvey Morris, Wallaceburgh Ont., (Assignee of John Greenwood, Rochester, N. Y., U. S.), 18th October, 1879, for 5 years.

*Claim.*—1st. The cutter *C*, provided with knives *C* having the slitting ends *C<sub>1</sub>* for dividing the hoops, and the concave faces *C<sub>2</sub>* *C<sub>3</sub>* for rounding the corners of the hoops, in combination with the pressing roller *D* resting above the cutters; 2nd. The combination of the endless apron or bed *E* provided with the inclined planes *f f*, the roller *G* provided with the cones *h h*, said planes and cones being parallel with each other to hold the hoops in an angular position, and the planer *H* set in a horizontal or straight position to plane the hoops to a bevel; 3rd. The combination of the saws or cutters *C*, the feeding roller *E*, the endless apron *E* provided with the inclined planes *f f*, the pressing roller *G* provided with the cones *h h* and the straight planer *H*, the whole arranged so that the hoops are first cut from staves or sections, then carried in an inclined position through the apron and pressing roller and, finally, planed to bevel form by the planer; 4th. The process of forming hoops which consists in, first, slitting or dividing the hoops and rounding the corners, then passing the hoops in an inclined position between a bed and roller and planing off the raised corners by a straight planer.

### No. 10,560. Improvements in Sewing Machines.

(*Perfectionnements aux machines à coudre.*)

George Juenst, New York, U.S., 18th October, 1879, for 15 years.

*Claim.*—1st. The combination of the take up lever *E*, the needle driving crank pin *e* and a spring for keeping the said lever against the said crank pin and producing its downward motion; 2nd. The adjustable cushion *S<sub>1</sub>* and its presser *S<sub>2</sub>*, sleeve *S<sub>3</sub>* and screw *S<sub>4</sub>*, in combination with the take up lever; 3rd. The combination, with the feeding dog, of the lever *N*, rod or lever *e*, cam *d* and the two adjustable fulcrums *g<sub>1</sub>* and *g<sub>2</sub>*, whereby a great degree of variation in the length of the movement of the dog is provided for; 4th. The combination, with the feed operating lever *N*, of an adjustable fulcrum *O<sub>3</sub>*, for regulating the height to which the feeding dog rises; 5th. The loose bobbin-holder in combination with an oscillating hook for forming the stitch; 6th. The feeding dog in combination with the bobbin-holder and the oscillating hook, whereby the said dog is made to depress the bobbin-holder, after the tightening of the stitch; 7th. The com-

bination, with the reaching spring of the feeding-dog, of means of adjusting the downward pressure of the said spring; 8th. The combination, with the tension disks *l* *l* and their sliding or longitudinally moving spindle, of a nut and a spring applied to operate and permit the movement of the spindle.

**No. 10,561. Improvement on Barbed Fences.**  
(*Perfectionnement aux clôtures barbeles.*)

The Washburn and Moen Manufacturing Company, Worcester, Mass., (Assignees of Jacob & Warren M. Brinkerhoff, Auburn, N. Y., U. S.), 18th October, 1879, for 15 years.

*Claim.*—1st. The combination of bars *K*, *K* and *K* *l*, with a metal strip of fencing *J*; 2nd. The combination of hook barb holding ends *f* *g* with the metal fencing strip *J*; 3rd. A metal strip fencing hook *L* for supporting and holding a barbed metal strip fencing *J*; 4th. The fencing strip, twisting and adjusting device *m* for twisting and adjusting a barbed metal strip *J* of fencing, after it has been strung upon the posts; 5th. The mode or process of constructing barbed metal strip fencing, consisting of, first, barbing the metal strip; second, securing it to alternate posts; third, twisting it; and, fourth, securing it in immediate holding hooks.

**No. 10,562. Improvements in the Manufacture of Hats.** (*Perfectionnements dans la fabrication des chapeaux.*)

George H. Hastings and Robert Cream, Toronto, Ont., 18th October, 1879, for 5 years.

*Claim.*—A hat or bonnet made of canton flannel.

**No. 10,563. Improvements on Electric Railway Signals.** (*Perfectionnements aux signaux électriques de chemins de fer.*)

Tuodore A. B. Putnam, New York, U. S., 18th October, 1879, for 5 years.

*Claim.*—1st. The combination of the sleeve *a* and the wheels *B* *B*, fixed thereon, with suitable mechanism for moving the said sleeve, endwise, on the axle; 2nd. The wheels *B* *B* arranged to be shifted, simultaneously, with the reversing of the engine, and by or through the same mechanism; 3rd. The boxes *D* *D*, in combination with the brushes *C* *C*, and the necessary mechanism for operating the same; 4th. The road-bed conductor, or its equivalent, whether provided with a roof, or not; 5th. A movable conductor, arranged to be elevated by the wheels of a passing locomotive, in combination with suitable conductors on the locomotive to contact therewith, and suitable conducting wires, or their equivalents, arranged to sound signals and operate mechanism through magnets; 6th. A switch lever, arranged to close an electric circuit when the switch is thrown open, which will sound an alarm on an approaching engine or train, in combination with the track mechanism; 7th. A switch mechanism, so arranged and connected electrically with a road bed conductor that the closing of the circuit, by the locomotive forming a part of same at said conductor, will lock the switch; 8th. The mechanism for unlocking the closed switch, which consists essentially of a depressor to be acted upon by a wheel on the locomotive, a lifter to be forced upward by said action of the wheel, a lever bearing a pin which is withdrawn by the upward movement of the lifter, and a catch to sustain the lever when the pin is withdrawn; 9th. The mechanism for signalling a follower from a leading locomotive or train, which consists essentially of a depressor-lever *F*, a depressor *a*, a lever *b*, an unequally fulcrumed lever *c*, elastic conductors *d* *d*, a drop *e*, and a magnet *f*, all arranged and connected with the road-bed conductors; 10th. The mechanism for signalling the approach of a train to a crossing, station or other point, which consists of a post *K*, a rod *L* hinged thereto and bearing signals *h* *l*, a catch *j* and a magnet *k*, either with or without a bell-alarm; 11th. A mechanism for resetting or adjusting the signal rod *L* by means of a wheel on the passing locomotive; 12th. A base piece *P* attached to a locomotive or tender and provided with metal conducting strips *r* *r*, all connected with the battery; 13th. The combination of a brush conductor, consisting of several insulated parts, with the mechanism to operate the same and the metal surfaces to be swept thereby; 14th. The reversing mechanism of a locomotive in combination with a commutator and connectors from the battery to the brush conductors, so arranged that the operation of reversing the engines will shift the said commutator; 15th. An electric alarm controlled by a divided circuit; 16th. The road-bed conductor, consisting of a brush holder *E* provided with brush like conductors, the quadrant covers *O* *O*, arranged to turn on journals in the fixed casing and provided with cross-arms linked to the lever, and the lever *K*; 17th. The construction and arrangement of parts, whereby the circuit of high resistance is kept open, until the other circuits are closed by the passage of the locomotive; 18th. The signal device at stations or crossings, which consists of an arm bearing visible signals arranged to be dropped by a current of electricity through a circuit closed by an approaching locomotive, in combination with an alarm or gong adapted to be sounded by power the falling arm being adapted to wind up the weight or spring furnishing the power and thus renew it; 19th. The combination of a battery, magnets, armatures and conductors with a locomotive and the intermediate mechanism; 20th. A depressor lever or levers *F*, for actuating mechanical movements on railways; 21st. The electric coupling device, whereby a signal or alarm is sounded when the train parts.

**No. 10,564. Improvements on Plough Coulters.** (*Perfectionnements aux coutres des charrues.*)

Daniel S. Aikman, Colchester, Ont., 20th October, 1879, for 5 years.

*Claim.*—A plough coultter having a curve, bend or jog in it, to the left when facing the same way as the plough, formed immediately above the cutting part.

**No. 10,565. Improvements on Gears of Buggies.** (*Perfectionnements aux trains des voitures.*)

James Woods, Strathroy, Ont., 20th October, 1879, for 5 years.

*Claim.*—1st. The new form of circle consisting of upper and lower halves *C* *L*; 2nd. The upper circle *C*, lower circle *L*, clevis *E* *J*, tie *F*, bolts *A* and bearings *I* *I*, in combination with head block *A*, king-bolt *B* and axle *D*; 3rd. The scroll-spring *N* passing beneath and beyond side bars *O* *O*.

**No. 10,566. Improvements on Flower Pins.**

(*Perfectionnements aux épingles à fleurs.*)

Jerome H. Plummer, Brooklyn, N. Y., U. S., 20th October, 1879, for 15 years.

*Claim.*—A supporting wire or piece, for the stem of the flower, and a flexible binding wire or piece attached to the supporting wire or piece.

**No. 10,567. Improvements on Tea Kettles.**

(*Perfectionnements aux bouilloires à thé.*)

Lewis J. Carpenter, Buffalo, N. Y., U. S., 20th October, 1879, for 5 years.

*Claim.*—A sheet metal tea kettle having the breast, sides and a strengthening portion for the spout, all formed in one piece of metal and double seamed to the pit.

**No. 10,568. Improvements in Prepared Cereals.** (*Perfectionnements aux céréales préparées.*)

Lewis S. Chichester, Jersey City, N. Y., U. S., 20th October, 1879, for 5 years.

*Claim.*—Ground or crushed, cooked or desiccated cereals and uncooked flour or meal mixed together.

**No. 10,569. Coal Mining Machine.** (*Machine à miner le charbon.*)

Francis M. Lechner, Waynesburgh, and Joseph A. Jeffrey, Columbus, Ohio, U. S., 20th October, 1879, for 5 years.

*Claim.*—1st. The combination of the shaft *L*, the spool and the friction driver, with the cord or chain *K* for drawing the sliding cutter frame towards the rear end of the main frame; 2nd. The chain consisting of links *C* *C* *D* *D*, pivoted *E* and friction rollers *E*; 3rd. The cutter shaft, provided with lugs *a* having their engaging faces formed in arcs of circles, in combination with the chain provided with friction rollers *E*; 4th. A driving chain, the links of which are constructed with bevelled edges or cutting edges; 5th. A cutter bar having sections, which are square in cross sections, to receive the driving chain and having other sections, which are rhomboidal in cross section to receive the cutters; 6th. A cutter bar having sections, which are rhomboidal in cross section, to receive the cutters and *l* having other sections, also rhomboidal in cross section, but having their wider faces arranged in planes at right angles to the planes of the wider faces of the adjoining sections.

**No. 10,570. Machine for Reducing Wood to Paper Pulp.** (*Machine à préparer le bois pour la pâte à papier.*)

William N. Cornell, Charles Tollner, Palaski, N. Y., Joseph T. Stevens and Lynden H. Stevens, Washington, D. C., U. S., 20th October, 1879, for 5 years.

*Claim.*—1st. The reciprocating saws, wherein the wood is presented at an angle or oblique to the saws; 2nd. The combination of the reciprocating saws with the inclined or oblique feed table.

**No. 10,571. Process for Drying Lumber.** (*Procédé de séchage du bois.*)

George Woods, Cambridgeport, Mass., U. S., 20th October, 1879 (Extension of Patent No. 4,016), for 5 years.

**No. 10,572. Stay-Sail Boom Guide.** (*Coulisseau d'arc-boutant de voile d'étai.*)

Hiram Welbanks (Assignee of William H. Thompson), Gananoque, Ont., 20th October, 1879, for 5 years.

*Claim.*—1st. The combination, with a jib-boom and stay-sail boom, of the socket *K* pivoted to the head *J*, the head *J* pivoted to the block *I*, and the block *I* sliding on the traveller irons secured to the jib-boom; 2nd. The socket *K*, head *J*, block *I* sliding on the guide bars *a a* of the traveller.

**No. 10,573. Apparatus for Preserving Meat, &c.** (*Appareil à conserver la viande, &c.*)

Kennard Knott, London, Eng., 23rd October, 1879, for 5 years.

*Claim.*—1st. In combination with a refrigerating chamber *G*, the freezing box *B*, coil pipe *C* and fan or blower *D* for lowering the temperature of meat prepared for transportation or storage; 2nd. In a non-conducting and air tight refrigerating room for preserving meat during transportation or storage, the combination, with the freezing box *B*, horizontal coil-pipe *C*, charcoal chamber *Y* and fan or blower *D*, of the perforated distributing and collecting pipes *J*; 3rd. The combination and arrangement of tank *N*, coil pipe *C* and pipe *p* for melting and discharging the rime which may form in the freezing coil *C*, so as to allow of keeping the air constantly dry and pure.

**No. 10,574. Treatment of Wood to render it pliable, &c.** (*Traitement du bois pour le rendre flexible, &c.*)

Pastor P. de la Sala, London, Eng., 23rd October, 1879, for 5 years.

*Claim.*—Rendering pliable and non inflammable, by treating with alkali, all vegetable substances whether such vegetable substances be in their compact and natural state, such as wood, plants, shrubs, grasses, or in their artificially rendered loose and fibrous forms, or when manufactured into textile fabrics of all kinds, such as canvas, linen, cotton, &c., or any other manufactured article, the material of which is of vegetable origin.

**No. 10,575. Improvements in Carriage Tops.** (*Perfectionnements aux soufflets des voitures.*)

Daniel Conboy, Uxbridge, Ont., 23rd October, 1879, for 5 years.

*Claim.*—1st. The seat irons for supporting a top or cover provided with the horizontally placed threaded extensions *B* extending outwardly from the



seat; 2nd. The seat irons, for supporting a top or cover provided with the threaded extensions B, in combination with the rail or sliding iron of a buggy or carriage top; 3rd. The seat irons B B', provided with the nuts b b', in combination with the seat rail D provided with the slot D'; 4th. The combination, with the seat and cover of a vehicle, of the sectional adjustable seat rails D D' provided with a back extension to receive the back quarter or stay of the top or cover; 5th. The combination of the seat rails D D', brace F and the back slat iron E provided with the stop E', or its equivalent.

### No. 10,576. Improvements in Barn Door Latches. (*Perfectionnements aux loquets des portes d'étables.*)

John Dennis, Toronto, Ont., 23rd October, 1879, for 5 years.

*Claim.*—The guards D, covering the latch pin B, in combination with the bolts E passing through the guide blocks C, and slotted passages *a* in the bolt A.

### No. 10,577. Fastenings for Door Knobs. (*Ajustages des boutons des portes.*)

Job F. Peacock, San Francisco, Cal., U. S., 23rd October, 1879, for 5 years.

*Claim.*—1st. The knob A having the cam shape or eccentric shape opening or recess in its shank *a*, in combination with a spindle B having an end portion *d* of corresponding cam or eccentric shape, as a means for attaching and securing knobs to their spindles; 2nd. The escutcheon or "rose" C, with a boss shape face *f* and having a socket aperture *e* with screw holes *g*, in the interior thereof, and with screw-thread *e*, on the exterior of the rear extension thereof, in combination with the shank *a* of a door knob; 3rd. A lock or latch spindle B, having a rectangular centre portion *b* and cam shape or eccentric shape ends *d d'*, in combination with the shank *a* of a door knob having an opening or recess of corresponding cam or eccentric shape, within it; 4th. The escutcheon D having the barb points *h* upon and projecting at right angles from the inner face thereof, the outer faces of said barbs *h* being bevelled at the point.

### No. 10,578. Improvements in Stave Machines. (*Perfectionnements aux machines à douves.*)

Harvey Morris, Wallaceburgh, Ont. (Assignee of John Greenwood, Rochester N. Y., U. S.), 23rd October, 1879, for 5 years.

*Claim.*—The combination, with the dogs *g g*, of the springs *k k* set into the face of the swinging bed E, and the stops *p p*, for operating upon and raising the springs above the level of the dogs in the back stroke of the bed.

### No. 10,579. Process for Renovating Feathers and Carpets. (*Procédé pour rafraîchir la plume et les tapis.*)

Eugène S. Manny, Zéphirin Manny et Alfred Limoge, Beauharnois, Que., 24th October, 1879, for 5 years.

*Résumé.*—1o. La combinaison des bras T, distribuant la vapeur par leur extrémité, et des traveaux en croix Y; 2o. La combinaison du calorifère G H I et des compartiments D E F, produisant et distribuant la chaleur à la chambre A au moyen des passes B, et la surface interne du calorifère I; 3o. La combinaison de l'appareil L et son moyen d'adaptation à l'arbre de couche U.

### No. 10,580. Improvements in Steam Boiler Jackets. (*Perfectionnements aux chemises des chaudières à vapeur.*)

John W. Hanmore, Newburgh, N. Y., U. S., 24th October, 1879 (Extension of Patent, No. 3980), for 5 years.

### No. 10,581. Improvements in the Manufacture of Hats, Caps, &c. (*Perfectionnements dans la fabrication des chapeaux, casquettes, &c.*)

George H. Hastings and Robert Crean, Toronto, Ont., 27th October, for 5 years.

*Claim.*—In manufacturing hats, caps and bonnets from a textile or semi-textile material or materials, by cutting said materials into strips of the required length, the edges of which are lapped and secured together in the manner described to form a blank, which blank is then stiffened and shaped on dies.

### No. 10,582. Improvements on Damper Regulators. (*Perfectionnements aux régulateurs des registres.*)

John C. McLaughlin, Detroit, Mich., U. S., 27th October, 1879, for 5 years.

*Claim.*—In combination with a system of heating by hot water circulation, consisting of a heater and a vessel connected therewith by a pipe or pipes and detached therefrom, and circulating water pipes, a device for employing the steam pressure in said vessel to regulate the damper in the smoke-stack of said heater.

### No. 10,583. Improvements on Fanning Mills. (*Perfectionnements aux tarares.*)

John Hanna, Jr., Augusta, Ont., 27th October, 1879, for 5 years.

*Claim.*—1st. The hinge A and joints B B B B'. 2nd. The hinge straps C and D; 3rd. The collar E.

### No. 10,584. Combined Umbrella and Tent. (*Parapluie et tente combinés.*)

Richard Catchpole, Hamilton, Ont., 27th October, 1879, for 5 years.

*Claim.*—The combination with an umbrella or portable tent, of the square or octagon handle A with a square or octagon runner B; 2nd. The construc-

tion of the metallic link stretchers C, the same being hinged to the runner B by hinge plate F and to ribs D by hinge plate F', strengthened by brace *d*; 3rd. In combination with an umbrella, the ribs D hinged to the handle A by hinges *e*; 4th. In combination with a combined umbrella and portable tent, the solid flat wooden stretchers C<sub>1</sub> and the same being hinged to the runner B by a hinge *e*, and to the ribs D by a hinge *f*, making the said stretchers double hinged and for a large tent; 5th. The combination of the cover E, with pockets G, hinged stretchers C C<sub>1</sub>, hinged ribs D, octagon or square handle A, runner B, hinged plates F F', sides H to form a combined umbrella and portable tent.

### No. 10,585. Improvements on Stove Grates. (*Perfectionnements aux grilles des poêles.*)

George W. Herrick, Detroit, Mich., U. S., 27th October, 1879, for 5 years.

*Claim.*—1st. In a rotating or vibrating grate provided with a central aperture, a sliding plate constructed with a sliced or perforated part and an open part, and supported below and pendent from said grate; 2nd. A rotating or vibrating grate provided with a central aperture, a sliding plate constructed with an imperforated and a perforated part, and supported below and pendent from said grate; 3rd. The grate A provided with central aperture D and the grooved lugs E, in combination with the plate F; 4th. In combination with the grate A and plate F, provided with a lug socket *b* and the handle *e*.

### No. 10,586. Improvements on Water Meters. (*Perfectionnements aux compteurs à eau.*)

John H. Coumba, Boston, Mass., U. S., 27th October, 1879, for 5 years.

*Claim.*—1st. The piston C having the valve chambers D<sub>1</sub> E<sub>1</sub>, the passages *n n*, exhaust ports *g m* and ports *o h*; 2nd. The piston C provided with the inlet operating L, and having the chamber I so constructed as to constitute a balanced piston; 3rd. The combination with the piston C of the valve chambers D<sub>1</sub> E<sub>1</sub> and the chambers I I' with their communicating passages and ports; 4th. The combination with the piston C, the arm R for the purpose of actuating the registering mechanism; 5th. The main hollow cylindrical valve D provided with the transverse ports *d d'*, the depression *e* and inlet port *i*, the whole constituting a balanced valve; 6th. The auxiliary hollow cylindrical valve E provided with the transverse ports *a a'*, the depression *b* and inlet opening *l*, the whole constituting a balanced valve; 7th. The combination with the piston C, the independent cylindrical valves D E provided with corresponding passages and ports; 8th. The combination of the valves D E, their chambers D<sub>1</sub> E<sub>1</sub> and the ports *ff*, and the chambers I I' and passages or ports *i h* and *o l*.

### No. 10,587. Improvements on Valves for Steam Pumps. (*Perfectionnements aux soupapes pour les pompes à vapeur.*)

George W. Dixon, Spring Lake, Mich., U. S., 27th October, 1879, for 5 years.

*Claim.*—1st. In combination with the cylinder and steam chest having ports, the valve *c* having flange *s*, overlapping case *d* and valve *f*, the valve *f* being shifted by the movement of the piston-head through positive connections; 2nd. The combination with the main valve, the auxiliary valve *f* having the stem *h*, the valve seat having the cavity *i* and the main exhaust port *k*, of the levers *l* fulcrumed in cylinder-heads, and the rods *m* having the collar *n*; 3rd. The combination with a cylinder and steam chest having ports, the case *d*, double seated valve *c*, valve *f*, rods *m* and shifting levers *l*.

### No. 10,588. Improvements on Ships. (*Perfectionnements aux navires.*)

Joseph B. Hall, Chicago, Ill., U. S., 27th October, 1879, for 5 years.

*Claim.*—1st. The combination in a vessel having the floor frames of wood and the bends and top frames of metal of a heavy outside planking upon said metal frames and screw bolts and fastenings for said planking introduced wholly from the inside; 2nd. The water way constructed of a series of planks set upon edge and bolted together with the joints broken; 3rd. The water-tight ceiling for the hull, consisting of layers of waterproof fabric laid between courses of thin boards and turned up vertically on each side of the keelsons; 4th. The filling or spaces between the frames ventilated by means of horizontal openings *i*, extending the whole length of the vessel and formed between the courses of ceiling adjoining the frames.

### No. 10,589. Improvements on Sewing Machine Needles. (*Perfectionnements aux aiguilles des machines à coudre.*)

George W. Laxell, Lynn, Mass., U. S., 28th October, 1879, for 5 years.

*Claim.*—1st. A sewing needle having a perforated point, an eye adjacent thereto, and flat at the back; 2nd. A sewing machine needle having its back composed of a flat or plane surface terminating in a point, all on one plane throughout the operating portion of the needle; 3rd. A sewing machine needle having a flat back and a point in line therewith and contracted in width in front above the eye.

### No. 10,590. Improvements on Holdbacks for Vehicles. (*Perfectionnements aux ragots des limonnières.*)

Orville M. Robinson, Painesville, Ohio, U. S., 28th Oct., 1879, for 5 years.

*Claim.*—1st. In combination with the holdback, a perforated rubber roller; 2nd. The combination of the holdback *a* provided with the screw *b*, bearing points *c*, perforated rubber roller *e* and shoulder *f*.

### No. 10,591. Improvements on Cultivators. (*Perfectionnements aux cultivateurs.*)

Charles Johnson, Thorold, Ont., 28th October, 1879, for 5 years.

*Claim.*—1st. A metallic box *a* to which a metallic outer *c* is attached and provided with handles *i*, bars *d*, slides *h h*, draw bar *l* and a knife *s* for cross cutting in front or rear; 2nd. A diamond shape pointed metallic outer

with side slanting projections *c*: the same being secured to any desirable frame for the purpose of cutting sod; 3rd. The combination of the cutter *c*, box *a*, lever bars *d*, slides *h* *h*, wheel *f* or wheels, draw-bar *l*, handles *r*, knife *n*.

### No. 10,592. Improvements in Axle Boxes.

(*Perfectionnements aux boîtes à graisse.*)

John A. MacKinon, Calelonia, N. Y., U. S., 23th Oct., 1879, for 5 years.

*Claim.*—1st. The spindle B constructed with a cavity D forming an oil reservoir and having an opening *e* in its upper side, provided with a perforated sleeve F adapted to receive a sponge or other capillary body; 2nd. The combination with the spindle B provided with cavity D and opening *e*, of the fixed perforated sleeve F and adjustable perforated sleeve G; 3rd. The axle box I provided near its inner end with the annular groove *t* adapted to be filled with sponge or other porous material; 4th. The combination with the spindle B provided with collar C, and axle box I having an internal screw thread *i*, of the annular nut J and washer K made concave on their adjacent sides and interposed packing ring L; 5th. The combination with the axle box I provided with internal screw thread *i*, of the annular nut J constructed in two parts hinged together at *m*; 6th. The combination with the spindle B having a collar C, and the axle box I provided with screw threads *i* *q*, of the annular nut J, washer K, elastic ring *s*, hollow screw O, follower P and elastic washer *r*; 7th. The combination with the spindle B, having a collar C, and the axle box I provided with screw thread *i*, of the annular nut J, and the packing ring L arranged on the rear side of the collar for forming a tight joint at the inner end of the box; 8th. The combination with the spindle B and box I provided with internal screw thread *q*, of the hollow screw O and follower P; 9th. The combination with the spindle B provided with oil reservoir D, of the box I provided with internal screw threads *i* *q*, screw collar J, washer K, hollow screw O and follower P.

### No. 10,593. Apparatus for Unloading Railway Rails and Ties. (*Appareil à décharger les rails et les dormants de railroutes.*)

Daily S. Moore, Chicago, Ill., U. S., 28th October, 1879, for 5 years.

*Claim.*—1st. The combination with the platform of a railway car Ax, of the roller-way Ct, arranged to extend forward of the front end of the car and one end of the side-bars of one or both roller-ways being curved outward, roller-way C, brackets o, posts D E arranged upon the platform of the car, truss rods *d* and guy rod *e*; 2nd. The combination with the platform of railway car A of the roller-ways B Bt, one end of the side bars of one or both of the roller-ways being curved outward, brackets o, and brace m.

### No. 10,594. Improvements on Sawing Machines. (*Perfectionnements aux scieries.*)

Joseph Carlisle, Kirkdale, Que., 28th October, 1879, for 5 years.

*Claim.*—In combination with a frame A having suitable posts B C, the pendulous bar F, provided with horizontal platform G, and connecting bar I for driving the saw J by a swaying motion of the operator standing on the platform and straddling the pendulum.

### No. 10,595. Improvements on Barrel Stands.

(*Perfectionnements aux chantiers des barils.*)

Leonidas D. West, West Valley, N. Y., U. S., 28th October, 1879, for 5 years.

*Claim.*—1st. The castor D consisting of the clips *a* *b* *b*, the adjustable pivot *f*, socket *g*, the pin *h*, support *i* and wheel; 2nd. The cover having pivots *k* on one side of its diameter and hooks *e*, a justly attached to a suitable support, in combination with a barrel eccentrically supported on a pivot and a castor.

### No. 10,596. Improvements on Spittoons.

(*Perfectionnements aux crachoirs.*)

James H. Ferriss, Troy, N. Y., U. S., 24th October, 1879, for 5 years.

*Claim.*—In a spittoon or cuspadore having a rounded and dish-formed base and an open flaring top, and arranged between the bottom of the flaring top and base, the diaphragm plate S having the central opening O, side apertures *y* and forming with the upper and lower curved walls of the dish formed base, the connected inclosure *b* *d*.

### No. 10,597. Improvements on Egg Carriers.

(*Perfectionnements aux porteurs d'oeufs.*)

David Goodwillie, Chicago, Ill., U. S., 28th October, 1879, for 5 years.

*Claim.*—1st. A tray for carrying eggs composed of partition strips *b* and rods or strips *a* *c* *f* *d*, placed through the partitions transversely to hold the larger and smaller ends of the eggs; 2nd. The two parts T *E*, the partitions *b* *b*, being placed transversely to each other, and the strips *f* *d* placed respectively and transversely through the partitions *b* *b*; and the two-part tray secured by clamps *v*, so as to hold the eggs in place.

### No. 10,598. Improvements on Curry Scrapers.

(*Perfectionnements aux étrilles-grattoirs.*)

Edmund Burritt, Jr., Easton Corners, and Herbert Merriok, Peterborough (Assignees of John Warren, Easton Corners), Ont., 28th October, 1879, for 5 years.

*Claim.*—A curry cleaner constructed of a circular or oval plate A with continuous rings or flanged rims *a* *b*, the frictional edges smooth, and provided with a suitable handle C.

### No. 10,599. Improvements on Truss Pads.

(*Perfectionnements aux bandages herniaires.*)

Charles Cluthe, Hamilton, Ont., 30th October, 1879 (Extension of Patent No. 4,183), for 5 years.

### No. 10,600. Improvements on Sewer Traps.

(*Perfectionnements aux trappes d'égouts.*)

Cornelius E. Haynes, Boston, Edwin H. Fittz, Northborough, and Joseph W. Calef, North Easton, Mass., U. S., 30th October, 1879, for 5 years.

*Claim.*—A trap for sinks, water-closets, etc., provided with a weighted valve *a*, for closing the bottom of the inlet pipe A; 2nd. A trap constructed and provided with a chamber D and covered opening F for the purpose of obtaining access to its interior; 3rd. The valve *a* provided with its weighted arm pivoted between the bifurcated projection *c* on knife edged lugs *d* for the purpose of insertion and removal; 4th. The valve *a* pivoted upon screws *t*, in combination with the pipe A, with its valve *a* and covered chamber D.

### No. 10,601. Improvements in Harvesting Machines. (*Perfectionnements aux moissonneuses.*)

Samuel Johnston, Brookport, N. Y., U. S., 30th October, 1879, for 5 years.

*Claim.*—1st. The combination of the crank H H: H: and shaft E E: E: E: with the hub of the main wheel and the grain wheel; 2nd. The combination of the crank H H: H: H: shaft E E: E: E: the main wheel and grain wheel with the elevating lever K K:; 3rd. The combination of the rock shaft W, brace piece S, hand lever Z, shoe Y and finger bar for the purpose of tilting or rocking the platform; 4th. The combination of the brace S, vibrating socket O, seat spring P and supporting shaft M; 5th. The yoke piece J J: J: loosely attached to the shaft E E: E: E: in combination with the crank shaft I arranged to drive the outting apparatus; 6th. The torsion spring bar G, so arranged in combination with the shaft E E: E: E: as to assist in elevating the platform.

### No. 10,602. Improvements on Steam Washing Machines. (*Perfectionnements aux machines à laver à la vapeur.*)

David J. H. Davies, Ogdensburg, N. Y., U. S., 30th October, 1879, for 5 years.

*Claim.*—1st. In combination with a wash-boiler having the perforated end chambers B, the false bottom C, forming passages G G: G: centre tube D with internal nozzle D: and external cone D:; 2nd. In combination with a steam washing boiler, the lid I provided with a steam dome J having a perforated cap L sliding telescopically; 3rd. The boiler A provided with a flanged rim I' and an inserted lid I; 4th. The lid I provided with ribs *l* and a dome J; 5th. In combination with the flanged rim I' and lid I, the buttons I' for locking the cover.

### No. 10,603. Improvements on Materials for Dyeing Cloths. (*Perfectionnements aux composés pour teindre les tissus.*)

Gayton P. Loring, Boston, Mass., U. S., and Albert Knight, Stanstead, Que., 30th October, 1879, for 5 years.

*Claim.*—The method or system of compounding the extracts of the barks of woods indigenous to, or growing in Canada, with the extracts of foreign woods, and with material such as ouch, gambia, &c., and chemicals in proper proportions.

### No. 10,604. Wind Wheel. (*Moulin à vent.*)

Milo Althouse, Wanpan, Wis., U. S. (Assignee of George Raymond), 31st October, 1879 (Extension of Patent, No. 4003), for 5 years.

### No. 10,605. Improvements on Shawl Straps. (*Perfectionnements aux courroies des châles.*)

Ernest Marx (Assignee of Max Rubin), New York, U. S., 5th November, 1879, for 5 years.

*Claim.*—1st. A shawl strap composed of a supporting bar, of a revolving crank handle and of looped straps which are connected to the shanks of the handle and wound up thereon simultaneously, for adjusting the straps to the shawl or bundle; 2nd. A supporting bar having end standards or arms, of a revolving crank handle, having elongated shanks, and of looped straps which are applied to the shanks, so as to be wound up thereon by the revolving of the crank handle, or be unwound therefrom; 3rd. The combination of a supporting bar having end standards or arms, with a revolving crank handle, having slotted shanks, and with looped straps passed through the slots of the shanks; 4th. The combination of a supporting bar having end standards or arms and parallel guide slots near the arms, with a revolving crank handle, having elongated shanks, and with looped straps that are applied to the shanks and passed through the guide slots of the bar; 5th. The combination of a supporting bar having end standards or arms, with a revolving crank handle for adjusting the looped straps, and with a locking device, of the bar for securing the crank handle and straps in position.

### No. 10,606. Improvements in Thill Couplings. (*Perfectionnements aux armons des limonnières.*)

Jeremiah P. Johnson, Ingersoll, Ont. (Assignee of Nelson A. Newton, Kalamazoo, Mich., U. S.), 5th November, 1879, for 5 years.

*Claim.*—1st. The combination with a thill hook and suitable attachments to a wagon, of a pressure spring operating against said hook and provided with an extension for conveniently releasing the same; 2nd. The combination of a thill hook and suitable attachments to a wagon with a pressure spring operating against said hook and provided with an extension for releasing the same, said spring being bent into the shape of a bow.

### No. 10,607. Anti-Friction Metal for Journal Bearings. (*Métal à anti-friction pour les coussinets des tourillons.*)

Benjamin J. Downs, East Boston, Mass., U. S., 5th November, 1879, for 5 years.

*Claim.*—1st. An anti-friction metal composed of about 32 parts tin, 5 parts copper and 2 parts antimony; 2nd. A journal bearing formed of a metallic alloy, compounded as described and provided with a supporting shell or base of cheaper or more tenacious metal.

### No. 10,608. Process for Converting Fish into Manure. (*Procédé pour produire de l'engrais de poisson.*)

George B. Oakes, Digby, N. S., 5th November, 1879, for 5 years.

*Claim.*—The process of cooking fish, fish refuse or gurry, either with or without the addition of alkalis, acids or salts, then by drying, adding lime or other absorbents, to render the mass portable, practical and commercial.

### No. 10,609. Tilling Apparatus. (*Appareil de labourage.*)

Charles E. Sackett, Matilda Furnace, Penn., U. S., 5th November, 1879, for 5 years.

*Claim.*—1st. A plough in combination with a pulverising mechanism, said pulverising mechanism being adapted to operate by the side of the plough in the furrow previously made and receiving and pulverizing the earth as it is turned; 2nd. The combination of a plough carried on a frame, of a wheel supporting said frame and adapted to move on the bottom of the furrow last made and to receive and pulverize the earth from the furrow in process of making; 3rd. A revolving pulverizer, closed or partially closed on the furrow side, adapted to receive the earth from the land side and provided with internal pulverizing apparatus; 4th. In combination with the revolving pulverizer, radially arranged teeth or transverse bars; 5th. In combination with the revolving pulverizer having bars and teeth, the shield 8; 6th. The combination of a plunging and pulverizing device mounted upon one frame, and operating together with the main frame of a carriage, upon which it is vertically adjustable; 7th. The combination of a carriage frame, of a frame carrying plunging and pulverizing devices, and of the lever 23, lifting bars 26, shackle bars 25, lifting cranks 27 and the shaft crank, connecting rod and lever or their equivalents; 8th. In combination with the lifting apparatus and the suspended frame, the springs 24 arranged upon the bolts of the principal lever bars 23 and operating with the controlling lever to raise the frame; 9th. The combination of a carriage frame and combined plough and pulverizing frame with the lifting springs 24, the principal levers 23, lifting bars 26, the shackle bars 25, lifting cranks 27, crank shaft 28, angling crank 29, connecting rod 31, controlling lever 31 and stop frame 32; 10th. In a vertical wheel pulverizer, the combination of transverse removable bars and the perforated rims, whereby the spaces are made adjustable in width; 11th. A vertical wheel pulverizer 2, in combination with a pulverizing plate 15 having hinged finger bars or cleaners 17 and springs 19, where by obstructions which will not pulverize are passed without injury to the implement; 12th. The plough made laterally adjustable in combination with the vertical wheel pulverizer, the mould board of the plough being adapted to the inner periphery of the pulverizer; 13th. A vertical wheel pulverizer 2, in combination with a plough 4 made fast to a sliding beam 5, sliding upon rods as 66 and actuated by a screw 7 and crank handle 8 or similar device, all in connection with the common frame 111, whereby the amount of earth turned into the harrow may be regulated; 14th. In a combined plough and pulverizer, the combination therewith of a wheel 10 actuated and adjusted by the angle lever 9 and rod 11, forming with the pulverizer, a rolling support for both sides of the implement and to regulate the depth of cut; 15th. A seed drill 22 working in combination simultaneously with a plough and pulverizer, and the devices for its adjustment and operation in combination therewith; 16th. The combination of a carriage frame and wheels with a plough, pulverizer and seed-drill working simultaneously; 17th. The combination with a carriage, of substantially the construction described, of a supplemental frame suspended on one side and carrying plunging and pulverizing devices, which operate in connection with each other, and of a seed dropping device mounted on the opposite side, the whole operating to plough, harrow and plant at one operation.

### No. 10,610. Remedy for Diphtheria- (*Remède contre la diphthérie.*)

Samuel H. Longard, Halifax, N. S., 5th November, 1879, for 5 years.

*Claim.*—The following ingredients viz: Myrrh, rectified spirits of wine vitriolic acid and aqua pura.

### No. 10,611. Improvements in Telephones. (*Perfectionnements aux téléphones.*)

Henry P. Andrew and George Moore, Toronto, Ont., 5th November, 1879, for 5 years.

*Claim.*—1st. In telephones, the combination of a diaphragm and a compound or horse-shoe magnet, said diaphragm being placed in electrical connection with one pole of the magnet; 2nd. The combination with the diaphragm of a telephone, of one or more compound or horse shoe magnets and an induction coil, said magnets being so arranged that one pole of each is grouped opposite to the centre of the diaphragm within an induction coil while the opposite pole of the magnet or each magnet is placed in electrical contact with the diaphragm; 3rd. The combination with a telephone diaphragm constructed of mix or equivalent material, of a metal plate provided with one or more radial arms; 4th. The combination with the diaphragm B, magnet C and induction coil D, of the adjustable core pin J; 5th. The combination with a telephone, of the mouth and ear funnels F G, said funnels being curved to the outline shown and one or both being provided with a hinge joint for adjustment.

### No. 10,612. Improvements on beds. (*Perfectionnements aux lits.*)

Frederic Bouchonnet, Montreal, Que., 5th November, 1879, for 5 years.

*Claim.*—The body B having the straps C C, rollers D D, belts H H, buckles I I, spring K, support L, the fastening of the support to the body by the bolts M M, the arrangement by which the straps N N are used to raise and lower the support L, also the arrangement and manner of using and working the rollers D D O by the use of the cranks F F.

### No. 10,613. Improvements on Wrenches. (*Perfectionnements aux manches de tarouls.*)

Joseph W. Calef, North Easton, Mass., U. S., and Austin D. Cable, Montreal, Que., 5th November, 1879, for 5 years.

*Claim.*—1st. A sliding motion, with the pieces C B, having one, two or more cogs either on a straight or circular position, also with teeth E or with

out them; 2nd. The pin F through the piece D, and handle A, which holds them together; 3rd. The flange I on both pieces C and D for carriage purposes or any other place required; 4th. The same sliding motion applied to the pipe wrenches.

### No. 10,614. Improvements on Telephones. (*Perfectionnements aux téléphones.*)

Frederick K. Fitch, Jersey, N. J., U. S., 5th November, 1879, for 15 years.

*Claim.*—1st. The combination in an electric circuit, of solid conducting bodies in constant contact with each other, one of said bodies being of proper form to be thrown into vibration by the impingement of atmospheric sound waves upon it, and by its vibrations producing variations in the area of surface contact between said bodies, and consequently corresponding variations in the resistance offered to an electric current at the place of such contact by diminishing the strength of the constant current flowing through the circuit; 2nd. The combination of the casing or chamber, its yielding or semi-elastic lining and the solid conducting transmitting plates secured therein with their adjacent faces in contact with each other.

### No. 10,615. Improvements on Harvesting Machines. (*Perfectionnements aux machines à moissonner.*)

Rufus Dutton, Yonkers, (Co-inventor with Alfred Torquist, New York,) N. Y., U. S., 5th November, 1879, for 5 years.

*Claim.*—1st. The combination, with the hand lever Y and its pocket piece T, connected to the finger bar outside of the place of its hinged connection with the frame, of the spring bolt t and rod y, for varying the length of the lower arm of such lever; 2nd. The combination of the foot lever Z and hand lever Y with its spring bolt f forming a double lifting device by which the operator, while on the machine, can raise either the inner end of the finger bar or the outer end, but partially to pass obstructions, or vertically for transportation and can at pleasure vary the length of the lower arm of the hand lever; 3rd. In combination with the lever Y and its socket piece T, the pivoted arm U and spring bolt t, for changing the leverage or length of the lower arm of that lever; 4th. The latch 2 and its sustaining spring which keeps it out of engagement combined with the foot lever Z, whereby when said foot lever is depressed the inner or operative end of said latch is raised up and caused to engage with the ratchets a b; 5th. A pivoted hand lever provided with a segment ratchet combined with a latch having an elongated hole for its pivot pin and a sustaining spring whereby said latch will be thrown out of engagement except when its outer end is depressed; 6th. The latch 2, having a sustaining spring and an elongated hole for the pin e, whereby it is made capable of motion on said pin, as a centre, or at a point near its rear end; 7th. In lifting mechanism, whereby the inner end of the finger bar may be raised and sustained, combined with mechanism for raising the outer end of said finger bar and locking mechanism for the same, so controlled by suitable devices as to be inoperative except when said inner end is raised up; 8th. A gear F which rotates with the main axle K and in mesh therewith, a gear E oscillating upon a ball and socket joint and an arm M for driving knife, fastened rigidly to said oscillating gear, combined with a support N for said arm adapted to prevent rotation of said oscillating gear, but to permit free reciprocation of said arm; 9th. In combination with the driving arm M and support N, the link u; 10th. In combination with the differential gearing E F, the crank t having bearings l l, one at each end, for the purpose of preventing wear and insuring greater uniformity in the oscillations of the gear E; 11th. The combination with the double bearings l l, of the cap c; 12th. In combination with the crank t, the fly-wheel L, placed between the crank e and the bearing l, and crank box composed of two globular halves e f, strap g, wedge h and gib i; 13th. In combination with the oscillating gear E, link n and support N, the crank t for equalizing the oscillations of the gear E and giving uniformity to the length of the vibrations of the arm at m; 14th. The inner shoe S of a harvesting machine hinged to one side of a brace or arm P, which arm in turn is hinged at its lower end to one end of the frame D, by a hinge 9 diagonal to the shoe hinge, the other end of the arm extending upward and forming a handle convenient to be operated by the driver, while sitting on the machine; 15th. In combination with the vibrating arm M, the diagonal hinge 9 for the purpose of raising and lowering the points of the fingers; 16th. In combination with the diagonal hinge 9, the latch and recess p, for steadying the brace P; 17th. The combination of the differential gearing E F, the vibrating arm M and the diagonal hinge 9; 18th. The inner shoe S of a harvesting machine hinged to one side of a brace or arm P, which arm in turn is hinged to one end of the vibrating frame by a hinge diagonal to the shoe hinge and bisecting the axis thereof at or near the pitman joint at the heel of the outer bar; 19th. The combination with the rotating nut B and threaded sleeve D of the adjusting collar H; 20th. In combination with the rotating nut B, the handle A and adjusting collar H; 21st. The spring bolt G, in combination with the rotating nut B, ring H and recessed flange d.

### No. 10,616. Improvements on Pitman Connections. (*Perfectionnements aux raccords des bielles.*)

Rufus Dutton, Yonkers, (Co-inventor with Alfred Torquist, New York,) N. Y., U. S., 5th November, 1879, for 5 years.

*Claim.*—1st. A pitman joint consisting in the blocks B B and balls F G, in combination with a wedge nut C and bolt D, to cause the blocks to press equally on opposite sides of the balls in the direction of the thrust; 2nd. A single wedge nut C and threaded bolt D, in combination with a ratchet I and spring L; 3rd. The loop E in combination with the bolt D for keeping the parts in place.

### No. 10,617. Improvements on Barley Forks. (*Perfectionnements aux fourches à orge.*)

Sidney Dillingham, Fenelon, Ont., 5th November, 1879, for 5 years.

*Claim.*—1st. The handle and middle finger A A made of one piece of timber; 2nd. The head and two outside fingers B C D made of one piece of timber; 3rd. The adjustable fingers E F; 4th. The opposite thumb K.

**No. 10,618. Improvements in Hoes.***(Perfectionnements aux hoes.)*

Thomas B. Lockwood, Baltimore, Md., U. S., 5th November, 1879, for 5 years.

*Claim.*—A hoe having the rear side of its eye-plate rabbeted to form a straight shoulder and its blade rivetted thereto and meeting said shoulder.**No. 10,619. Improvements on Car-Couplers.***(Perfectionnements aux attelages des wagons.)*

John D. Kiely, Toronto, Ont. (Assignee of Orson B. Kendall, Buffalo, N. Y., U. S.), 5th November, 1879, for 5 years.

*Claim.*—In a railway car draw-head, the opening made in the top of the draw-heads, in combination with the hook or horn rising from the centre of the opening in the draw-heads and so arranged as to enable the cars to be coupled with safety.**No. 10,620. Improvements on Harvesters.***(Perfectionnements aux moissonneuses.)*

Henry A. Howe, Detroit, Mich., U. S., 8th November, 1879, for 15 years.

*Claim.*—1st. In a harvester, the recessed main frame with two bearings for the tongue, a foot rest, hollow axle arms, crank shaft support and the lower half of the crank shield cast in one piece; 2nd. In a harvester and in combination with the main frame cast in one piece, the hollow axle arms chilled upon the upper half of their interior surface for the purpose of forming smooth bearings for the axle and preventing the necessity of boring said arms to fit the axle, or the use of boxes; 3rd. In harvesters and in combination with the main frame, the hollow crank-shaft box cast in one piece, with the upper half of the crank shield and socket for ball-joint and adapted to be secured in a recess in the main frame; 4th. In a harvester and in combination with a recessed main frame enclosing the gearing, and in combination with the gearing upon the axle, the rock shaft carrying a spur wheel andpinion, said shaft being journaled in the sides of the main frame eccentrically to the axis of said spur wheel and shaft and provided with a lever by means of which said spur wheel and shaft are thrown in or out of engagement with the gearing on the axle; 5th. In a harvester and in combination with the axle thereof and the driving wheels, a stationary half of a clutch rigidly secured to the axle and forming a sand protector at the end of the axle boxes and a loose half of a clutch sleeved upon the axle and provided with inclined faced lugs which, by their engagement with the spokes of the wheels, compel or release the engagement of the two parts of the clutch, without the intervention of pawls or levers; 6th. In a harvester and in combination with an adjustable and folding cutter or finger bar, the devices described consisting of the parts 8 9 10 11 12 13 16 17 18 19 20 21 22 24 25 27 and 36 and S & O, by means of which the finger bar is tilted to any desired cutting angle, lifted to any desired height or folded perpendicularly; 7th. In a harvester and in combination with an adjustable and folding cutter or finger bar, and with devices for tilting, lifting or folding said bar, the adjustable wheel at the rear end of the shoe; 8th. In a harvester, and in combination with a finger bar, the concave-shaped shoe O, the plate R, the wheel P, draw-bar and alignment rod U, rod S, link St, tongue V and the devices for tilting, raising and folding said finger bar; 9th. In a harvester and in combination with a finger bar and shoe, the plate K with its perforated projection *w* and lugs *x*, by which said finger bar and shoe are connected with suitable devices for raising or folding the same; 10th. In a harvester, the pusher bar Z pivotally secured at one end to the shoe and at the other end secured to the side of the crank box extension of the main frame; 11th. In combination with the recessed frame of a harvester, the hinged cap or cover W, the notched stud 28 and eccentric latch 29; 12th. In combination with the recessed main frame of a harvester, the hinged cap or cover W, the notched stud 28, eccentric latch 29 and rubber cushions at; 13th. In a harvester and in combination therewith, the seat 32, tool box 33, stud 35 and eccentric latch 34; 14th. In a harvester, the draw rod U pivotally secured to the front end of the shoe, and adjustably secured to the tongue, by means of which the finger bar can be properly aligned; 15th. In a harvester, the draw bar and shoe O combined and cast in one piece and pivotally attached at front and rear; 16th. In a harvester, the draw bar and shoe O combined and cast in one piece, concave in cross-section, pivotally secured at front and rear.**List of Patents issued to up 22nd November, 1879, but not yet Officially published in the Patent Office Record.**

No. 10,621. W. Goldie, Fentonville, Mich., U.S.A., "Shingle Machine," (Extension of Patent No. 10,522), Nov. 8th, 1879.

No. 10,622. P. K. Dederick, Albany, N. Y., U. S. A., "Baling Press," Nov. 8th, 1879.

No. 10,623. W. Lamb, Green Bay, Wis., U. S. A., "Wire Rope Carriage Movement," (Extension of Patent No. 4,359), Nov. 8th, 1879.

No. 10,624. H. McLeod, Hardwood Hill, N. S., "Flexible Harrow," Nov. 8th, 1879.

No. 10,625. J. Rourk, Kingston, Ont., "Railway Switch Point Mover and Fastener," Nov. 8th, 1879.

No. 10,626. B. J. Warden, Cincinnati, Ohio, U. S. A., "Vehicle Dash," Nov. 8th, 1879.

No. 10,627. M. A. Richardson, Bridgeport, Conn., U. S. A., "File Sharpening Process," Nov. 8th, 1879.

No. 10,628. G. L. Anders, Boston, Mass., U. S. A., "Apparatus and Circuits for Signalling in District Telephone Systems," Nov. 8th, 1879.

No. 10,629. L. M. Fitch, Rome, (Assignee of E. R. Fitch, Hubbardsville, N. Y., U. S. A.), "Spring for Platform Wagons," Nov. 11th, 1879.

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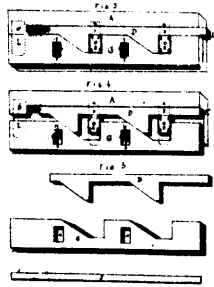
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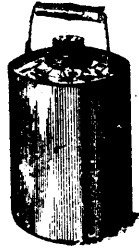
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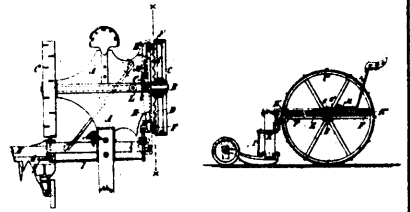
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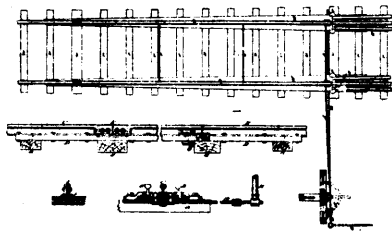
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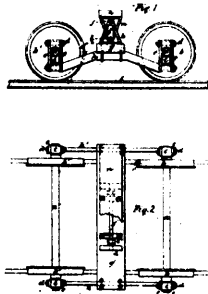
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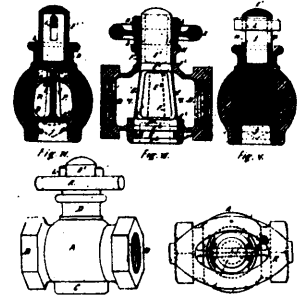
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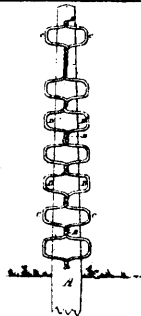
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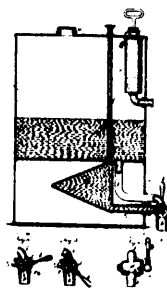
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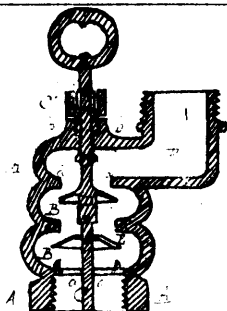
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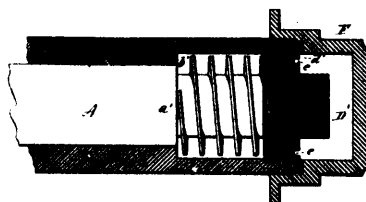
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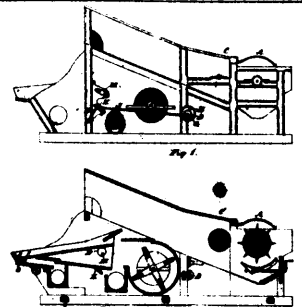
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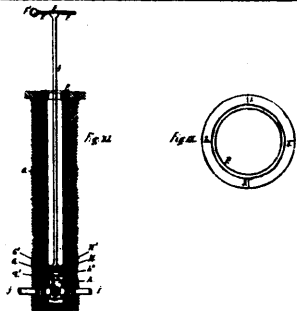
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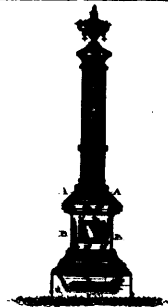
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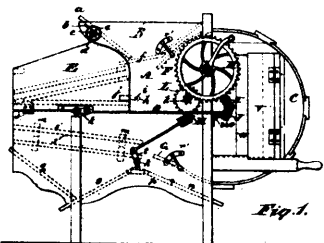
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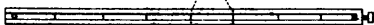
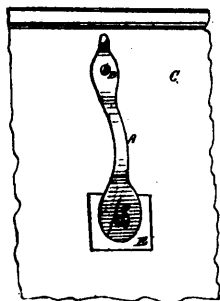


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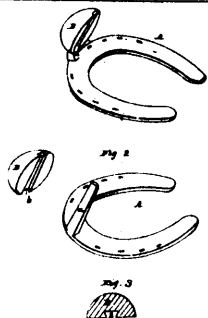


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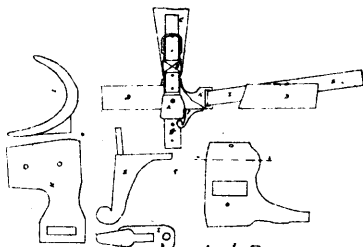
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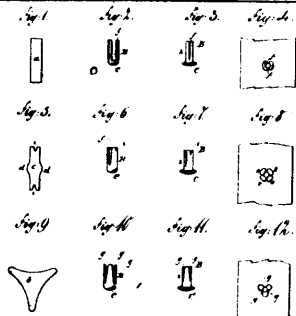
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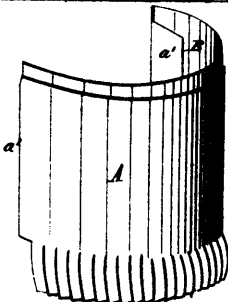
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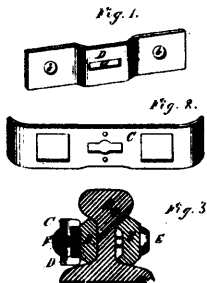
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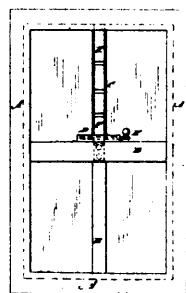
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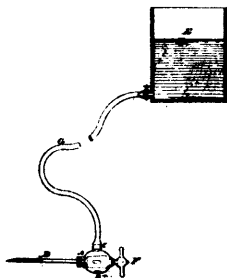
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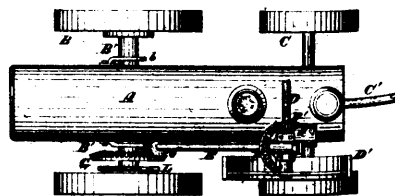
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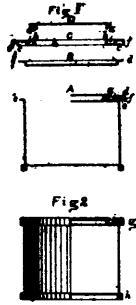
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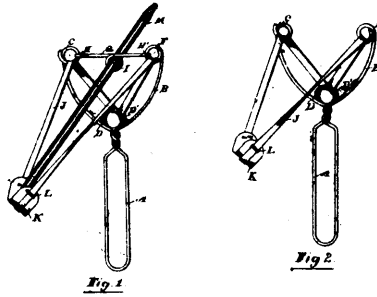
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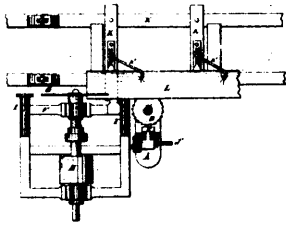
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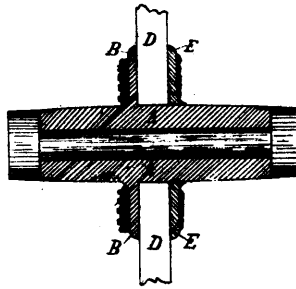
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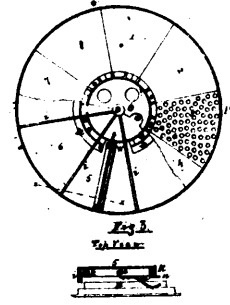
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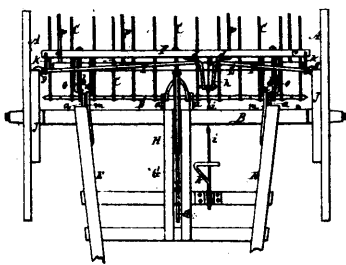
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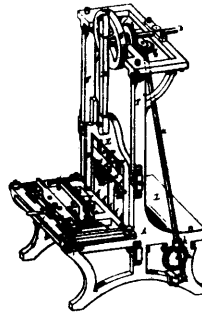
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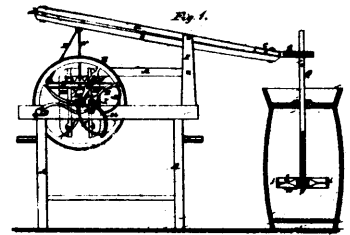
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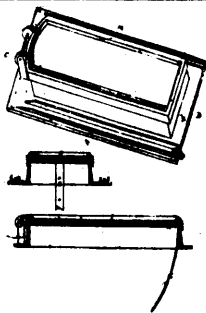
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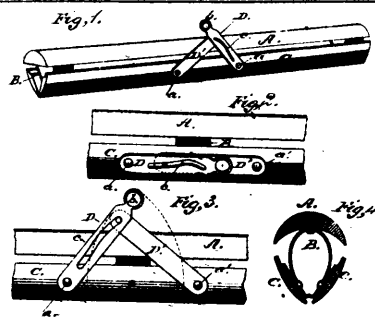
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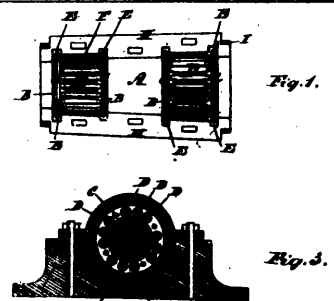
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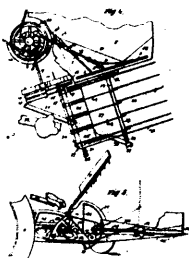
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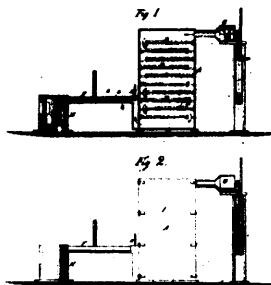
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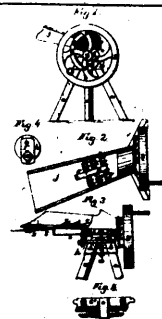
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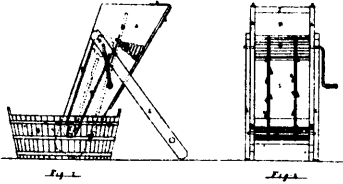
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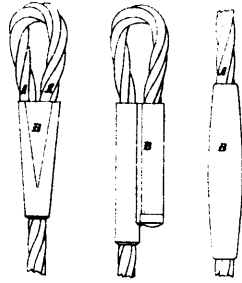
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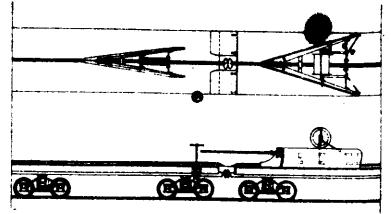
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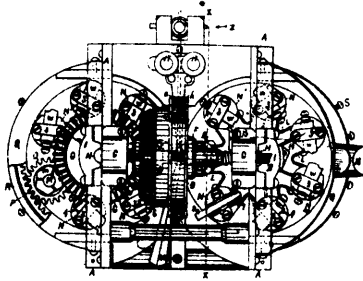
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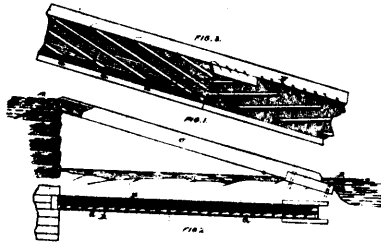
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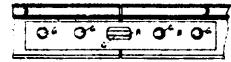


FIG. 1  
ELEVATION



FIG. 2  
SECTION

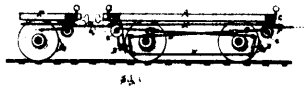


FIG. 3

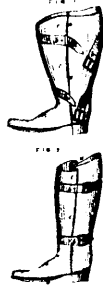


FIG. 4  
PLAN

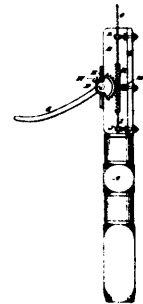
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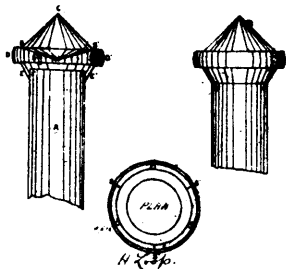
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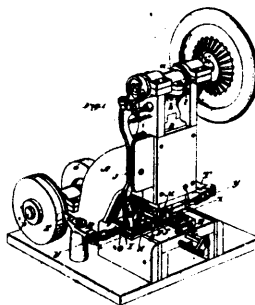
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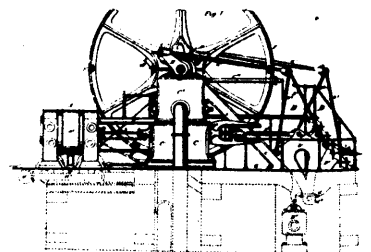
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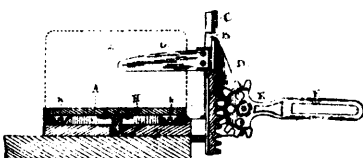
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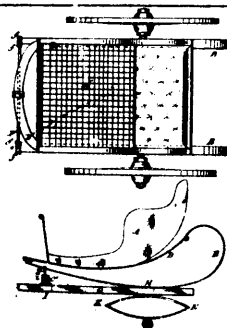
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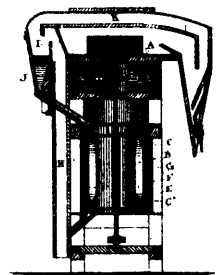
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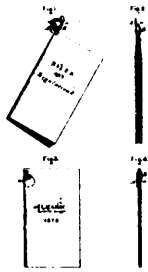
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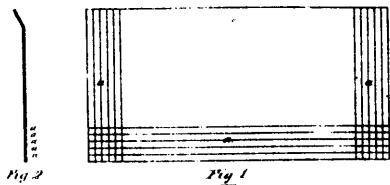
10548 Griffin's Improvements in Carriage Springs.



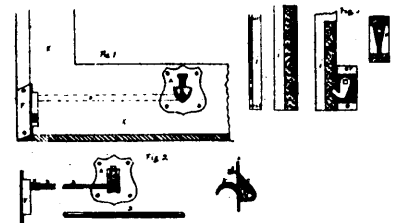
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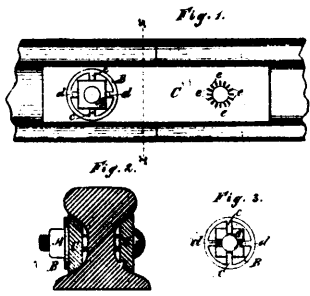
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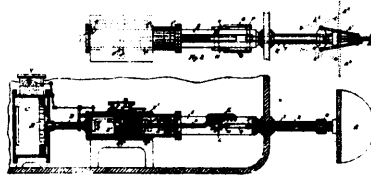
10551 Parsons & Smith's Improvements in Stove Backs.



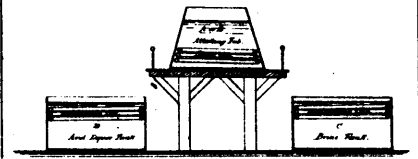
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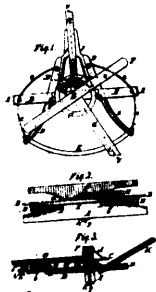
10553 Laporte's Improvements in Nut Locks.



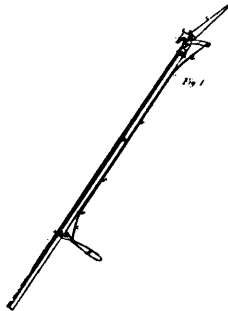
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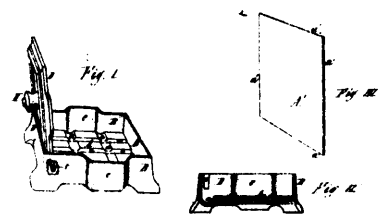
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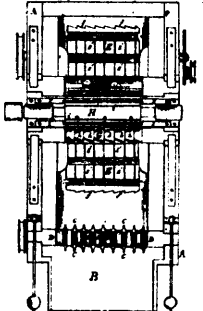
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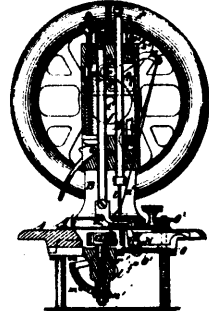
10557 Smith's Improvements in Pruning Knives.



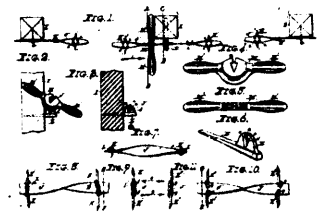
10558 Hill's Blotter Bath for Copying Presses.



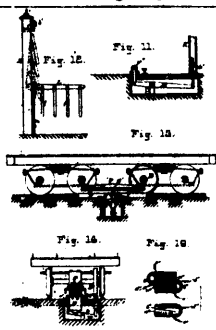
10559 Greenwood's Machine for Cutting and Planing Hoops.



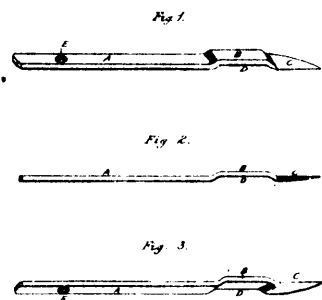
10560 Juengt's Improvements in Sewing Machines.



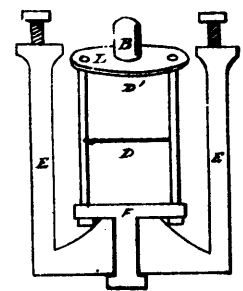
10561 Blinkschhoff's Improvements on Barbed Fences.



10563 Putnam's Improvements on Electric Signals.



10564 Alkman's Improvements on Plough Coulters.

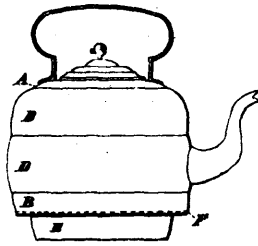


10565 Woods' Improvements on Gears of Buggies.

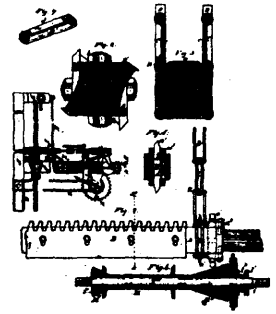


10566 Plummer's Improvements on Flower Pins.

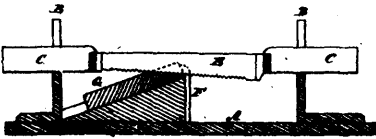
Fig. 1



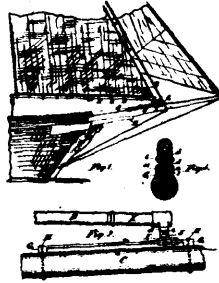
10567 Carpenter's Improvements on Tea Kettles.



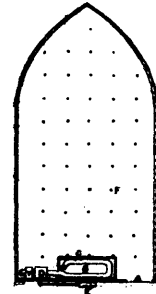
10569 Lechner & Jeffrey's Coal Mining Machine.



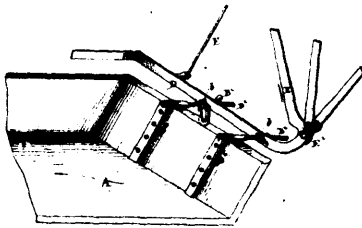
10570 Cornell, Tollner & Stevens' Machine for Reducing Wood to Paper Pulp.



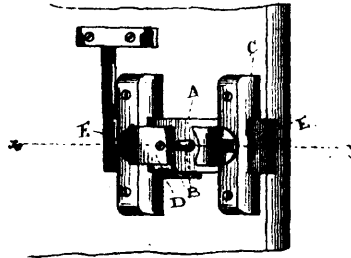
10572 Thompson's Stay-Sail Boom Guide.



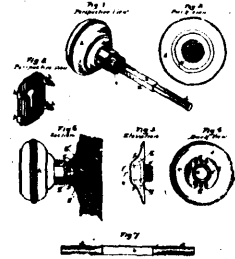
10573 Knott's Apparatus for Preserving Meats.



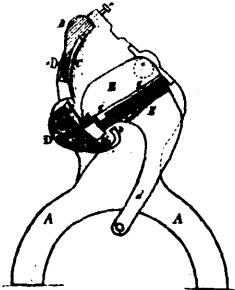
10575 Conboy's Improvements in Carriage Tops.



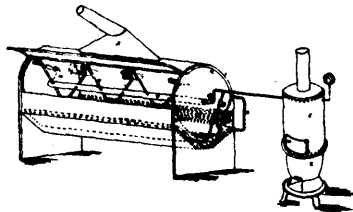
10576 Dennis' Improvements in Barn Door Latches.



10577 Peacock's Fastenings for Door Knobs.



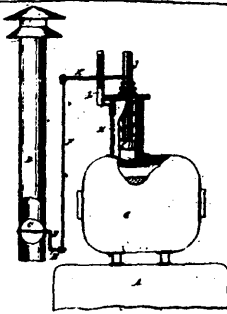
10578 Greenwood's Improvements in Steam Machines.



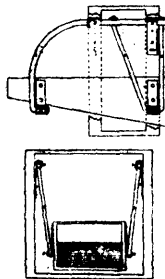
10579 Manny & Limoge's Process for Renovating Feathers and Carpets.



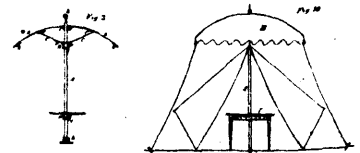
10581 Hastings & Crean's Improvements in the Manufacture of Hats, Caps, &c.



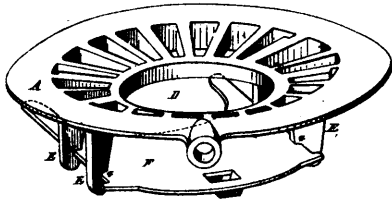
10582 McLaughlin's Improvements on Damper Regulators.



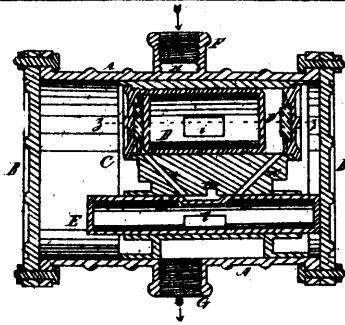
10583 Hanna's Improvements on Fanning Mill Hinges.



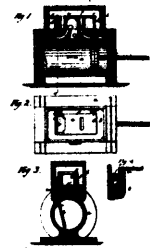
10584 Catchpole's Combined Umbrella and Tent.



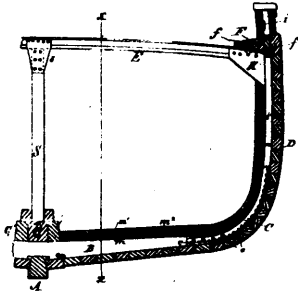
10585 Herrick's Improvements on Stove Grates.



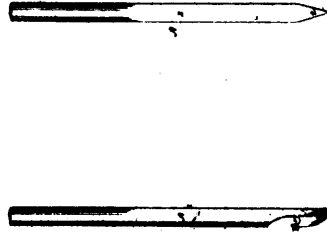
10586 Coombs' Improvements on Water Meters.



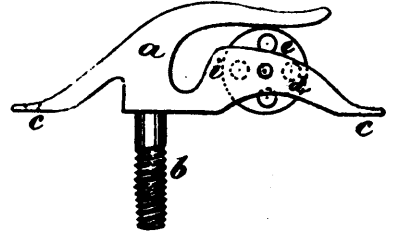
10587 Dixon's Improvements on Valves for Steam Pumps.



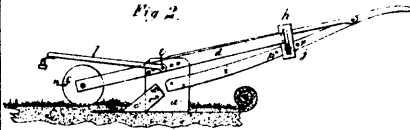
10588 Hall's Improvements on Ships.



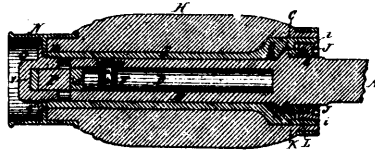
10589 Laxell's Improvements on Sewing Machine Needles.



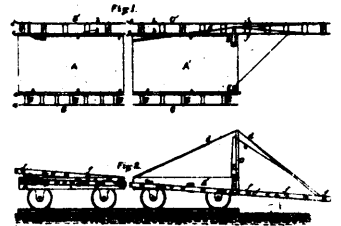
10590 Robinson's Improvements on Holdbacks for Vehicles.



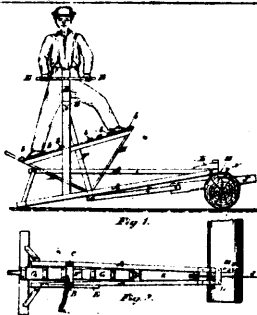
10591 Johnson's Improvements on Cultivators.



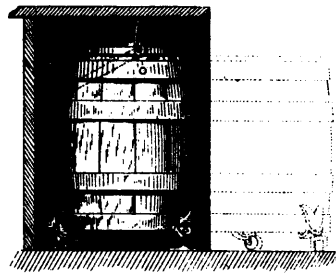
10592 MacKinnon's Improvements in Axle Boxes.



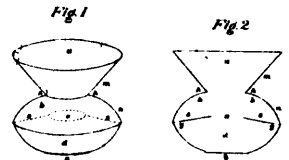
10593 Moore's Apparatus for Unloading Railway Rail and Ties.



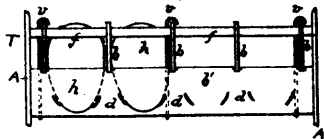
10594 Carrisle's Improvements on Sewing Machines.



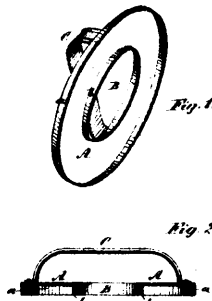
10595 West's Improvements on Barrel Stands.



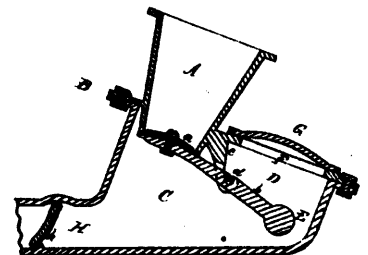
10596 Ferriss' Improvements on Spittoons.



10597 Goodwillie's Improvements on Egg Carriers.

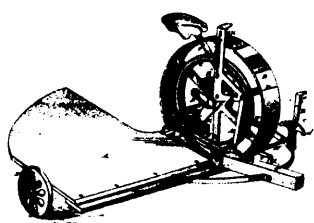


10598 Warren's Improvements on Curry Scrapers.

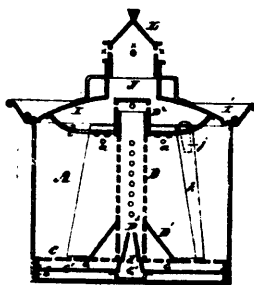


10600 Haynes, Fitts & Calef's Improvements on Sewer Traps.

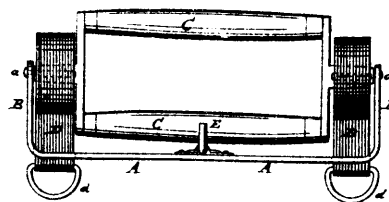




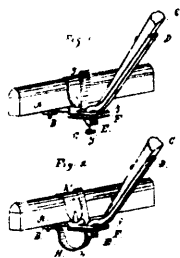
10601 Johnstons' Improvements in Harvesting Machines.



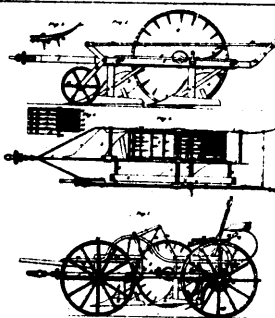
10602 Davies' Improvements on Steam Washing Machines



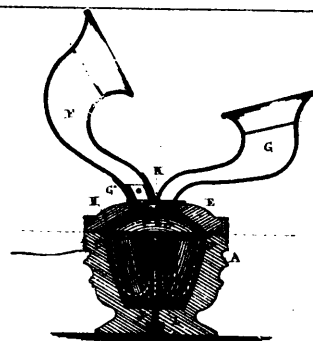
10605 Rubin's Improvements on Shawl Straps.



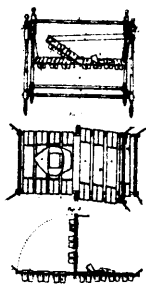
10606 Newton's Improvements in Thill Couplings.



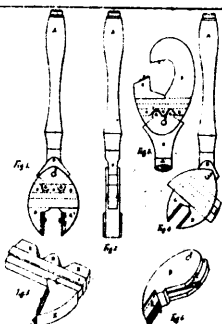
10609 Sackett's Tilling Apparatus.



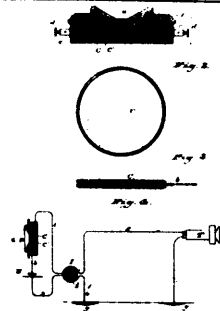
10611 Andrew & Moore's Improvements on Telephones.



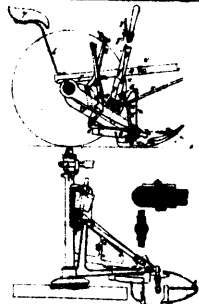
10612 Bouchonnet's Improvements on Beds.



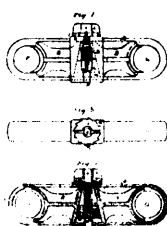
10613 Calef & Cable's Improvements on Wrenches.



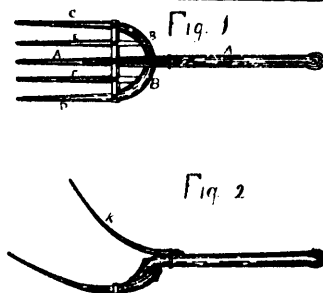
10614 Fitch's Improvements on Telephones.



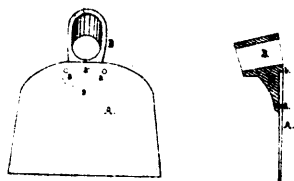
10615 Dutton & Torquist's Improvements on Harvesting Machines.



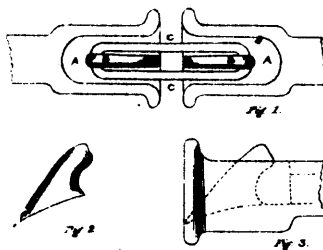
10616 Dutton & Torquist's Improvements on Pitman Connections.



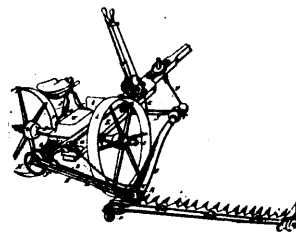
10617 Dillingham's Improvements on Barley Forks



10618 Lockwood's Improvements in Hoes.



10619 Kendall's Improvements on Car-Couplers.



10620 Howe's Improvements on Harvesters.