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# The Canadian Patent Office Record

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## CONTENTS.



## INVENTIONS PATENTED.

### No. 10,339. Improvements in Pumps.

*(Perfectionnements aux pompes.)*

John Fear, Meaford, Ont., 13th Aug., 1879, for 5 years.

*Claim.*—1st. One or more chambers B connecting the suction pipes A and C, in such a manner that any heavy foreign matter, entering with the water into the chamber B, will sink to the bottom of the said chamber and not pass into the barrel E, through the pipe C. 2nd The suction pipe C, projecting into the valve chamber D, in combination with the valve I; 3rd The chamber B, having one pipe A discharging into it and another pipe C drawing from it, in combination with the hand hole B1, 4th. The tapered plunger E, provided with leather packing F in combination with the nut g; 5th. In combination with plunger F and rod G connected to the handle L, a copper float K; 6th. A tapered vent pipe m, in combination with the valve n operated by the rod p, 7th. A wooden handle I, provided with a metal link n, in combination with the pump M and rod G, 8th The foot valve I connected to a tapered plug and situated within a chamber, 9th The valve chamber D, provided with a hand hole H, in combination with an internally projecting pipe C.

### No. 10,340 Improvements in Men's Drawers.

*(Perfectionnements aux caleçons pour les hommes.)*

George D. Elghmie, Poughkeepsie, N. Y., U. S., 13th August, 1879, for 5 years.

*Claim.*—The drawers having each leg B made from a single piece or pattern A, which is cut bias and whose edges *a b* are united to form the single lengthwise back seam *e*.

### No. 10,341. Improvements in Cockle Separators. *(Perfectionnements aux séparateurs de nielle.)*

R. Kurth Hamilton, Ont (Assignee of Paulina M. L. Hersel. 13th August, 1879, for 5 years.

*Claim.*—1st. In combination with one or more perforated metallic revolving cylinders of a cockle separator, a non removable jacket enclosing and binding so tight to the same that they become consolidated as one, 2nd. In combination with a perforated revolving cylinder B, or cylinders, of a cockle separator, a jacket F made to fit tight to the same, said jacket being formed of any substance that can be placed around the cylinder in a soft state, and which will have the property of setting quickly and harder in a short time, so as to consolidate the two together, 3rd. In combination with the revolving cylinder and casting of a grain separator, an outer casing G, or hoops or bands H.

### No. 10,342. Upper Jaw Check for Horses.

*(Rêne pour la machoire supérieure des chevaux.)*

Jacob A. Sherman, Freehold, N. J U S., 13th August, 1879, for 15 years.

*Claim.*—1st. The upper jaw check for horses composed of the rein *a*, straps *b* passing through the reins *d* of the bit, the nose strap or pad *f*, and the strap *g* by which the nose pad is suspended. 2nd The check rein holder *m* made of one or more pieces of leather with an intermediate filling of rubber.

### No. 10,343. Improvements on Window Sash Balancing and Fastening. *(Perfectionnements aux arrêts-croisés et aux contre poids de croisées.)*

Richard Creelock and John R. Carle, St. John, N.B., 13th August, 1879, for 5 years.

*Claim*—1st. The employment of cog wheels C C1, racks R R1 and pinions or friction wheels P P1, 2nd The stop K used in connection with the above gearing.

### No. 10,344. Improvements on Sewing Machines. *(Perfectionnements aux machines à coudre.)*

Joseph I. Trottier, Three Rivers, Que., 13th August, 1879 for 5 years.

*Claim.*—1st The thread carrier composed of the screw shank *a* and blade *b*, 2nd The combination of the screw shank *a* and blade *b*

### No. 10,345. Improvements on Grain Driers.

*(Perfectionnements aux séchoirs à grain.)*

Peter Prevost, Little Chute, Wis., U. S., 13th August, 1879, for 5 years

*Claim.*—1st The combination, with the tubes B through which the grain passes while being heated, of the tapparent funnel E provided with bevelled cross-bars *a*, at different heights, and a deflector E depending from the lowest of said cross-bars, 2nd The combination with the discharge spout E2, of a conical valve F having a stem movable up and down in an inner tube of the cylindrical part of the deflector E1, 3rd. The combination with the grain tubes B, of the wires *f*, each provided with several balls arranged at intervals thereon; 4th. The wires *f* centered in the tubes B by means of the eyes *f1* on the wires, and the conical depressions in the upper part of tubes B; 5th The top head having concave depressions around each conducting tube, to supply an equal quantity of grain thereto.

### No. 10,346. Heel Plates for Boots and Shoes.

*(Plaques pour les talons de chaussures.)*

Luther H. Bellamy, Augusta, Ont., 13th August, 1879, for 5 years.

*Claim.*—1st The combination of the heel A, plate B, pad C having projection D, 2nd. The combination of the heel A having pad C

### No. 10,347. Improvements in Harrows.

*(Perfectionnements aux herses.)*

Abner S. Baker, Kalamazoo, Mich., U. S., 13th August, 1879, for 5 years.

*Claim.* In combination with the frame of a harrow, the spring teeth curved in front of the girts and having their lower portions twisted, so as to set their base ends at right angles with their upper portions, whereby the then lowest corner of the said base ends forms points to the teeth.

### No. 10,348. Improvements in Spring Bed Bottoms. *(Perfectionnements aux fonds de lits à ressorts.)*

William A. Bury, Detroit, Mich., U. S., 13th August, 1879, for 5 years.

*Claim.* The sections A hinged together at *a* and supported by the springs C resting upon the slats B.

### No. 10,349. Manufacture of Boots. *(Fabrication des chaussures.)*

George A. McCully, Hamilton, Ont., 13th August, 1879, for 5 years.

*Claim.* The quarter and ramp cut from one piece of leather A.

### No. 10,350. Improvements in Elliptic Springs. *(Perfectionnements aux ressorts elliptiques.)*

Timothy Deiotte, Galt, Ont., 13th August, 1879, for 5 years

*Claim.* The detachable head C, provided with a bridge or bar *f*, in combination with the plates A B having ends *a b*.

## No. 10,351. Pegging Machine. (*Machine à cheviller.*)

Tristram H. Fletcher, Dover, N. H., U. S., 13th August, 1879, for 5 years.

*Claim.* The combination of the lever *k*, arm *n*, spring lever *o*, plate *c*, vertical adjustable arm *q*, knife *s* and spring *t*; 2nd. The combination of the knife *s*, arm *q*, support *w*, scales *z* and index *y*, with the lever *o* and plate *c*.

## No. 10,352. Improvements on Mechanical Musical Instruments. (*Perfectionnements aux instruments de musique mécaniques.*)

Moses Harris, New York (Assignee of Oliver H. Arno, Wilmington, Mass., U.S., 13th August, 1879, for 5 years.

*Claim.* The spring fingers F $F_1$, arranged to lift the jacks E $E_1$ and valves *e* $e^1$ through the medium of the hooks *f* $f^1$, in combination with the perforated paper H.

## No. 10,353. Hame Tug Loop. (*Joint de mancelle de collier.*)

Myers S. Bettice and Orange S. Tullis, Attica, Ind., U.S. 13th August, 1879, for 5 years.

*Claim.*—1st. The plate C with ears D D and a removable and reversible key F; 2nd. The combination of the plate C having tongue *a*, the ears D with half round openings *b* and slots *a*, and the half-round key F with lug *h* at each end.

## No. 10,354. Improvements on Plough Clevises. (*Perfectionnements aux volées de charrues.*)

Jay W. Powers, Portage, Wis., U. S., 13th August, 1879, for 5 years.

*Claim.*—1st. The vertical clevis C provided at its rear end with the elliptical or oblong hole *b*, and at its forward end with the anterior notches *a a a*, standing at right angles to and interlocking with an ordinary draft clevis provided at its forward end with the posterior notches *c c c*, the two combining to form one clevis; 2nd. In combination with the vertical clevis C and the horizontal clevis D, the twisted link B and the lock bolt F; 3rd. The coupling bar K, having hole *g* and bifurcated ends with elongated holes *h h*, in combination with beam A, clevises C D and bolts F E L; 4th. The beam A, provided with a flattened extremity having a vertical hole K, in combination with the clevises C D and bolts F E L.

## No. 10,355. Machine for Making Wood Screws. (*Machine à faire des vis de bois.*)

Charles D. Rogers, Providence, R. I., U.S., 13th August, 1879, for 15 years.

*Claim.*—1st. The combination of the primary gear from which the movement of the leader is derived, the leader which actuates the reciprocating tool post and a friction brake to arrest the rotation of the primary gear and its connecting train, upon the instant that the said primary gear is disconnected from its continuously revolving driving shaft; 2nd. The combination of the continuously revolving driving shaft D, the detachable primary gear for giving movement to the leader mounted on such shaft, the leader which actuates the reciprocating tool post, the spindle shaft and its train connecting with the driving shaft and a friction brake operating to arrest the rotation of the primary gear and its connecting train, upon the instant that the said primary is unlocked from the driving shaft, whereby the number of idle revolutions of the spindle shaft are diminished; 3rd. The combination of the primary gear from which, when locked with its driving shaft D, the motion of the leader is derived, a friction brake arranged to operate upon the said primary when the same is unlocked from the camshaft and an arm S, for controlling the brake, worked by the movable clutch connecting the driving shaft with the primary gear.

## No. 10,356. Screw Machine. (*Machine à faire des vis.*)

Charles D. Rogers, Providence, R. I., U. S., 13th August, 1879, for 15 years.

*Claim.*—1st. The combination of a revolving spindle capable of holding a screw or other article, the head of which is to be burnished, and a burnishing tool held to its work by a spring pressure and moved by suitable means in the plane of the longitudinal axis of the revolving spindle, said burnishing tool having a horizontally lateral movement given to it as it advances, modified by the shape of the head to be burnished; 2nd. The combination of a revolving spindle capable of holding a screw or other article, the head of which is to be burnished, a burnishing tool which has the proper movements given to it by suitable mechanism for enabling it to exert pressure upon such head, and a pawl and ratchet, or equivalent means, for intermittently revolving the burnisher to present a fresh section of its surface to each successive head; 3rd. The combination of a revolving spindle and a yielding burnisher mounted upon a radius arm, pivoted to a carriage, which has a movement given to it in a direction radial to the axis of the revolving spindle by suitable mechanism, the said radius arm, as it is advanced by the carriage, receiving a horizontally lateral movement to enable the burnisher to conform to the shape of the head to be burnished.

## No. 10,357. Match Making Machine. (*Machine à faire des allumettes.*)

Peter Wallace, London, Ont., 13th August, 1879 (Extension of Patent No. 3768), for 5 years.

## No. 10,358. Cooking Stove. (*Poêle de cuisine.*)

William A. Greene, Elizabethport, N. J., U. S., 13th August, 1879 (Extension of Patent No. 9877), for 5 years.

## No. 10,359. Cooking Stove. (*Poêle de cuisine.*)

William A. Greene, Elizabethport, N. J., U.S., 14th August, 1879 (Extension of Patent No. 9877), for 5 years.

## No. 10,360. Improvements in Fences. (*Perfectionnements aux clôtures.*)

William R. White, Neoga, Ill., U. S., 14th August, 1879, for 5 years.

*Claim.*—1st. A fence post provided with a shoulder *a* and finger or standard *b*; 2nd. The combination, in a fence, of posts supporting the rails and provided with shoulders *a* and high standards *b*, crossed braces B B resting on said shoulders *a*, and stringer bars *c* lying between the cro-sed ends of the braces; 3rd. A metallic fence post adapted to receive and hold the rails, terminating at the upper end in a loop *w* and having shoulders *a*; 4th. A fence post consisting of a metal rod bent to form a loop *w*, shoulders *a a*, and standards *e e*; 5th. The distance pieces *i* arranged between the standards *e*; 6th. The combination of the wood standards and dovetailed tie block I.

## No. 10,361. Improvements in Wash Boards. (*Perfectionnements aux planches à laver.*)

Fitzland L. Wilson, Saginaw, Mich., U.S., 14th August, 1879, for 5 years.

*Claim.*—A frame having rounded corners constructed by removing portions of the inner or underside of the corners by means of a series of saw-kerfs or cuts H, in combination with two distinct washing surfaces A formed of one continuous sheet of zinc bent over the top rung or division board F and secured on each side of the bottom rung.

## No. 10,362. Machine for attaching Buggy or Waggon Shafts and Poles to the Axle. (*Machine pour attacher les limons et limonières des voitures à l'essieu.*)

Samuel B. Bennett, Wallaceburg, Ont., 14th August, 1879, for 5 years.

*Claim.*—The combination of the arm C, bolt E, hinged arm F, rivets G and H and spring I.

## No. 10,363. Improvements on Vapour Engines. (*Perfectionnements aux machines à vapeur.*)

William P. and William T. Wood, Washington, D. C., 14th August, 1879, for 15 years.

*Claim.*—1st. For utilizing volatile liquids as motors for engines, the method of producing the power vapour consisting in pumping the volatile compound from a reservoir, into and against parts of an empty retort, said retort being heated by a circuit of steam pipes from a boiler: 2nd. In an apparatus for utilizing volatile liquids as motors, the combination, with a boiler, of a retort or vaporizing chamber and a steam circuit pipe leading from said boiler into and through said retort, whereby the vaporizing surface is heated by a continuous circuit of steam direct from and returned to the boiler; 3rd. In an apparatus for utilizing volatile liquids as motors, the retort or vaporizing chamber D, provided with a heating cup or cone $D_1$, in combination with the steam or hot water conduit C, the volatile liquid conduit G and the engine connection H; 4th. In an apparatus for utilizing volatile liquids as motors, the boiler A, steam conduit C, the heating cup $D_1$ of the retort D and the return pipe $C^1$, whereby to maintain the circuit of the steam or hot water; 5th. The cup or heating cone $D_1$ of the retort D provided with the receptacle *p*; 6th. In a steam boiler A, an independent retort or vaporizing chamber D, a heater therefore, a reservoir E for the volatile liquid, a steam circuit pipe C $C_1$ leading from said boiler into and through said retort to its extraneous heater, circuit pipes H K G connecting the boiler, condenser, reservoir and a pump, for operation.

## No. 10,364. Advertising Apparatus. (*Appareil d'annonces.*)

Félix Bigaouette, Montreal, Que., 14th August, 1879, for 5 years.

*Résumé.*—Un appareil pour les annonces composé d'une bande passant autour de rouleaux rotatoires et portant les annonces.

## No. 10,365. Fire Proof Paint. (*Peinture réfractaire.*)

Terence Sparham, Brockville, Ont., 16th August, 1879 (Extension of Patent No. 3786), for 5 years.

## No. 10,366. Furnace Grate. (*Grille de fourneau.*)

Carl Hoffmann, New York, N. Y., U. S., 16th August, 1879 (Extension of Patent No. 3798), for 5 years.

## No. 10,367. Sash and Door Clamps. (*Mordaches à emboiture des portes et croisées.*)

William Abercrombie, Hamilton, Ont. (Assignee of Robert L. Greenlee Chicago, Ill., U. S.), 18th August, 1879 (Extension of Patent No. 3767) for 5 years.

## No. 10,368. Improvements on Horse Collars. (*Perfectionnements aux colliers à cheval.*)

Ebenezer Fisher and John Watson, Kincardine, Ont., 19th August, 1879, for 15 years.

*Claim.*—1st. The combination, with the steel parts A A, of the cover B secured to the flanges thereof; 2nd. The combination of the steel parts A A having vertical end flanges *c c*, the interposed piece or plate E and clamp bolt *b*; 3rd. The combination of the steel parts A A having vertical end flanges $d_1$ $d_1$, the flanged interposed piece F overlapping plate *f* and fastening bolts *e* $e^1$ with clasp $g_1$, whereby one joint will be fixed and the other movable, to allow separation of parts when placing the collar over neck of the animal; 4th. The parts *a a* having a downwardly bent extremity at the lower end to form an open space between the collar and neck of the animal; 5th. The brackets D in combination with the flanges *a* of the parts A A; 6th. A steel horse collar composed of the parts A A having a pivotal connection at one end, and a locking connection at the other; 7th. The combination of the matrix blocks G G, placed side by side, and die blocks H H, constructed in pairs, having an intervening space I; 8th. A horse collar, of steel

or other metal, composed of the parts A A having turned or rolled edges *a a*; 9th. A horse collar composed of the parts A A having rolled edge *a a* formed from a plate of steel or a sheet of metal by pressure in a die or dies G G, H H; 10th. In combination with the dies H $H_1$ the blocks G G, each having a projection $g^1$ raised at the outside.

## No. 10,369. Improvements on Mechanical Musical Instruments. (*Perfectionnements aux instruments de musique mécaniques.*)

Moses Harris, New York, N. Y. (Assignee of Oliver H. Arno, Wilmington Mass., U. S.), 19th August, 1879, for 5 years.

*Claim.*—1st. The bar M carrying spring fingers L when pivoted to the side boards D $D_1$, and by one end in a slotted bearing $p^1$ and there held by a spring catch, so that said bar can readily be removed from and replaced in its supports; 2nd. In combination with a swell P and perforated paper, spring fingers R arranged to act upon the arm Q of said swell through the perforations in said paper; 3rd. The spring finger R, formed with an obtuse angle for operation, in combination with a perforated paper upon the swell P; 4th. In combination with a bellows E, a block G arranged to travel on its operating rod by the movements of the bellows-board, so that said block G, in such travel, will automatically regulate the movements of the exhausters to exhaust the bellows; 5th. In combination with musical reeds, perforated paper O, drawing rolls N $N^1$, spring fingers L, push pins *n* and valves *l* to said reeds; 6th. In combination with the exhausters F $F^1$, the rods $b^1$ $b^2$ and *d*, block G, rod H, bar $d^1$ and exhaust bellows E.

## No. 10,370. Machine for Burnishing Photographs. (*Machine à polir les photographies.*)

William G. Entrekin, Philadelphia, Penn., U. S., 19th August, 1879 (Extension of Patent, No. 3820), for 5 years.

## No. 10,371. Improvements in Long Leg Boots. (*Perfectionnements aux bottes à longues tiges.*)

Robert Church, St. Lambert, Que., 19th August, 1879, for 5 years.

*Claim.*—1st. The leg made of a single piece with the seam immediately in front; 2nd. The leg piece A having its lower edge cut concave and its upper side cut down at the meeting edges; 3rd. The leg piece A with concave lower and cut away upper edges and having projections for side linings; 4th. The single leg piece A cut up the back, in combination with the outside counter.

## No. 10,372. Improvements on Signal Cartridges. (*Perfectionnements aux cartouches à signaux.*)

Adam H. Bogardus, Elkhart, Ill., U. S., 19th August, 1879, for 5 years.

*Claim.*—In the combination of the tube A containing fire works, a compressible wad B, the head F of larger diameter than the tube and the fuse I passing through the wad, whereby the tube becomes adapted to be fired from a muzzle loader or a breech loader.

## No. 10,373. Improvements on Sleighs. (*Perfectionnements aux traîneaux.*)

Joseph T. Clarkson and George W. Morrill, Amesbury, Mass., U. S., 19th August, 1879, for 5 years.

*Claim.*—1st. The side panels *b b* arranged with their lower edge oblique to the line of sills *c c*; 2nd. In a pivotal top sleigh or pung, the combination of the pivotal guide-rods *n* and the supporting bar *r*; 3rd. In combination with guide-rod *n* and spring *t*, the elastic tubular buffer *v*; 4th. In combination with rod *n*, bar *r* and spring *t*, the elastic buffers *s*; 5th. In combination with rod *n*, interior coiled spring *u* and external spring *t*, the tubular buffer *v* arranged between such outer and inner springs; 6th. In combination with a tilting body A, the angle rods *i i* to connect the bars *x*; 7th. In a pivotal body sleigh or pung, the springs *t* supported by the panel D and extended up within the body A to conceal them.

## No. 10,374. Improvements on Grain Elevators. (*Perfectionnements aux élévateurs à grain.*)

Orlando D. Spalding and Lewis C. Barnett, Mitchell, Iowa, U. S., 19th August, 1879, for 5 years.

*Claim.*—1st. A grain elevator made in circular form with a central tubular shaft and a series of bins arranged around the same, and all running to the centre; 2nd. The combination of the central tubular shaft A, inclined sills C C, floor D, outside slotted hoop E, inside sill F and wall studdings J; 3rd. The combination of the central tubular shaft A, wall studdings J, floor D, studding G, partitions H and braces I.

## No. 10,375. Railway Switch. (*Aiguille de chemin de fer.*)

Henry Harmer, Southampton, Ont., 20th August, 1879, (Extension of Patent No. 3770), for 5 years.

## No. 10,376. Improvements on Horse Powers. (*Perfectionnements aux manèges à cheval.*)

John McCrea and John Irvine, Orchardville, Ont., and Thomas Swan, Mount Forest, Ont., 21st August, 1879, for 5 years.

*Claim.*—1st. The rotary top consisting of the arms C D, braces I J, cog wheels T T and U, in combination with the fixed cog-rim B for operating the centre shaft E, bevelled gears O P and line shaft Q; 2nd. The combination, with the fixed cog-rim B, of the travelling cog wheels T T and bull pinion-wheel U geared to operate in the same plane, and central shaft E, carrying bevelled spur-wheel O meshing with bevelled cog P for operating line shaft Q; 3rd. The bearings L M secured to the arms C and bed-piece G having concentric flanges.

## No. 10,377. Improvements on Rubber Boots or Shoes. (*Perfectionnements aux chaussures de caoutchouc.*)

Samuel E. Whittemore, Bristol, R. I., U. S., 21st August, 1879, for 15 years.

*Claim.*—1st. A rubber boot or shoe provided at its toe with a binding shield *a* which protects the toe and is united to the sole and upper, and overlies the joint or seam at which the sole and upper are united; 2nd. A rubber boot or shoe, provided at its toe with a binding shield *a* which protects the toe and is united to the sole and upper, and overlies the joint or seam at which the sole and upper are united, in combination with a shield *b* which is extended vertically at its rear and is attached to the counter.

## No. 10,378. Improvements on Rotary Engines (*Perfectionnements aux engins rotatoires.*)

Alonzo Noteman, Toledo, Ohio, U. S., 21st August, 1879, for 5 years.

*Claim.*—1st. The blades $c_1$ coupled by a pin $c_3$, and having holes $c_4$ communicating with the mortises or holes containing the ends of the coupling pin; 2nd. The blades $c_1$ constructed with the lips or projections $c_5$ to extend upon the sides of the abutment *b* and the bearing $b_3$; 3rd. In the combination of the cylinder $a_1$ having ports $a_4$ $a_2$ and grooves or chambers $e_1$ surrounding the vacuum chamber $a_6$ and abutment *b*, the head plates *d* supporting the piston and axles and provided with rabbets or channels $d_2$ around their rims, and the circular adjustable packing rings *e* placed within the channels $e_1$ and pressed outward against the head plates.

## No. 10,379. Improvements on Spinning Machines. (*Perfectionnements aux machines à filer.*)

Joseph Abbott, Joseph B. De Young and Charles Z. De Young, Philadelphia, Pa., U. S., 21st August, 1879, for 5 years.

*Claim.*—1st. The combination, with the front line of rollers, of one or more lines of back rollers rotating at different degrees of speed; 2nd. The front line of rollers in combination with one or more lines of back rollers and operating with the sliver spool drum and spindle carriage; 3rd. The upper and lower rollers set at an angle to each other, whereby the slubbing is caused to move in a direct line with the bearing centre of the rollers; 4th. The combination, with the front and back lines of rollers, of the adjustable bearings or stands F G.

## No. 10,380. Washing Machine. (*Machine à laver.*)

Gilbert F. Burtch, Jackson, Mich., U. S., 21st August, 1879, for 5 years.

*Claim.*—1st. The combination of the removable bearing *d*, having the slot *j* for the journal *e* of the washer to move in, rest *k* and catches $a_1$ and $b_1$ to hold the bearing in place, and the spring *o* to keep the journal pressed downwards; 2nd. The combination of the slotted removable bearings *d*, catches $a_1$ and $b_1$, plate *h* having a stud *g* for the bearing to catch upon, and the rest *k*.

## No. 10,381. Railway Switch. (*Aiguille de chemin de fer.*)

Russel Pickel, Plattsburgh, N. Y., U. S., 21st August, 1879, for 5 years.

*Claim.*—1st. The double railed link J having the rails *a b* and chairs *c*; 2nd. The combination and arrangement of the double railed link J, rods G H, bell cranks E F and connecting rod D with the leading switch track I.

## No. 10,382. Machine for Working Sheet Metal. (*Machine pour travailler les métaux en feuille.*)

James Fife, Toronto, Ont., 21st August, 1879, for 5 years.

*Claim.*—1st. The bar B, working in vertical guides from a foot or hand lever, in combination with the table D and hinged folding plate E provided with the projections $E_2$; 2nd. The pivoted bar G in combination with the bar B provided with a moulded face; 3rd. The bar B provided with bevelled front face and moulded rear face, and recessed on its under side; 4th. The combination and arrangement of the bar B, table D, folding plate E and the pivoted bar G.

## No. 10,383. Improvements on Steam Generators. (*Perfectionnements aux générateurs de vapeur.*)

Michael J. O'Rielly, Buffalo, N. Y., U. S., 21st August, 1879, for 5 years.

*Claim.*—1st. In one or more series of horizontal pipes *i*, closed at the ends and arranged closely together, vertical pipes K and manifold L; 2nd. In two or more sections H $H_1$ $H_2$, each composed of horizontal pipes *i* arranged closely together and transversely to the direction of the draft, vertical pipes K and manifolds L arranged parallel with the draft, the different sections forming horizontal flues, one above the other, through which the draft passes successively; 3rd In two or more horizontal sections H $H_1$ $H_2$, each composed of horizontal pipes *i*, vertical pipes K and manifolds L and right and left hand threaded pipes *m* connecting the different sections, so that each section can be readily removed.

## No. 10,384. Improvements in Oatmeal Machines. (*Perfectionnements aux machines à gruau d'avoine.*)

George Ayliffe, Joseph Hugill and Charles Rinehart, Akron, Ohio, U. S., 21st August, 1879, for 5 years.

*Claim.*—In a cylinder perforated with holes in which the grain stands, a fixed knife lying close to the surface of the cylinder and pins to force outward the grain to be cut.

## No. 10,385. Improvements on Buggy Tops.

(*Perfectionnements aux soufflets de voitures.*)

Edward N. Heney, Montreal, Que., (Assignee of William Davis), 21st August, 1879, for 5 years.

*Claim.*—1st. An adjustable buggy top frame capable, when raised, of being rigidly supported, without bracing, by the clamping arm C and screw *f*, also by the same means and by the arrangement of bows and stretchers folding up close when depressed and adjustable to any intermediate position; 2nd. In a buggy top frame, the single bow iron C pivoted above its extremity and having sockets for the pivoting of the other bow irons *d d d*, and provided with the clamping arm C, fulcrum bolt *b* and clamping bolt *f*, of wrought iron or steel, inserted with countersunk heads; 3rd. The method of forming the bow irons of a buggy top of a tubular shape consisting either of short tubular jointed sockets for the reception of wooden bows, or otherwise of sheet or wrought iron pipes formed with joints at the lower ends and extending upwards to the stretchers; 4th. The double strap *k* with knobs or buckles for adjusting and retaining the back curtain.

## No. 10,386. Billiard Table. (*Table de billard.*)

Hugh W. Collender, New York, U. S., 21st August, 1879, for 5 years.

*Claim.*—1st. A billiard table, the body of which is composed of an inner wooden frame or framework having, combined with it, outer metallic plates or portions; 2nd. A billiard table, the body of which is composed of an inner wooden frame or framework, having combined with it, outer metallic plates or portions of lesser width, the wooden frame or framework projecting above the metallic plates or portions.

## No. 10,387. Horse Shoe. (*Fer à cheval.*)

James M. Pitblado, George J. Grant and Thomas Clarke, Truro, N. S., (Assignees of Gerard Dunning and Charles B. George, Waukegan, Ill., U. S.), 21st August, 1879, (Extension of Patent No. 3809), for 5 years.

## No. 10,388. Improvements on Harrows.

(*Perfectionnements aux herses.*)

Edwin R. Whitney, Magog, Que., and Charles L. Bossé, Montreal, Que., 21st August, 1879, for 5 years.

*Claim.*—1st. A connectable and integrally cast metal harrow tooth head A formed of cruciform arms, each arm having alternately a hook *b* and eye *a* and, centrally, a tooth *d*, whereby two or more heads may be connected to form a harrow; 2nd. A cast metal harrow tooth head A, formed of cruciform arms, each arm having alternately a hook *b* and eye *a*, and an inserted tooth *d* secured by a nut and screw or other fastening; 3rd. A flexible harrow composed of a series of cruciform heads A having a central tooth *d* connected by hooked joints.

## No. 10,389. Improvements on Grates and Grate Bars for Stoves, Furnaces, &c. (*Perfectionnements aux grilles et aux barres de grilles de poêles, fourneaux, &c.*)

John McF. Crawford, Philadelphia, Pa., U. S., 21st August, 1879, for 5 years.

*Claim.*—1st. A grate composed of a series of independent concentric bars or rings adapted to be simultaneously oscillated, a part in one direction and a part in the other; 2nd. A grate composed of a series of two or more independent circular sections combined with a rock shaft, whereby said sections may be caused to move simultaneously in opposite concentric directions; 3rd. The rock shaft D having pins or cogs at unequal distances, on opposite sides alternately, from the middle of said shaft; 4th. The bearing bar C having posts *c c*, &c., with lugs $c_4$; 5th. The combination of independent circular sections A B C, having slots, lugs or teeth, with a rock shaft D having pins, studs or cogs to engage therewith, said pins, studs or cogs being on opposite sides of and at unequal distances from the middle of said shaft; 6th. The independent circular sections A B C, having flanges *a b c*, in combination with bar C having posts *c* $c_1$ with lugs $c_4$; 7th. The combination, with rock shaft D having dogs G G, of bearing bar C having studs or stops *g g*; 8th. The combination of independent circular sections A B C with bearing bar C and rock shaft D; 9th. The combination of bar C, shaft D and key F; 10th. The combination, with bearing bar C and rock shaft D, of shaft H with winch *h*.

## No. 10,390. Improvements in Hinges.

(*Perfectionnements aux charnières.*)

Johann W. Morgeneier, Sheboygan, Wis., U. S., 27th August, 1879, for 5 years.

*Claim.*—A hinge having its flaps A B set at considerable angles with their vertical pin *a* and socket *b*, and provided with bevelled edges $a^1$ $b_1$, so as to form dovetailed attachments for the hinge.

## No. 10,391. Shingle Machine. (*Machine à bardeau.*)

Benjamin F. Penney, Dedham, Me., U. S., 27th August, 1879, for 5 years.

*Claim.*—1st. The combination of a carriage *b*, moving in a horizontal plane, with tracks *x y* guiding said carriage past the saw centre, and a saw *c* flush upon the side next the bolt and so arranged, with reference to the carriage, that a horizontal line drawn through the centre of the saw shall pass through the body of the bolt; 2nd. The set rolls *d* projecting at $d_1$ and adapted to grasp the bolt beyond the set work jaws; 3rd. The combination of the carriage *b* and extended tracks *x y* and saw *c*, arranged with set works provided with set rolls *d* extending past the set work jaws *m*; 4th. The carriage *b*, provided with rollers *h i*, in combination with a guide *e* and adjustable guide *f*; 5th. The saw arbor *t* in combination with the adjustable journal boxes *j j* pivoted by bolts and nuts *n* upon slotted arms *k k*.

## No. 10,392. Improvements on Waggons and Waggon Springs. (*Perfectionnements aux voitures et ressorts.*)

Egbert P. Carter, Arcade, N.Y., U. S., 27th August, 1879, for 5 years.

*Claim.*—1st. The side springs consisting first of the single foundation leaf 1, having the second leaf, formed in two parts 2 2, set thereon each side of, and either leaving a space in the centre or else overlapping (when greater stiffness is required), and with the supplementary leaves 3 3 set thereon between the centre and ends; 2nd. The side springs having overlapping leaves 2 2 and supplementary leaves 3 3, each side spring arched upwards in the centre, and with counter curves between the centre and ends, in combination with half elliptic end springs forming the spring platform; 3rd. In combination with the waggon body D and the side springs A A, the spring cross-bars C C having the conical vertical bolt-holes *c c* with the bolt *a* and interposed cushion *b*; 4th. In combination with the foundation leaf 1, the second leaf formed in two parts 2, 2, the inner end of each overlapping in the centre of the spring whereby a freer action is got, as well as greater stiffness.

## No. 10,393. Improvements on Fifth Wheels for Vehicles. (*Perfectionnements aux ronds d'avant train de voitures.*)

William W. Grier and Horatio Barr, Hulton, Pa., U.S., 29th August, 1879, for 5 years.

*Claim.*—1st. The combination of a saddle-brace, a king-bolt and a yoke for each, the yoke of the king-bolt being encircled by and turning within the other; 2nd. The combination of a saddle-brace, a clip king-bolt and a yoke for each, the yoke of the king-bolt being encircled by and turning within the other; 3rd. The combination of a clip king-bolt, a spring hanger and a yoke for the clip king-bolt circling within the hanger; 4th. The combination with a saddle-brace and king-bolt, each having an independent yoke and one yoke circling within the other, of a mud-plate or cap covering and protecting the bearings of the yokes.

## No. 10,394. Telegraph Signalling Apparatus.

(*Appareil de signaux télégraphiques.*)

William Hadden, New York, 29th August, 1879, for 5 years.

*Claim.*—1st. A non-conducting trough A, having wires B $B_1$ connected with two corresponding series of exposed contact points in the bottom of the trough, in combination with a separate metallic circuit closer E having a bifucated end; 2nd The rheostat formed of a non-conducting tube L filled with carbon powder M, to adapt it to be applied to the circuit wires of a battery; 3rd. The combination of a local circuit J K and an adjustable rheostat L M with the line circuit G F $F_1$ of a district telegraph signalling apparatus.

## No. 10,395. Apparatus for Aging Liquors.

(*Appareil à vieillir les liqueurs.*)

Moses G. Corey, Greensborough, Pa., U. S., 29th August, 1879, for 15 years.

*Claim.*—1st. The process for imparting the qualities of age to spirituous liquors, which consist in applying heat and agitation at the same time within the body of the liquor to be treated, said liquor being contained within a charred barrel, package or receptacle; 2nd. The process for imparting the qualities of age to spirituous liquors contained in a charred barrel, package, or similar receptacle, which consists in alternately heating and cooling the liquor.

## No. 10,396. Shelf Supporters. (*Supports de tablettes.*)

Archibald Macfie, Chatham, Ont., August 29th, 1879, for 5 years.

*Claim.*—The rod A, either with or without the centre nut B or end nut C, but having one nut D or C or nuts B C and D, or any greater number of nuts, whereby the length of supporter may be varied to suit different distances between shelves, the whole to be used as a shelf supporter.

## No. 10,397. Music Teaching Chart. (*Carte pour l'enseignement de la musique.*)

Gerrit S. Rice, Chicago, Ill., U. S., August 29th, 1879, for 5 years.

*Claim.*—1st. A movable chart or diagram having a governing central stationary key-note index arranged with exact spacing in connection therewith, so that all the intervals and harmonies of every scale and key, and the division of the same into families can be readily understood, and on which each required chord, position or interval, is correctly indicated and pointed out by the index hand or any other convenient signs on the said chart or diagram; 2nd. The register bar B with the sliding chord registers C C, said bar being designed to aid in teaching all manner of intervals used in music; 3rd. The system of harmonizing songs or melodies and of writing accompaniments made up of appropriate chords and harmony, by the terms tonic, subdominant and dominant, or any other equivalent terms or signs, which shall indicate the same harmony and intervals; 4th. The combination of the above described chart or diagram with the key board of an ordinary piano, organ, or other similar instrument, for the purpose of teaching the principles of harmony, and the writing of the same in a clear and comprehensive manner.

## No. 10,398. Combined Sliding Box and Valve.

(*Tiroir de vapeur et soupape.*)

Lewis H. Baker, Fairfield, Ill., U. S., 29th August, 1879, for 5 years.

*Claim.*—1st. The valve A and box B connected with each other by the abutments C C; 2nd. The valve seat F provided with steam ports $c^1$ $c_1$, exhaust port $d_1$ and steam openings or passages $b^1$ $b_1$; 3rd. The combination of the steam chest D, valve A, box B and valve seat F.

## No. 10,399. Improvements in Land Rollers.

(*Perfectionnements aux rouleaux d'agriculture.*)

John Sampson, York, Ont., 29th August, 1879, for 5 years.

*Claim.*—1st. The roller sections provided with the independent slotted boxes E, said boxes being fitted to the ends of the roller sections and forming a fixed centre around which the roller sections rotate; 2nd. The roller sections provided with the slotted boxes E, in combination with the axle B; 3rd. The frame A, provided with the fixed axle B, in combination with two or more roller sections, provided with heads having slotted boxes E forming a fixed centre of rotation for the roller; 4th. The combination, with the adjustable roller sections, of the springs G.

## No. 10,400. Improvements in Cake Griddles.

*(Perfectionnements aux casseroles à gâteaux.)*

Jonathan V. Taylor, Lansingburgh, N. Y., U. S., 29th August, 1879, for 5 years.

*Claim.*—1st. The combination of a fixed plate, having raised lugs, with a hinged plate that dumps the cakes and rests on the lugs, so as to admit air to the cakes between the plates; 2nd. The combination of a fixed plate with a swinging plate having a hinged handle with a projecting shoulder bearing on the plate.

## No. 10,401. Improvements in Sewing Machines and Cops. (*Perfectionnements aux machines à coudre et aux bobines.*)

John Keats, Wood Green, England, 29th August, 1879, for 15 years.

*Claim.*—1st. In a reciprocating rotary shuttle, having a recess for receiving the open loop of the needle thread extending up to and beyond its axis of motion, the use of a cover which, when opened, will disclose the whole of the interior to view, and which is provided with a slot that overlies the centre of the cap and an eye situated near the centre of motion of the shuttle; 2nd. The combination, with a reciprocating rotary shuttle having its axis parallel, or thereabouts, with the line of motion of the needle, and having, provided upon it, a series of contrate teeth, of a driving shaft set at an inclination, both to the line of motion of the needle and to the axis of the shuttle, and a contrate wheel, upon the said shaft, gearing with the contrate teeth on the shuttle; 3rd. The combination, with the reciprocating rotary shuttle having its axis parallel, or thereabouts, with the line of motion of the needle, and having, provided upon it, a series of contrate teeth, of a contrate driving wheel which gears with said contrate teeth, and one of whose teeth, which is both longer and wider than the others, enters into the recess provided in the shuttle for the entrance of the loop of the needle thread, and acts upon the sides of the said recess to drive the shuttle during a portion of its rotation; 4th. The preparation of the compressed cop for insertion in the rotary shuttle; 5th. Mounting the presser and feed bar in a vertically reciprocating guide and holding it firmly therein by a gripping or binding surface; 6th. The arrangement of mechanism for locking the presser and feed bar in position upon the work and thereby enabling it to resist the upward pull of the needle thread, without unduly pressing upon the work; 7th. The arrangements of parts whereby the presser bar, when locked to its guide-box, will be free to receive the requisite motion for feeding the work.

## No. 10,402. Stove Pipes Screwing Machine.

*(Machine à fileter les tuyaux de poêle.)*

Edward M. Ball, Hatley, and Wright Sleeper, Coaticooke, Que., 29th August, 1879, for 5 years.

*Claim.*—1st. The combination of the circular disks B B with the feeding screw shafts C C, connecting gears D D, roller H and cone I; 2nd. The combination of the circular disks B B, shafts C C, connecting gears D D and roller J with chuck K.

## No. 10,403. Improvements in Derricks. (*Perfectionnements aux treuils.*)

Edward Moore, Portland, Me., and Augustus R. Wright, Geneva, N. Y., U. S., 30th August, 1879, for 5 years.

*Claim.*—1st. A platform, revolving upon a circular track and carrying symmetrically arranged booms and hoisting devices connected with each, in combination with an engine mounted on said platform and with suitable drawing mechanism, whereby a bucket may be lifted at either end and transferred from one side to the other; 2nd. In the combination of a revolving platform, booms arranged opposite to each other for hoistidg and transferring from side to side a central mast and guys connecting the booms and mast; 3rd. The combination of the booms D D, mast B, guys and circular platform; 4th. The combination of the booms D D, mast B with circular platform and with central shoe C; 5th. The circular platform, composed of the two annular beams separated to admit of the wheels, in combination with the transverse timbers *b b*; 6th. In the combination of the lower platform supporting a circular track and upper platform mounted upon wheels adapted to move on said track, an annular ratchet bar fixed upon the lower platform concentric with the circular track and a pinion in gear with said ratchet bar, with driving mechanism mounted upon the circular platform; 7th. The combination of the drums *p* $p_1$, central shaft *r*, engin s *m m* and the intermediate connections.

## No. 10,404. Improvements on Concrete Skips.

*(Perfectionnements aux caissons à béton.)*

Edward Moore, Portland, Me., and Augustus R. Wright, Geneva, N. Y., U. S., August 30th, 1879, for 5 years.

*Claim.*—A concrete skip provided with valves for holding the concrete and allowing it to be deposited in place, said valves being located above the open mouth of the skip; 2nd. The combination of the valve, spring catches, releasing cams and rods.

## No. 10,405. Improvements in Horse Powers and Elevating Machines. (*Perfectionnements aux manéges et élévateurs à cheval.*)

Peter K. Dederick, Albany, N. Y., U. S., 13th August, 1879 (Extension of Patent No. 3,900), for 5 years.

## No. 10,406. Improvements in Steam Boiler Feeders. (*Perfectionnements aux alimentateurs de chaudières à vapeur.*)

Benjamin F. Fitch, Lacrosse, and Charles M. Masters, Sparta, Wis., U. S., 30th August, 1879, for 5 years.

*Claim.* The duplex chambers $A^1$ $A^{11}$, steam chests *a a*, slide valves $a^1$ $a_1$, opening cams $b^1$ $b_1$, closing cams $b^{11}$ $b_{11}$, pipes *i g m*, syphon pipe $e_1$ and spray sheet *e*.

## No. 10,407. Improvements on Nut Locks.

*(Perfectionnements aux arrête-noix.)*

Samuel E. St. O. Chapleau, Ottawa, Ont., 2nd September, 1879, for 5 years.

*Claim.*—1st. In a nut lock plate, the slot C; 2nd. In a nut lock plate having the slot C, the triangular check E in locking portion B; 3rd. In a nut lock plate having the slot C and check E in the locking portion B, the triangular check E in the end of the plate; 4th. In a nut lock plate having the slot C, check E in locking portion B and check $E^1$ in the end of plate, the square end of the plate F.

## No. 10,408. Improvements in Fish Traps. (*Perfectionnements aux piéges à poisson.*)

Henry Webb, Rockport, Mass., U. S., 2nd September, 1879, for 5 years.

*Claim.*—1st. The combination of the netting trap-body A, open in rear and provided with a bottom and floats and a pocket, with the stationary guides B $B^1$, movable wings C C and the stay lines *c d i k l*, with or without the central wing E; 2nd. The combination of the stationary guides B B, movable wings C C and stay lines *c d i k l* with the trap body open in rear and provided with a bottom and floats; 3rd. The combination of the netting trap body A, open in rear and provided with floats and series of anchors *f*, support lines *l g*, brace lines *d i k l* and a pocket D, with the stationary guides B B, movable wings C C and the brace line *c* of one or both of such wings, with or without the central wing E.

## No. 10,409. Improvements on Ploughs. (*Perfectionnements aux charrues.*)

Christopher Bentley, Dresden, Ont., 2nd September, 1879, for 5 years.

*Claim.*—1st. The curved beam A attached by bolts *a a* to land side B of a plow; 2nd. The mode of attaching and adjusting coulter C by means of beam A and set screw D.

## No. 10,410. Improvements in Electric Telephones. (*Perfectionnements aux téléphones électriques.*)

Sidney H. Short, Columbus, Ohio, U. S., 2nd September, 1879, for 5 years

*Claim.*—1st. A telephonic transmitter, in which the imperfectly conducting medium is held under pressure applied independently of the diaphragm and the electrical pulsations are caused by the diminution of the normal pressure effected by the vibrations of the diaphragm; 2nd. In a telephonic transmitter in which the pressure is applied independently of the diaphragm, the combination of the diaphragm and the standards carrying the resisting medium; 3rd. In the combination of the diaphragm, the standards carrying the resisting medium and the set screw; 4th. In combination with the diaphragm of a telephonic transmitter, the device for checking the vibrations of said diaphragm; 5th. In the combination of the diaphragm, the standards and the disks formed with concave faces and carried upon the standards with the double convex button, the pivots being adapted to each other; 6th. In a telephonic transmitter, a standard fixed to the diaphragm, at some point between its centre and edge, and acting in connection with another standard to hold the carbon under pressure and to diminish said pressure by vibrations of said diaphragm, said carbon being in electrical connection

## No. 10,411. Improvements in Sewing Machines. (*Perfectionnements aux machines à coudre.*)

Samuel Y. Love, Philadelphia, Penn., U. S., 2nd September, 1879, for 5 years.

*Claim.*—1st. The combination of the head A, the rotating cam block B, the needle bar D, its slide *e* carrying the needle and an arm or lever controlling the said slide and arranged in respect to the rotating cam block, so that upon the reciprocation of the bar D, the slide *e* will be reciprocated and the block B partially rotated; 2nd. The combination of the head A, the rotating cam block B the needle bar D, its slide *e* and the arm or lever J having a spring finger *m*; 3rd. The lever J made in two parts joined together, one part being capable of movement independent of the other, such movement being governed by the adjustment of a set screw.

## No. 10,412. Elevator and Bag Holder. (*Elévateur et accroche-sac.*)

George Millin, Hullett, Ont., 2nd September, 1879, for 5 years.

*Claim.*—1st. The combination of belts, canvas and bucket D or E E and the shaft F; 2nd. The bag fastener A or C C and its jaws B B; 3rd. The method of conducting the grain to either sides of the mill into the elevator by the grain guide B C and conduit pipe D.

## No. 10,413. Flour Manufacturing Process and Apparatus. (*Procédé et appareil pour la fabrication de la farine.*)

Benjamin H. Skoyles, Odessa, Ont., 2nd September, 1879, for 5 years.

*Claim.*—1st. Passing the middlings and bran through a bolting reel in which they are alternately rolled or crushed and sifted; 2nd. The combination, with the bolting reel provided with the bars $J^1$, of the adjustable rollers I, or their equivalent, said reel and rollers being arranged to alternately crush and sift the middlings and bran; 3rd. The combination of the bolting reel A, collars *c c* and the stationary hollow bar B; 4th. The combination of the hollow stationary bar B, shaft E, chains $F^1$ and levers G; 5th. The pivoted levers G in combination with the roller beam H and rollers I; 6th. The bar B and brackets F in combination with the levers G, roller beam H and rollers I.

## No. 10,414. Device for securing and retaining Keys in Key Holes. (*Manière d'ajuster et retenir les clefs dans les trous de serrures.*)

William Metcalf, Toledo, Ohio, U. S., 2nd September, 1879, for 5 years

*Claim.*—The combination, with the key-hole plate A, of the plate B sliding in suitable bearings in said key-hole plate, the said plate B being provided with handle C, notch D and bent spring E.

## No. 10,415. Remedy for the Relief and Cure of Ear-ache. (*Remède pour l'adoucissement et la guérison du mal d'oreille.*)

Joseph F. Avery, Halifax, N. S., 2nd September, 1879, for 5 years.

*Claim.*—A composition of marigold, arnica, glycerine, sweet-oil, laudanum, chloroform, friars balsam and carbolic acid.

## No. 10,416. Improvements on Telephones.

(*Perfectionnements aux téléphones.*)

George M. Phelps, Brooklyn, N. Y., U. S., 2nd September, 1879, for 15 years.

*Claim.*—1st. The permanent magnet of a horse-shoe shape, with one pole bent inwardly for the attachment of the electro-magnet, casing and diaphragm, and with the other pole perforated for the passage of the conducting wires; 2nd. The combination of the horse-shoe shaped permanent magnet with its inwardly bent pole and the electro magnet, case, diaphragm and mouth piece mounted on said pole.

## No. 10,417. Improvements on Pans. (*Perfectionnements aux poêles.*)

Edward A. C. Pew, Welland, Ont., (Assignee of William J. Abrich, Elkton, Maryland, U. S.), 3rd September, 1879, for 5 years.

*Claim.*—In combination with the pan A, the cover C having a flanged rim D, a valved opening F and condensing diaphragm E.

## No. 10,418. Improvements on Dental Engines. (*Perfectionnements aux engins dentaires.*)

Eli T. Starr, Philadelphia, Pa., U. S., 3rd September. 1879, for 15 years.

*Claim.*—1st. In the combination of the dental engine base, the engine arm and mechanism for inclining said base and arm; 2nd. The combination of the dental engine base, provided with a device or mechanism to tilt or incline it, with the engine arm capable of rocking on said base; 3rd. The combination of the base, its inclining or tilting mechanism, the engine arm and the treadle mounted on the base, whereby said base, arm and treadle may be tilted or inclined together; 4th. The combination of the base, its arm, a tilting device to incline said base and arm, and mechanism to lock the tilting device in position; 5th. The combination of the dental engine base, its arm and devices to incline the base in different directions, or tilt the said arm to either side of the perpendicular; 6th. The combination of the base, the engine arm capable of rocking on said base and mechanism to lock said arm in different positions relatively to the base; 7th The combination of the base, the engine arm capable of rocking thereon having its pivot or hinge coincident with the axis of the fly or driving-wheel, and mechanism for locking the arm in the desired position or angle relatively to the base; 8th. The combination of the base, its fixed standard, the engine arm rocking thereon, and mechanism to change the normal position of said arm carried by the base or standard; 9th. The combination of the base, the engine arm rocking thereon and the device to tilt the base at an angle to the plane of the independent rocking movement of the said arm; 10th. The combination of the base, its tilting device, the rocking engine arm and the independent mechanisms for locking the inclining device to the base and the base to the arm; 11th. The combination of the base, its tilting mechanism, the driving pulley and the engine arm, the driven pulley and the flexible shaft; 12th. The combination of the base, its tilting mechanism, the driving pulley, the treadle, the rocking engine-arm, the mechanism for changing the normal position of said arm, the driven pulley, its spindle, the flexible shaft and the hand piece; 13th. The combination of the tilting engine base, the engine arm, and the flexible shaft and its enveloping sheath carried by said arm; 14th. The combination of the base, its rocking arm, the plate and its locking device for varying the normal position of the rocking arm, while still permitting it to rock, and the counterbalancing spring connected at one end with said plate and at the other with the engine arm; 15th. The combination of the base, the rocking arm, the flexible shaft connected with the rocking arm, the adjustable plate for varying the normal position of said arm and the spring connected with said plate at one end and acting upon the rocking arm at the other, to maintain it in its normal position, while permitting it to be deflected or rocked upon its pivots; 16th. The combination of the base, the forked engine arm pivoted thereon and the ears or lugs upon said arm to limit its range of movement; 17th. The combination of the base, the engine arm, mechanism for varying the normal position of said arm, lugs or devices for limiting the range of rocking movement of the arm and the counterbalancing spring acting upon the arm; 18th. The combination of the pivoted plate, to change the normal position of the engine arm, with a spring locking device to secure said plate to the engine base or its standard; 19th. The combination of the base, the engine arm rocking thereon, the spring connecting the base and arm and the telescoping cover or envelope for said spring; 20th. The combination of the plate, for changing the normal position of the engine arm, with the counterbalancing spring and the jointed or yielding cover of said spring; 21st. The combination of the base, the engine arm rocking thereon, the pivoted plate for changing the position of said arm, the counterbalancing spring connecting said plate and arm and the device to vary the tension of said spring; 22nd. The combination of the lateral arm or engine head, the pivot crosswise of said arm upon which said arm rocks and the driven pulley overhanging said pivot at the side thereof opposite that at which said lateral arm extends; 23rd. The combination of the lateral arm or engine head, the rocking pivot crosswise of said arm, the driven pulley overhanging said pivot at the side thereof opposite that at which the lateral arm extends, and the flexible power conveyor driven by said pulley; 24th. The combination of the lateral arm or engine head, the rocking pivot of said arm, the driven pulley overhanging said pivot and the shank of said lateral arm with which it is connected by the rocking pivot; 25th. The combination of the lateral arm, the rocking pivot of said arm, the driven pulley overhanging said pivot and the shank of said lateral arm with which it is connected by the rocking pivot, the flexible power conveyor and the hand piece; 26th. The combination of the lateral arm, the rocking pivot thereof, the shank of said arm, the shank spring, the engine arm and the overhanging driven pulley carried by said lateral arm; 27th. The combination of the lateral arm, the rocking pivot thereof, the pivotal shank of said arm, the shank spring, the engine arm, the overhanging driven pulley carried by said lateral arm and the flexible power conveyor driven by said pulley; 28th. The combination of the lateral arm, the rocking pivot thereof, the pivotal shank of said lateral arm, the shank spring, the engine arm, the overhanging driven pulley, the flexible power conveyor and the sheath therefor; 29th. The combination of the lateral arm, the rocking pivot thereof, the pivotal shank of said lateral arm, the shank spring, the engine arm, the overhanging driven pulley, the flexible power conveyor and the hand piece; 30th. The combination of the lateral arm, the rocking pivot thereof and the adjusting device to lock the arm, when desired, in the position to which it is rocked; 31st. The combination of the lateral arm, the rocking pivot thereof, the adjusting device to lock the arm, when desired, in the position to which it is rocked and the driven pulley overhanging said pivot at the side thereof, opposite that at which the lateral arm extends; 32nd. The combination of the lateral arm, the rocking pivot thereof, the adjusting device to lock the arm when desired in the position to which it is rocked, the driven pulley over hanging said pivot at the side thereof opposite that at which the lateral arm extends, the flexible power conveyor driven by said pulley and the hand piece.

## No. 10,419. Butter Working Machine. (*Machine à app êter le beurre.*)

James B. Burbank and Joseph W. Atkins, Danville, Que., 3rd September, 1879, for 5 years.

*Claim.*—The combination of the hollow bed or dish A with the tapering pieces B and the rims C C with the hole D, also the hinged legs E E with the pins F F and the revolving lever roller H with the revolving handle *j* and pivot I.

## No. 10,420. Improvements in Fire Extinguishers. (*Perfectionnements aux extincteurs d'incendie.*)

Henry S. Parmelee, New Haven, Conn., U. S., 3rd September, 1879, for 5 years.

*Claim.*—1st. In combination with a system of main and branch pipes, the outlets of which are provided with distributors arranged to spread the water, a seal arranged to be released by the fusion of metal or solder; 2nd. The combination, with a system of pipes provided with distributors and closed with seals or caps depending on the fusion of metal for their release, of the tank F or any other automatic supply of water, gas or fluid; 3rd. The combination, with a system of pipes provided with distributors and closed with plugs, seals or caps depending on the fusion of metal for their release, of an alarm operated by the flow of the water acting on a float; 4th. The combination, with a distributor, of a cap arranged to fit over and protect the distributor; 5th. In an automatic fire extinguisher, the combination, with a distributor, of a cap secured to the distributor by a low fusible material; 6th. The combination, with a fluid supply, mains and branches provided with distributors, of a metal cap arranged to fit over the distributors and secured thereto in any manner, so that the same will be released by the action of heat on a fusible material; 7th. The combination of an automatic fire extinguisher with the mains and branches of a distributor within which a seal is secured depending on the fusion of metal for its release; 8th. A distributor, provided with an extended base, in combination with a cap secured to said base by low fusible solder; 9th. A revolving distributor, provided with a hollow spindle having ports and a ring or cap provided with discharge openings arranged to revolve the same by the discharge of a fluid or gas; 10th. The combination, with an alarm, of an elongated valve extending through the valve opening and arranged to be moved a distance before the valve is opened, so as to operate an alarm; 11th. The combination, in a valve, with the valve seat and an extension nearly fitting the valve opening, of a groove or by way.

## No. 10,421. Means of Cleansing Bolting Screens. (*Mode de nettoyage des tamis de bluteaux.*)

William W. Huntley, Abel P. Holcomb and August Heine, Silver Creek, N. Y., U. S., 3rd September, 1879, for 5 years.

*Claim.*—1st. Loose balls arranged on the underside of the screen and supported by an open or perforated surface; 2nd. In combination with a vibrating bolting screen, provided with pockets or compartments on its under side, loose balls *d* arranged in said compartments and a rough perforated surface *e* by which said balls are supported.

## No. 10,422. Knitting Machine. (*Machine à tricoter.*)

Hiram P. Ballon, Needham, Mass., U.S., 3rd September, 1879, for 5 years.

*Claim.*—1st. In combination with the spindle G and the adjustable part $m_1$ of the needle cam K, the helically grooved rotary head L and the bar or rod $n^1$ arranged with and applied to such spindle and movable part; 2nd. In combination with the vertical needle cam K, the mechanism for turning it around laterally and stopping it, such mechanism being the arm M and the stops N O; 3rd. In combination with mechanism for turning the needle cam laterally and stopping it at the extreme of its arc of motion, the vertical needles' thread guide applied so as to be movable into or out of action with such needles; 4th. In combination with the two sets of needles, mechanism for effecting the vertical adjustment of the vertical set relatively to the horizontal set, such mechanism being the screw *w*, its eccentric stud *t* and the grooves applied to the arch and the spindle; 5th. In combination with the two sets of needles, mechanism for forcing upwards certain of the horizontal needles, while the next adjacent vertical ones may be descending, such mechanism being the cam *b* applied to the cam ring D; 6th. The cam groove of the horizontal needles made with a straight branch *e f* and a curved branch *f g*.

## No. 10,423. Fertilizer Distributor. (*Distributeur d'engrais.*)

Walter Marks, Hopewell, N. Y., U. S., (Assignee of Gilbert Jessup), 3rd September, 1879, for 5 years.

*Claim.*—1st. The rotating cylindrical feed cup composed of the shell A and bottom plate B, separated by a continuous opening which is closed by the stationary ring C having a lateral feed opening and a gate; 2nd. The combination of the rotary feed cup A provided with an opening, near its bottom, surrounded by the stationary ring C having a lateral feed opening and a gate, and the rotating distributor D; 3rd. The combination of the

rotary feed cup A, stationary ring C, feed opening *o*, gate I and cone E; 4th. The combination of the rotary feed cup A, stationary ring C, feed opening *o*, gate I, cone E and rotating distributor D; 5th. The combination of the rotary feed cup A, stationary ring C provided with a lateral feed opening and gate I, and the arm M arranged to force the fertilizer into the path of the gate; 6th. The combination of the rotary feed cup A, ring C, opening *o*, gate I and hopper F; 7th. The combination of the rotary feed cup A, provided with a stationary ring C having lateral feed opening and a gate, and the hopper F and plate *b*; 8th. The combination of the rotating feed cup A, stationary ring C provided with a feed opening and a gate, and the bottom plate B and the gear G; 9th. The combination of the rotating feed cup A, stationary ring C, feed opening *o*, gate I, gear G, supporting plate J and hopper F; 10th. The combination of the feed shell W having projecting lip *t* and feed cup A provided with a central discharge opening, and supported by the open frame S having rim T; 11th. The circular feeding shell W, provided with projecting lip *t*, in combination with a feed cup having a central discharge opening; 12th. The combination of the feed cup A, provided with a central discharge opening, and the distributor D and feeding shell W; 13th. The combination of the supporting plate S having rim T, the rotating feed cup A provided with a central discharge opening, and the feeding shell W; 14th. The combination of the feed cup A and distributor D attached to the cup by slotted lug $g_1$; 15th. The combination of the feed cup A, supporting plate S and feeding shell W attached to the plate, so as to be readily removed therefrom by lugs $x$ $x$ and slots $b^1$ $b^1$.

## No. 10,424. Apparatus for Dropping the Cuts of Augers and Auger Bits. (*Appareil à forger les hélices et les mèches des tarrières.*)

Garven Gilmore, Côte St. Paul, Que., (Assignee of William Tucker, Fiskedale, Mass., U.S.), 6th September, 1879, (Extension of Patent No. 3993), for 5 years.

## No. 10,425. Screw Propeller. (*Propulseur à hélice.*)

John I. Thornycroft, Chiswick, England, 6th September, 1879 (Extension of Patent No. 3968), for 5 years.

## No. 10,426. Nut Locks. (*Arrête-noix.*)

Joseph A. Quesnel, Arthabaskaville, Que., 6th September, 1879, for 5 years.

*Claim.*—1st. The elliptic or spring shaped nut lock plate C having an oblong or other shaped key-hole J and a star-shaped aperture I, to allow the nut D to pass through it; 2nd. The nut lock key F provided with a flat or other shaped head having pins G projecting from its under side and the cross-bar H on its other end; 3rd. The fish-plate B having bolt holes L and key holes M; 4th. The elliptic or spring shaped nut lock plate C having an oblong or other shaped key-hole J, a star-shaped aperture I, key F having cross-bar H and pins G, fish-plate B provided with bolt holes L and key holes M.

## No. 10,427. Swing. (*Balançoire.*)

Evangéliste Lavigne, Quebec, 8th September, 1879, (Extension of Patent No. 37), for 5 years.

## No. 10,428. Steam Generator. (*Générateur de vapeur.*)

Charles C. Holton, Chicago, Ill., U. S., (Assignee of Edward G. Good), 8th September, 1879, for 5 years.

*Claim.*—1st. The combination, with the fire-box or furnace of a steam boiler, or other steam generating apparatus, of the series of drop pipes *a a a* and the main circulating pipe C provided with the syphon end D; 2nd. In a steam generating and circulating attachment for steam boilers, the combination, with the boiler A, of the main circulating pipe C and the series of drop pipes *a a a*, the said pipe C receiving the water from the boiler at a point near the bottom and returning the same to the boiler again in the form of steam, through the syphon end of the pipe C inserted in the boiler, in such a manner as to always discharge the steam below the water line, whereby a continuous and regular circulation is maintained.

## No. 10,429. Improvements in Rope Clamps. (*Perfectionnements aux serre-cables.*)

James C. Covert, Troy, N. Y., U. S., 8th September, 1879, for 5 years.

*Claim.*—1st. The method of connecting one part of a rope adjacent to another part, or the ends of two ropes by clamping the same with one or more open rings of metal under extreme pressure; 2nd. One or more open rings clamped around a braided or twisted rope under pressure to prevent unbraiding or untwisting.

## No. 10,430. Music Leaf Turner. (*Appareil à tourner les feuilles de musique.*)

Oliver H. Goodwin, San Francisco, Cal., U. S., 8th September, 1879, for 5 years.

*Claim.*—1st. The holding bars E E with their guiding pieces $F^1$, the bars being united by the diagonal parallel strips F pivoted to the back, in combination with the operating thumb piece G, so that they may be opened and closed; 2nd. The turning arms K provided at their outer ends with the nippers or holders composed of the jaws L N with the spring O and the elastic cushion *d*; 3rd. The turning arms K with their springs V, said arms having the circular enlargement *e* secured to an axis P and provided with a notch R, in combination with the stem T and catch S; 4th. The turning arms K with the hinged circular enlargement *e*, having a pin *a* upon one side, in combination with the eccentrics W and the arms Y with the hooks or catches Z to engage with the pins, said arms being pivoted and operated by the eccentrics; 5th. The arms K mounted to turn upon a central axis, the holding bars E having their leaf retaining edges in a line with the axis of the turning bars; 6th. The music supporting back D, having an inclined base or foot with the slotted openings C, in combination with the studs or screws B projecting from the table, so that the device may be easily attached or detached and held at the proper angle.

## No. 10,431. Galvanic Battery. (*Batterie galvanique.*)

William S. Wilson, Sunderland, England, 8th September, 1879, for 5 years.

*Claim.*—1st. The combination, in galvanic cells or batteries, of an isolator C with the porous diaphragm or cell D for the purpose of more effectually preventing the heavier liquid from gravitating into the lighter; 2nd. The packing of the oxygenating materials with or without sand between the porous diaphragm and the solator 3rd. The application, to cells or batteries, of the condenser E for condensing nitrous fumes, thus enabling them to recombine with the oxygen of oxygenating substances present in the cell and reform nitric acid; 4th. The partial covering of the elements by the isolating anti-corrosive material (paraffine); 5th. The combination, in a battery, of small electrode surfaces near the top of the cells only, with large quantities of liquids; 6th. The combination, in galvanic cells, of the three compartments A containing the positive element and water or saline solution, C containing the oxygenating substance and D containing the negative element and its exciting acid.

## No. 10,432. Artificial Fuel. (*Combustible artificiel.*)

Amisa P. Gotham, Chicago, Ill., U. S., 8th September, 1879, for 15 years.

*Claim.*—The process of making artificial fuel or fire kindling by treating native peat, after being cut into blocks and dried, first to a bath of inflammable liquid and then to a bath of resinous material, to first saturate the blocks with the elements of combustion, which is then sealed, to prevent evaporation, by forming in the block an integral wall of considerable depth, as distinguished from a surface coating or film.

## No. 10,433. Drip Basin for Barrels. (*Bassin recevant le liquide qui s'échappe des barils.*)

Ernest F. Pflueger, Akron, Ohio, U. S., 8th September, 1879, for 5 years.

*Claim.*—1st. The semi-circular trough-pieces D $D^1$ connected by interlocking flanges; 2nd. The basin A having the rack B, screen C and tank E; 3rd. The combination of the trough D $D^1$ and basin A having the screen C and tank E.

## No. 10,434. Churn Dasher. (*Batte-beurre.*)

Charles Frieteborn, Clare, Mich., U. S., 8th September, 1879, for 5 years.

*Claim.*—A churn dasher formed of the obtusely conical plate A having the axial tube or socket B and the inverted central inner cone *b*, and covered at intervals with the radial semi-circular tubes C tapering towards the central socket and provided with the side apertures *c*, the said cone A being provided, under and between the tubes C, with the holes *d e*.

## No. 10,435. Process for Extracting Copper from its Ores. (*Procédé pour extraire le cuivre du minérai.*)

Henry Doetsch, London, Eng., 8th September, 1879, for 5 years.

*Claim.*—The process for extracting copper from its natural ores by means of sulphurous acid, either alone or in connection with other agents.

## No. 10,436. Process for Extracting Copper from its Ores. (*Procédé pour extraire le cuivre du minerai.*)

Henry Doetsch, London, Eng., 8th September, 1879, for 5 years.

*Claim.*—The use of hydrochloric acid or of aquaregia simultaneously with peroxide of manganese or peroxide of iron, or both, or with the residuum of the chlorine works, or with chlorine gas, or chlorides, or hypochlorites, or other oxidizing agents as applied to the extraction of copper and the precious metals when present from crude or unburnt ores.

## No. 10,437. Improvements on Draw-Bars. (*Perfectionnements aux ressorts de traction.*)

Robert Hay, Mineral Point, Wis., U. S., 10th September, 1879, for 5 years.

*Claim.*—As an improvement in draw-bars for locomotives, the frame A with projection B and lugs *b* $b^1$ in combination with the coupling bar C having head *d*, shoulder K and collar *j*, the cross heads *g i* and intermediate spiral spring *h*, whereby when the engine is in motion the coupling bar bears against the spring through the cross-heads and the strain is taken up by the spring.

## No. 10,438. Improvements on Magazine Fire Arms. (*Perfectionnements aux armes à feu à répétition.*)

Andrew Burgess, Owego, N. Y., U. S., 10th September, 1879, for 5 years.

*Claim.*—1st. The combination of a mortised or shouldered breech-bolt with a pivoted lever working in the mortise or against the shoulders, to move and to lock the bolt; 2nd. The breech-bolt having the arc or bearing $B^1$ and shoulder $B^2$ in combination with the pivoted brace to move and lock said bolt; 3rd. A swinging brace locking the breech bolt at an angle with the barrel in combination with longitudinal ribs and grooves to resist the upward tendency of the bolt; 4th. The brace, the bolt and the firing pin in combination, whereby the firing pin is withdrawn by the unlocking of the brace; 5th. A firing pin provided with the downward projection *f* in combination with the brace L and reciprocating bolt; 6th. The combination of the bolt, the firing pin provided with the downward projection *f* and the locking lever L by which the forward movement of the firing pin is prevented until the bolt is locked; 7th. A starting lever *e*, pivoted to the movable part of the breech mechanism, in combination with studs or projections on the side of the frame; 8th. The pivoted ejecting lever *e* in combination with the bolt and with a stop or stops projecting from the inside of the receiver; 9th. A removable stop S in combination with the bolt and carrier.

## No. 10,439. Improvements in Dumb Stoves.

(*Perfectionnements aux poêles-sourds.*)

Joseph Moreau, Jr., Windsor Mills, Que., 10th September, 1879, for 5 years.

*Claim.*—1st. In a dumb-stove, the combination of the oven C with the shell or body A, air-flues B, arched-sheet E and pipe D; 2nd. In a dumb-stove, the warming oven C.

## No. 10,440. Improvements in Rock Drills.

(*Perfectionnements aux forets de mines.*)

Thomas B. & Thomas R Jordan, London, Eng., 10th September, 1879, for 5 years.

*Claim.*—1st. In a machine for drilling rocks and other hard substances the employment or application of an air or pneumatic cylinder *a* and piston *b*; 2nd. A machine for drilling or perforating rocks or other hard substances and in which the action is due to pneumatic pressure upon a piston working in a cylinder, providing the said cylinder with means for taking into the same at each stroke of the piston a small additional supply of air, and for regulating and controlling the pressure therein; 3rd. In, and forming part of a machine for drilling rocks and other hard substances, the mechanism comprising the long nut *g* secured in the lifting block *f* and fitted to a screw thread on the drill bar *e*, and arranged to slide through and turn with a wheel *h*; 4th. In the said machine and in combination with the other parts of the same, the mechanism for regulating the angular position of the drilling or other implement or its movement around its axis; 5th. In a machine for deep boring and similar operations, the means whereby pneumatic pressure may be employed alternately with hydraulic pressure for raising or driving down or forward the drill or perforating implement; 6th. In a machine for hammering, forging and laminating metals, crushing minerals and other like operations, the construction, combination and arrangement of parts.

## No. 10,441. Improvements on Valves. (*Perfectionnements aux soupapes.*)

Freeman Brown, Haverhill, Mass., U. S., 10th September, 1879, for 5 years.

*Claim.*—1st. A conical plunger-valve closing by a longitudinal movement into a surrounding seat of the same form; 2nd. A conical plunger-valve closing by its longitudinal movement into a surrounding seat and being free to turn on its own axis; 3rd. A conical plunger-valve, closing by its longitudinal movement into a seat surrounding it, in combination with two or more eduction pipes or passages, either at its sides or at its inner end, or both; 4th. A conical valve-plug A swivelled to its stem *a*; 5th. A valve-plug A made detachable from its cap or holder *g*.

## No. 10,442. Improvements on Magazine Guns.

(*Perfectionnements aux fusils à répétition.*)

Andrew Burgess, Owego, N. Y., U. S., 10th September, 1879, for 5 years.

*Claim.*—1st. A reciprocating bolt to close and open the breech, a link or links L pivoted to said breech bolt on a line with the bore of the barrel and in combination therewith, the guard lever pivoted to the other end of the link or links L and operating to open, close and lock the bolt through said link connection without intermediate part; 2nd. The continuous breech bolt B pivoted to and operated by the links L and lever G, all in combination, so that the breech is locked against the frame A; 3rd. The link or links L, pivoted directly to the reciprocating bolt, a guard lever pivoted to the other end of said link or links and operating thereby to move and lock the breech, in combination with the spring T for holding said lever and parts in position; 4th. The breech bolt, links and pin *p* combined to operate the slide F; 5th. The pivoted extractor having a projection below the pivot or toward the centre of breech block that, closing against the head of a cartridge, turns the hook down over the flange; 6th. A breech bolt, or attachment thereto, having an inclined surface at the lower front end, whereby a cartridge is given a tendency to move forward when raised against the bolt; 7th. A bolt having or carrying an incline at its front end in combination with a vibrating carrier; 8th. In a vibrating cartridge carrier pivoted at its rear and extending forward through or by the operating lever, a spring to press the front of the carrier downward to stop the delivery end of the magazine when the breech is closed, a projection W on the guard lever to operate the carrier and a curved surface C[11] eccentric with the movement of the lever, all in combination to operate as specified.

## No. 10,443. Saw Sharpening Machine. (*Machine à affûter les scies.*)

Milo Covel, Chicago, Ill., U.S., 12th September, 1879, for 5 years.

*Claim.*—1st. The head piece B, having a lateral movement on a curved plane, in combination with the vertical inclined sliding gate C; 2nd. The inclined guides *b b* in combination with the sliding emery wheel gate C; 3rd. The combination, with the emery wheel F, of the collar E provided with the flange or bead *a*, or its equivalent; 4th. The combination, with the emery wheel arbor D, of the collar E provided with the flange or bead *a*; 5th. The combination with the emery wheel gate C, of the adjustable pitman rod G, the sleeve H provided with the set screw A and the loose joint *c*; 6th. The combination of the adjustable eccentric L having a segmental slot, eccentric rod K, the horizontal perforated lever J, loose joint *c*, sleeve H, pitman rod G, emery wheel gate C and the adjustable stop *a*[1]; 7th. The combination, with the driving shaft R, of the eccentric and the eccentric rod *d*, lower feed lever P, pin *c*[11], the irregular shaped cam piece *o*, the vertical feed arm M, the adjustable slide O and the feed finger N; 8th. The combination of the pinion R with the shifting gear T, flange or disk *d*[1] having the openings *d*[11] *d*[11] on the rim of said flange, the guides or wings *e e* and the pin P; 9th. The combination of the perforated lever U, having the pin P[1] inserted in the loose end, with the rod V and the head piece B.

## No. 10,444. Improvements in Carriage Jacks.

(*Perfectionnements aux chèvres de voitures.*)

Edwin Prescott, Hampton Falls, N. H., and George W. Gregory, Boston, Mass., U. S., 12th September, 1879, for 5 years.

*Claim.*—1st. A carriage jack provided with an upright *a* and a lifting bar C connected together by links *e f* which are independent of the handle or lifting lever *g*, the said links working in parallel planes in all positions of the lifting bar, so as to direct the lifting bar in substantially a straight line and keep it free of the upright; 2nd. The improved carriage jack consisting of an upright *a*, a lifting bar *g* connected with it by links *e f*, at two or more points, and a lifting lever *g* on a fulcrum independent from the fulcrum of the links.

## No. 10,445. Improvements on Folding Boats.

(*Perfectionnements aux bateaux composés de plusieurs parties.*)

John W. D. McDonald, Banbridge, Eng., 12th September, 1879, for 5 years.

*Claim.*—1st. The combination, in a folding boat or vessel, of longitudinal sections or parts or stiff bendable elastic material having the juxtaposed edges of similar shape or curvature, and continuous water proof hinges or joints connecting the said longitudinal sections or parts together; 2nd. The combination, in a folding boat or vessel, of a bottom 1, of wood or other stiff bendable elastic material, curved at both its longitudinal edges, two sides 4 of similar material and having their lower edges similarly curved, and two continuous hinges or joints of leather 3 connecting said sides to said bottom; 3rd. The combination, in a folding boat or vessel, of a bottom 1, of wood or other stiff bendable elastic material, curved at both its longitudinal edges, two sides 4 of similar material and having their lower edges similarly curved, two continuous hinges or joints of leather 3 connecting said sides to said bottom, risings or ledges 13 fastened to said sides, tapered pieces or guides 14 fixed above said risings or ledges and thwarts or cross seats with recessed ends; 4th. The combination, in a folding boat or vessel, of a bottom 1, of wood or other stiff bendable elastic material, curved at both its longitudinal edges, two sides 4 of similar materal and having their lower edges similarly curved, two continuous hinges or joints of leather 3 connecting said sides to said bottom, means for keeping said boat or vessel open and spreaders or openers 9 secured by hinges to the bottom of the boat; 5th. In a folding boat or vessel composed of a bottom 1, of wood or other stiff bendable elastic material, formed in two parts curved at their outer edges and connected together by a straight central longitudinal water proof hinge or point, two sides 4, of wood or other stiff bendable elastic material, having their edges curved like toose of the bottom, two continuous water proof hinges or joints 3 connecting said sides to said bottom and means for keeping said boat open.

## No. 10,446. Process for Preserving Butter.

(*Procédé de conservation du beurre.*)

Gustave Bischof, London, Eng., 12th September, 1879 for 5 years.

*Claim.*—The process of preserving butter, or other organic substances, by the application of spongy iron impregnated with water.

## No. 10,447. Barbed Wire Fences. (*Clôtures de fil de fer barbelé.*)

Thomas J. Clark, John Forrest, and John G. Short, Woodstock, Ont., (Assignees of George W. Allen, Creston, Ill., U. S., 12th September, 1879, for 5 years.

*Claim.*—Two short pieces of wire B placed on opposite sides of a twisted double wire A and having their ends twisted together, so as to grip the wire between them and their pointed ends set at four different angles, the whole being japanned.

## No. 10,448. Water Meter. (*Hydromètre*)

William B. Mounteney, Chicago, Ill., U. S., 12th September, 1879, for 5 years.

*Claim.*—1st. The double elastic packing thimble *e*; 2nd. The strip or rib *d* in combination with the diaphragm A and the casing of a water meter; 3rd. The improved moulded diaphragm for water meters composed of two or more strata of vulcanized rubber *b b* and the interposed stratum of textile fabric.

## No. 10,449. Combined Hay Rake and Loader.

(*Râteau et élévateur à foin combinés.*)

David W. Bovee, Richland Centre, Wis., U. S., 12th September, 1879, for 5 years.

*Claim.*—The combination, with the main frame D E and elevator F G, of the notched arms H pivoted to the frame, the coiled spring wire catches I fastened to the elevator, arranged to pass over the arms H and by spring pressure take into the notches thereon, thus prevent any accidental displacement of the elevator and at the same time impart a certain degree of flexibility or elasticity to the elevator.

## No. 10,450. Underground Telegraph Conductor. (*Conducteur de télégraphe souterrain.*)

Philip Arbogast and Thomas J. McTighe, Pittsburgh, Penn., U. S., 12th September, 1879, for 5 years.

*Claim.*—1st. The mode of enclosing wires in vitreous material consisting in inserting the wire in a solid mass of molten vitreous material, and then drawing the wires or mass of vitreous material away; 2nd. The mode of forming rods of glass-coated wires by first drawing said wires through a solid mass of molten glass and then through a suitable shaping die; 3rd. The mode of forming rods of glass-coated wires by passing said wires through a guide plate, then through a solid mass of molten glass and finally through a suitable shaping die; 4th. The mode of forming rods or lengths of glass-coated wires by laying the wires between two separate layers of glass or vitreous material and consolidating the whole by heat or pressure, or both; 5th. The mode of forming sections of encased glass coated wires by inserting a lining of glass in a metal trough, then laying the wires on said lining, next inserting a top layer of glass and consolidating the whole by heat or pressure, or both; 6th. A fluted glass rod having wires, passing through the same, corresponding to the flutings; 7th. A system glass-coated wires or wires coated with vitreous material encased in a metallic shell open at one side; 8th. In a system of glass-coated wires, the glass having moulded ends; 9th. The detachable perforated guide plates *f*, as a means of moulding the ends of the lengths and aligning the wires; 10th. As a means of connecting the sections of underground telegraph conductors, two flanged sleeves having enlargements at the middle and embracing the sections with

suitable means of tightening the said sleeves together; 11th. The mode of coupling telegraph wires consisting in bending the wires out of line, inserting between them a grooved conducting strip and compressing the whole between insulating blocks; 12th. The mode of coupling telegraph wires by soldering, twisting or amalgamating the ends together and then pressing them between blocks of insulating material; 13th. The coupling consisting of two perforated blocks of insulating substance in combination with suitable means of forcing them together; 14th. The coupling consisting of two perforated blocks of insulating substance, suitable means of forcing them together and interposed conducting strips i; 15th. The coupling consisting of two blocks of insulating material and the flanged sleeves enclosing said blocks with suitable means of forcing them together.

## No. 10,451. Improvements on Fountain Pens.

(*Perfectionnements aux plumes-fontaines.*)

Alonso T. Cross, Providence, R. I., U. S., 12th September, 1879 for 5 years.

*Claim.*—1st. The air passage made in the solid side or wall of the ink reservoir and extending from the vent valve or cap, at the upper end of the holder, to a point near the lower end of the ink chamber; 2nd. The combination of the reservoir and point section by means of a movable tubular coupling; 3rd. The combination of an adjustable spindle holder with a removable tubular coupling serving to connect the spindle holder, point section and main reservoir together; 4th. The combination of the spindle holder J, pin I, tube or cylinder G provided with a hole *g* and collar H, spring K and washer L; 5th. A tapering pointed ink delivering tube combined with a writing spindle tipped with a piece of iridium, or other hard substance, provided with a fluted edge.

## No. 10,452. Land Roller.

(*Rouleau d'agriculture.*)

Oscar F. Shafer, London, Ont., 15th September, 1879 (Extension of Patent No. 3,848), for 5 years.

## No. 10,453. Improvements in Pipe Joints.

(*Perfectionnements aux joints de tuyaux.*)

Abraham Edwards, Philadelphia, Pa., U. S., 15th September, 1879, for 5 years.

*Claim.*—1st. In combination with the neck or boss *a* or the outlet or neck of a basin, bowl, tub or other fixture and a waste or discharge pipe B, a sliding pipe H adapted to be moved down into said waste pipe and to form a close conduit connection between it and said neck or outlet, when raised; 2nd. The combination of waste pipe B, mercury trap consisting of cap C and trough $B^2$ and a sliding pipe H adapted to fit in said waste pipe, when the said cap is lowered and sealed, and to be elevated when said cap is raised or opened; 3rd. The combination, with a neck or outlet *a*, of waste or discharge B, cap C, sliding pipe H and intermediate mechanism for drawing up said pipe when said cap is lifted; 4th. The combination of pipe B, cap C and sliding pipe H with hangers $C^2$ $C^2$, levers I I and pitmans K K, constructed and combined for operation; 5th. The combination, with cap C, of pintle or shaft $C^1$, winch or crank *c* and handle or rod D; 6th. The combination of cap C, sliding pipe H and intermediate mechanism connecting said pipe and cap, a shaft $C^1$, rod or handle D and arm E with weight *e*; 7th. In combination with the pipe B, the mercury trough $B^2$, having flaring or lipped sides or walls to prevent the slopping over of the fluid or metal contained in said trough; 8th. The cap Q, having depending segmental racks R R, in combination with pipe S having teeth or openings $s^1$ $s^1$ meshing therewith; 9th. The combination, with the seal case O, of basin N, flange bolted thereto; and sliding pipe S arranged and operating to form, when raised, a connection with said basin and a direct close conduit therefrom to pipe P or trap $S^1$.

## No. 10,454. Mode of Preparing Hides for Tanning.

(*Mode de préparation des peaux pour le tannage.*)

John B. Burland, Montreal, Que. (Assignee of Charles J. Tinnerholm, Brooklyn, N. Y., U. S.), 15th September, 1879, for 5 years.

*Claim.*—1st. A compound of water, unslaked lime, soda ash, salt-petre and flour of sulphur; 2nd. A compound of water, unslacked lime, soda-ash, salt-petre and flour of sulphur, in combination with a bath of caustic ammonia, sal soda and borax.

## No. 10,455. Vehicle Brake.

(*Frein de voiture.*)

William D. C. Pattyson and William Farwell, Sherbrooke, Que., 15th September, 1879, for 5 years.

*Claim.*—1st. The combination of lever A and its connections with brake F; 2nd. The slide lever D in combination with draft rods B and E; 3rd. The combination of withdraw lever C and its strap K with the brake rod B; 4th. The combination of lock link G and its cord H with brake connections at lever D; 5th. The combination of lever A, lever C, brake connections B D E, lock link G with brake F.

## No. 10,456. Improvements on Sash Balances.

(*Perfectionnements aux contre-poids de croisées.*)

William Milner, Strathroy, Ont., 15th September, 1879, for 5 years.

*Claim.*—1st. The endless screw-winder G meshing into cog-wheel E rigidly attached to winding axle *b*, when used singly or in combination with the lower box B and cog-wheel F; 2nd. The combination of cone shaped box B, when used to contain a light spring to regulate the action of the upper spring contained in box A which carries the weight of the sash; 3rd. The arrangement of boxes A B, when placed side by side so that the winder G operates both springs simultaneously.

## No. 10,457. Machine for Distributing Insecticide Liquid.

(*Machine à distribuer le liquide insecticide.*)

John Burns and William H. Baldwin, Ottawa, Ont., 16th September, 1879, for 5 years.

*Claim.*—1st. The tube A having bellows B fitted to end C, and provided with branch pipe D attached to flexible tube E, the whole arranged together and combined with tank F; 2nd. A tank, for insecticide fluid, containing an agitator H fitted to the sides of tank F and holding, at its base, a brush.

## No. 10,458. Fly-Wheel for Engines.

(*Roue d'air pour les machines à vapeur.*)

Pierre E. Jay, New York, U. S., 17th September, 1879, for 5 years.

*Claim.*—In combination with the wheel A, the arm having the slot *c* and and the thimble *d*.

## No. 10,459. Method of Curing Fish.

(*Manière de saler le poisson.*)

Lyman Woodruff, Ellensburgh, Oregon, U. S., 18th September, 1879, for 5 years.

*Claim.*—The process for treating and curing the fish or meats consisting in subjecting the article to a dressing.

## No. 10,460. Improvements on Flower Stands.

(*Perfectionnements aux jardinières.*)

Frederick Snyder, Berlin, Ont., 18th September, 1879, for 10 years.

*Claim.*—The combination of the flower stand with the fountain.

## No. 10,461. Boot and Shoe Pegging Machine.

(*Machine à cheviller les chaussures.*)

William G. Budlong, Providence, R. I., U. S., 18th September, 1879, for 5 years.

*Claim.*—1st. The combination of the following instrumentalities, a device for feeding and corrugating the wire, a device for shaping and separating the nail, an oscillating carrier, a locking device for locking the carrier and a driver arranged to drive the nail by a blow; 2nd. The combination of a device for feeding and corrugating the wire, a device for regulating the length of the nails, a device for shaping and cutting the wires into the varying lengths, a driving device and a work feeding device; 3rd. The combination, with the corrugating and feeding rolls, of a fixed tube or holder, a reciprocating cutter and an oscillating carrier provided with a hole arranged to hold the nail, when it is separated from the wire, and carry the same and hold it under the driver; 4th. The combination, with the corrugating and feeding rolls of a shoe nailing machine, of a device for regulating the rotation of the rolls and the length of the wire delivered so as to vary the length of the nail, during the operation of the machine; 5th. The combination, with a nail carrier, arranged to carry the nail from the cutter to the driver, and a work feeding device, of a yielding slide placed below the carrier, to prevent the falling of the nail from the carrier, and provided with a hole to receive the nail arranged to yield to the work feeding device; 6th. The combination, with the driving shaft B, of the cams C D E F G and H arranged to operate the various parts; 7th. The combination, with the carrier K provided with the segmental gear, of the slide $d^1$ provided with the rack at its end, the lever *d* and cam D, the whole arranged to oscillate the carrier so as to bring the hole in the carrier, alternately, under the holding tube *i* and under the driver; 8th. The combination, with the rack $f^3$ arranged to rotate the feeding and corrugating rolls $f^5$ $f^6$, of the slide $f^7$ provided with the serrated stops, arranged to arrest the descent of the rack and regulate the length of the nails; 9th. The combination, with the cam F, rod $f^1$ and arm *f*, of the spring $f^2$, rack $f^3$ and adjustable stop $f^7$, the whole arranged so that the rod and rack are raised by the cam and forced down by the spring, until the rack is arrested by the adjustable stop $f^7$ and the reciprocation of the rack is regulated; 10th. The combination, with the carrier K and the work feeding arm $g^1$, of the spring pressed slide *l* arranged to yield to the feeding arm; 11th. The combination, with the slide $f^7$ provided with the graduated stops, of the bevel gears $f^8$ connected with the slide by a pin and slot arranged to regulate the length of the fastening device in a shoe nailing machine; 12th. The combination, with the spring pressed driver A, of the oscillating carrier K, the work feeder arm $g^1$ and the slide *l*, the whole arranged to carry the nail under the driver and over the hole in the slide *l*, drive the nail and feed the work.

## No. 10,462. Improvements in Door Fastenings.

(*Perfectionnements aux fermetures des portes.*)

Thomas P. White, Ashtabula, Ohio, U. S., 18th September, 1879, for 5 years.

*Claim.*—The combination of the barrel C, having the slots *c* $c^1$ $c^2$, with the chain bar D provided with the handle *d* and the hook $d^1$.

## No. 10,463. Broom Holder.

(*Porte-balai.*)

Joseph D. Leach, Penobscot, Me., U. S., 18th September, 1879, for 5 years.

*Claim.*—A broom holder formed of a single piece of wire and with the eye *a*, members *b b*, jaws *c c* and the slotted shield *d* formed to receive the wire holder.

## No. 10,464. Churn Dasher.

(*Batte-beurre.*)

William R. Walker, Ronceverte, Va., U. S., 18th September, 1879, for 5 years.

*Claim.*—The cylindrical perforated cup A, having a socket tube B braced by radial blades *a*, and provided also with a conical and upwardly flaring flange *b*, located upon the upper and outer surface of the dasher about the socket tube and rising from the plane of the top of the cap.

## No. 10,465. School Desk and Seat.

(*Pupitre et banc d'écoles.*)

Oliver S. Garretson, Buffalo, N. Y., U. S., 19th September, 1879, for 5 years.

*Claim.*—1st. The wedge *u* acting against the wood at *c*, to force the inoline plane *a* to its seat beside the dovetail groove in the wood and there held by the screw *o*, 2nd. Constructing the parts of a seat or desk so that, when they are put together, the torsional spring of the irons will exact a constant pressure against the hinged joint, for the purpose of maintaining it, by friction, in any position; 3rd. The external stops *i n* in conjunction with the internal stop P and cushion *e*; 4th. The rounded tongues and grooves J J, the tongues standing out upon opposite sides of the respective edges of the slats.

## No. 10,466. Improvements in Hosiery. (*Perfectionnements dans la bonnetterie.*)

Howard K. Clarke, St. John, Que., 20th September, 1879, *for 5 years*

*Claim.*—Knit hosiery having doubled tops formed in one with and by the same process as the rest of the stocking or sock.

## No. 10,467. Improvements in Sewing Machines. (*Perfectionnements aux machines à coudre.*)

Nathan Hayden and Erastus M. Skinner, Chicago, Ill., U. S., 20th September, 1879, for 5 years.

*Claim.*—In the combination of a slitted needle-bar, two needles and a single clamp and screw adapted to compress and retain both needles with equal security

## No. 10,468. Combined Box and Sample Card. (*Boîte et carte à échantillons combinées.*)

Morris H. Pulaski, Philadelphia, Pa., U. S., 20th Sept., 1879, for 5 years

*Claim.*—1st. A box, for packing lace or embroidery, that will conveniently open and close and allow the removal or replacing of any part of the goods, without soiling or injuring the goods or the box, having flaps C, slits F F, measure D, ring E, 2nd. A box, for packing lace, embroidery, &c., having flaps C, slits F F in the bottom of the box, for the purpose of exposing samples of the contents of the box.

## No. 10,469. Improvements in Hydrants (*Perfectionnements aux bornes-fontaines.*)

Norris C. Peterson, Sarnia, Ont., 20th September, 1879, *for 5 years*

*Claim.*—1st. The open water way through head of spigot plug *l*, turning within the casing *m* with combination of lock nut *i*, to hold both pipe and plug rigidly, and extension handle *g* insuring the flow or cut-off by a quarter turn in either direction; 2nd. The combination, with the head of the discharge pipe *f*, of the attachment *h* and lock nut *i*, to be used instead of the handle for yard and house purposes, 3rd The combination of two waste water vents *o* with the outer casing *m* insuring the escape of returning water, at either turn of the handle *g*, or attachment *h*; 4th. The surface box with iron bottom perforated for reception pipe and waste water vents *c* and fitted with stops *d* and angle irons *e*.

## No. 10,470. Machine for Distributing Potato Bug Poison. (*Machine à distribuer le poison pour la mouche à patates.*)

David Lockhead, Hochelaga, Que., 20th September, 1879, *for 5 years.*

*Claim.*—1st. The combination of the axle *b*, having adjustable wheels *c*, frame *a*, shaft *l* having brushes, boxes *i*, 2nd. The combination of the boxes *i*, having hopper bottoms $a_2$ and slips *p*, legs $d_2$, conductors $e_2$, shoes $f_2$ and brush *n*; 3rd. The combination of the box *i*, having hopper bottom $a_2$ and slip *p*, leg $d_2$, conductor $e_2$, shoes $f_2$, rake $l_2$ and revolving brush *n*.

## No. 10,471. Mowers and Reapers. (*Faucheuses-moissonneuses.*)

Walter H. Laurie, Montreal, Que., 22nd September, 1879, for 5 years.

*Claim.*—In the combination with a face cam or corrugated face wheel, the bar or bars D, carrying rollers F F, all adjustable in position relatively to said wheel.

## No. 10,472. Improvements on Locomotive Pilots and Snow Ploughs. (*Perfectionnements aux locomotives de réserve et charrues à neige.*)

John J. Van Wagenen, Syracuse, and John Butler, Oswego, N. Y., U. S., 22nd September, 1879, *for 5 years.*

*Claim.*—1st. The flat faced rectangular framed locomotive pilot, having the slats *a a* and openings or spaces between them, and provided with pockets or slide holders B C, or their equivalents, adapted to receive and hold the removable sliding plates; 2nd. The combination, with a pilot for locomotives and the cross-beam A, of a rearwardly superimposed snow plough constructed with an apron and mould boards, united so as to form a divider, 3rd The combination of the pilot attached to the cross beam A and the rearwardly superimposed snow plough, attached in front to the pilot frame or cross-beam and resting upon or against the former end of the boiler and stay rods, with the frame and boiler of a locomotive.

## No. 10,473. Improvements on Car-Couplings. (*Perfectionnements aux attelages des wagons.*)

Simon J. Keim, Catasauqua, Pa., U. S., 22nd September, 1879, *for 5 years*

*Claim.*—1st The combination, in a draw-head, of a series of bolts secured on shafts, one above the other, levers at the ends of said shafts and a link uniting said levers, 2nd The combination, in a draw head, of a series of bolts secured on shafts, one above the other, with the inclined levers at the ends of said shafts and a weighted link uniting said levers, 3rd. The combination, in a draw-head, of two or more recesses, a series of bolts secured on shafts, in said recesses, one above the other, stops formed in said recesses to arrest the forward motion of the toes of the bolts, levers at the ends of the shafts and a weighted link connecting said levers.

## No. 10,474. Improvements on Potato Diggers. (*Perfectionnements aux arrache-patates.*)

Lewis A. Aspinwall, Albany, N. Y., U. S. 22nd September, 1879, for 5 years.

*Claim.*—1st. Constructing the separator with two or more bars C $C_1$, of a step by step or sectional form, starting from a head or disk, or ring *c* and proceeding in a helical, or mainly, or approximately helical direction, 2nd Constructing the plough with jointed fingers *q* and suspending and adjusting it.

## No. 10,475. Improvements in Sewing Machines. (*Perfectionnements aux machines à coudre.*)

Charles Raymond, Guelph, Ont., 22nd September, 1879, for 5 years.

*Claim.*—1st. The wheel C, having a concave periphery and provided with the inflected groove $C_1$, in combination with the pivoted rocking shaft D. 2nd. The rocking shaft D, pivoted to the frame of machine below the wheel C and provided with the friction roller $D_1$ and upwardly extending shuttle arm $D_2$, 3rd. The combination, with the eccentric wheel G and buckle $G_1$, of the pivoted block H and feed bar F; 4th. The combination, with the eccentric wheel G and buckle $G_1$ provided with the slotted arm $G_2$, of the pivoted block H provided with the pin *h*, and feed bar F provided with the pin *f*; 5th. The blocks H $H_1$ in combination with the feed bar, 6th. The combination of the adjusting screw I with the block $H_1$ provided with the lug $H_2$ and the feed bar F; 7th. The recessed shaft K, provided with the wheel M, spring $K_2$ and adjustable head $K_1$, in combination with the bracket L and driving wheel of machine, 8th. The shaft K, having an adjustable spring head to receive one end of bobbin, in combination with bracket L provided with extended arm $L_1$ forming a stationary point of support for the other end of bobbin; 9th. The bobbin shaft K, provided with a screw thread, in combination with the worm wheel N and pinion $N_1$, 10th The pinion $N_1$ in combination with the bar O provided with the toothed slot $O_1$; 11th. The pinion $N_1$ and bar O, provided with the toothed slot $O_1$ and diagonal slot $O_2$, in combination with the spring P; 12th The bar O provided with the flange $O_3$, in combination with the switch plate Q, 13th The combination, with the bobbin shaft, of a self-acting reciprocating bar provided with a thread holder, said bar being operated from the bobbin shaft and arranged to guide the thread, to and fro, on the bobbin, during the operation of winding.

## No. 10,476. Drilling, Turning and Threading Machine. (*Machine à forer, tourner et fileter.*)

Nathaniel H. Shaw, Bedford, Que., 22nd September, 1879, *for 5 years*

*Claim.*—1st. The combination of the stationary gear *e*, having an annular *f*, with the revolving plate and the tool carrier *l*; 2nd. The combination of the bracket *a* having projections *c d*, revolving plate *l*, provided with a system of gears operated by gear teeth formed on the projection *d*, guides *n q*, rest *p*, centre $c_2$ and bracket $b_2$, 3rd. The combination of the plate *l* guides *n q*, rest *p*, set screws *u s t*

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# List of Patents issued up to 20th October, 1879, but not yet Officially published in the Patent Office Record.

No. 10,482. A. Lépage, Montreal, Que., "Valve and Water Tap," 20th September, 1879.

No. 10,483. J. Frazier, Centralia, Ill., U. S. A., "Fence Post," 26th September, 1879.

No. 10,484. G. W. Aldrich, Brooklyn, N. Y., U. S. A., "Oil Tank," 26th September, 1879

No. 10,485. D. W. Baird, Geneva, N. Y., U. S. A., "Brace or Stay for Carriage Top," (Extension of Patent No. 3,939), 26th September, 1879.

No. 10,486. L. Crofoot, Pavilion, N. Y., U. S. A., "Bag Holder," (Extension of Patent No. 3,995), 26th September, 1879.

No. 10,487. W. B. True, Silver Islet, Ont., "Vanning Machine," (Extension of Patent No. 3,974), 27th September, 1879.

No. 10,488. J. Rhule, Jr., and W. H. Cameron, Pittsburgh, Penn., U.S. A., "Oil Can," 27th September, 1879.

No. 10,489. H. S. Servas, St. John, N.B., "Gas Regulator," 27th September, 1879.

No. 10,490. H. Killam, New Haven, Conn., U. S. A., "Carriage Axle," 27th September, 1879.

No. 10,491. J. Morse, Clinton, Ont., "Thrasher and Grain Separator," 27th September, 1879.

No. 10,492. D. W. Norris, Elgin, Ill., U. S. A., "Can," (Re issue of Patent No. 8,280), 1st October, 1879.

No. 10,493. L. E. Morin, Montreal, Que., "Key for Water Tap," 2nd October, 1879.

No. 10,494. H. Barrett, London, England, "Bottle Stopper," 2nd October, 1879.

No. 10,495. R. Chappell, Alliston, Ont., "Galvanized Iron Monument," 2nd October, 1879.

No. 10,496. E. S. Higgins, Ottawa, Ont., "Fanning Mill," 2nd October, 1879.

No. 10,497. T. Doney, Chicago, Ill., U. S. A., "Process of Oleographic Painting," 2nd October, 1879.

No. 10,498. R. Whiting and M. & W. Weathered, Toledo, O., "Cutter Bar for Harvester," 2nd October, 1879.

No. 10,499. C Nelson, Port Huron, Mich., U. S. A., and J. S. Kite, London, Ont., "Hat Holder," 2nd October, 1879.

No. 10,500. W. Zartman, Petaluma, Calf., U. S. A., "Tea Weight," 2nd October, 1879.

No. 10,501. J. Knight and H. Hilliard, Musquash, N B., "Hold back for Harness," 2nd October, 1879.

No. 10,502. B. L. d'Aubigne, Waterbury, Conn., U. S. A., "Tubular Rivets," 2nd October, 1879.

No. 10,503. F. Avery and C. B. Randall, Garden Prairie, Ill., U. S. A., "Boot Counter," 2nd October, 1879.

No. 10,504. J. A. Quesnel, Arthabaskaville, Que., "Nut Lock," 2nd October, 1879.

No. 10,505. A. A. Armstrong, Milford, Penn., U.S.A., "Sash Fastener," 2nd October, 1879.

No. 10,506. W. Ransford, Brighton, England, "Brine Evaporator," 4th October, 1879.

No. 10,507. R. Jones, Berkeley, England, "Process and Apparatus for Preserving Animal Flesh," 4th October, 1879.

No. 10,508. F. L. Fairchild and C. G. Cooper, Mount Vernon, Ohio, U. S. A., "Fraction Engine," 4th October, 1879.

No. 10,509. F. A. Walsh, Chicago, Ill., U. S. A., "Paint Can," 4th October, 1879.

No. 10,510. The Adams Tobacco Company (Assignee of E. McMullen), Montreal, Que., "Tobacco Machine," (Extension of Patent No. 4,862) 4th October, 1879.

No. 10,511. O. A. Howland, Toronto, Ont., "Mode of Carriage on Allied Land and Water Routes," (Extension of Patent No. 3,920), 4th Oct., 1879.

No. 10,512. J. B. & L. C. Clark, Plantsville, Conn., U. S. A., "Dies for Heading and Squaring Bolts," (Extension of Patent No. 5,177), 7th October, 1879.

No. 10,513. J. B. & L. C. Clark, Plantsville, Conn., U. S. A., "Dies for Heading and Squaring Bolts," (Extension of Patent No. 5,177), 7th October, 1879.

No. 10,514. O. H. Curtis, Milwaukee, Wis., U. S. A., "Stone and Arrow Projecting Device," 7th October, 1879.

No. 10,515. D. L. Grover, N. Y., U. S. A., "Reaper and Mower Guard, 7th October, 1879.

No. 10,516. W. N. Blakeman, Jr., New York, U. S. A., "Process for Treating Bed Cushions, &c.," 7th October, 1879.

No. 10,517. J. W. Morris, Moss Point and M. A. Dees, Scranton, Miss., U. S. A., "Gang Circular Saw Mill," 7th October, 1879.

No. 10,518. H. B. Varns and J. P. Willett, Washington, Cal., U. S. A., "Process for Cleansing Millstones," 7th October, 1879.

No. 10,519. A. Merrick, Fulton, N. Y., U. S. A., "Wheel Hub," 7th October, 1879.

No. 10,520. L. Morgan, Port Washington, Wis., U. S. A., "Grain Separator," 7th October, 1879.

No. 10,521. D. P. Sharp, Ithaca, N. Y., U. S. A., "Horse Rake," 7th October, 1879.

No. 10,522. W. Goldie, Fentonville, Mich., U. S. A., "Shingle Machine," 7th October, 1879.

No. 10,523. A. Switzer, Nepean, Ont., "Churn Power," 7th October, 1879.

No. 10,524. E. Vogelsang, Berlin, Ont., "Cast Iron Skylight and Roof Window," 7th October, 1879.

No. 10,525. J. J. Christie, Henderson, Tenn., U. S. A., "Paper File and Binder," 7th October, 1879.

No. 10,526. W. L. Eveland, Fingal, Ont., "Axle and Journal Box," 7th October, 1879.

No. 10,527. J. Garrard, Cincinnati, Ohio, U. S. A., "Rake and Hand Binder," 7th October, 1879.

No. 10,528. T. O. Alsing, Kossing, Sweden, "Albumen Manufacturing Process," 7th October, 1879.

No. 10,529. W. A. Rife, Valleymills, Va., U. S. A., "Feed Cutter," 7th October 1879.

No. 10,530. L. A. Parter, St. Catharines, Ont., and C. F. Farlin, Toledo, Ohio, U. S. A., "Washing Machine," 8th October, 1879.

No. 10,531. W. P. Healey, New Orleans, La., U. S. A., "Metallic Splice for Wire Rope," 8th October, 1879.

No. 10,532. G. P. Merrill and P. Dowling, Toledo Ohio, U. S. A., and E. A. Gossage, St. Thomas, Ont., "Railway Car Ballast and Earth Unloader," 8th October, 1879.

No. 10,533. D. Armstrong, Chicago, Ill., U. S. A., "Nail Forging Machine," 8th October, 1879.

No. 10,534. W. T. Bunnell, Ottawa, Ont., "Clothes Wringer," (Extension of Patent No. 3934), 10th October, 1879.

No. 10,535. H. C. Kerstine, Cleveland, Ohio, U. S. A., "Grate Bars," (Extension of Patent No. 3937), 10th October, 1879.

No. 10,536. J. Abell, Woodbridge, Ont., "Revolving Grate," (Extension of Patent No. 3936), 10th October, 1879.

No. 10,537. M. McDonald, Lexington, Va., U. S. A., "Fishway," 13th October, 1879.

No. 10,538. T. H. Tracy, London, Ont., "Key rail Joint," 13th October, 1879.

No. 10,539. H. Empey, Detroit, Mich., U. S. A., "Railway Brake," 13th October, 1879.

No. 10,540. O. T. Jones, Port Dinorwic, Wales, "Improvements in Boots," 13th October, 1879.

No. 10,541. A. Porteous and J. Irvin, Port Perry, Ont., "Vertical Pump," 13th October, 1879.

No. 10,542. W. H. Loop and J. & E. James, Montreal, Que., "Ventilator," 13th October, 1879.

No. 10,543. S. N. Smith, Providence, R. I., U. S. A., "Lacing Hook Making Machine," 13th October, 1879.

No. 10,544. G. H. Corliss, Providence, R. I., U. S. A., "Pumping Machinery," 13th October, 1879.

No. 10,545. J. J. Heenan, Oso, Ont., "Dog Power, (Extension of Patent No. 9907) 13th October, 1879.

No. 10,546. J. J. Heenan, Oso, Ont., "Dog Power," (Extension of Patent No. 9907), 14th October, 1879.

No. 10,547. R. S. Selby, Toronto, Ont., "Cheese Cutter," 14th October, 1879.

No. 10,548. G. D. Griffin, Hamilton, Ont., "Carriage Spring," 14th October, 1879.

No. 10,549. B. Barter, Toronto, Ont., "Smut Machines," 14th October, 1879.

No. 10,550. E. M. Fine, (Assignee of I. Fine, Philadelphia, Penn., U.S.A.), "Suspension Ring and Hook," 14th October, 1879.

No. 10,551. E. L. Parsons, St. John, and H. Le B. Smith, Fredericton, N.B., "Stove Back," 14th October, 1879.

No. 10,552. G. F. Thompson, Jr., and H. A. Crosby, "Sash Top and Lock," 14th October, 1879.

No. 10,553. S. Leparte, Ottawa, Ont., "Safety Ball Nut," 14th October, 1879.

No. 10,554. R. Smith, Sherbrooke, Que., "Method of Ship Propulsion," 16th October, 1879.

No. 10,555. F. M. Lyte, London, England, "Process of Treating Ores," 18th October, 1879.

No. 10,556. J. F. Drew, Barnston, Que., "Improvements on Wagons," 18th October, 1879.

No. 10,557. J. Smith, Hamilton, Ont., "Pruning Knife," 18th Oct., 1879.

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No. 10,570. W. N. Carnell and C. Tolliver, Pulaski, N. Y., and J. T. and L. H. Stevens, Washington, Col., U. S. A., "Wood Reducing Machine for Paper Pulp," 20th October, 1879.

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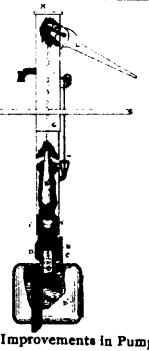

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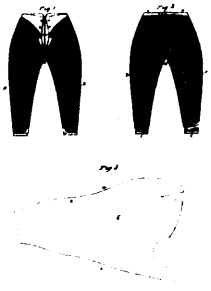

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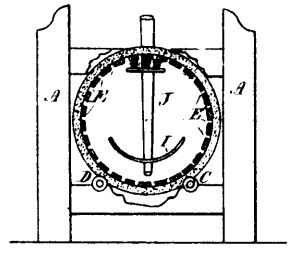

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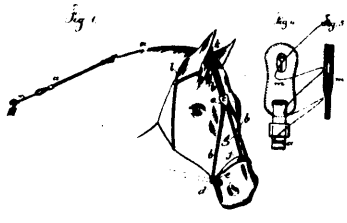

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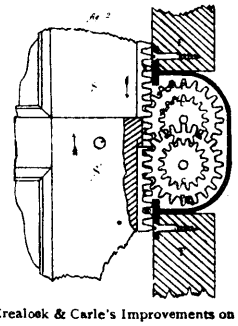

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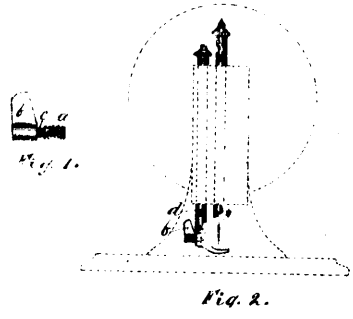

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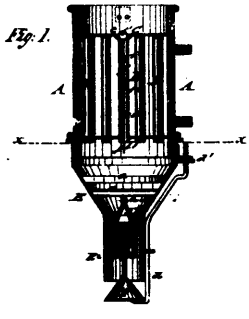

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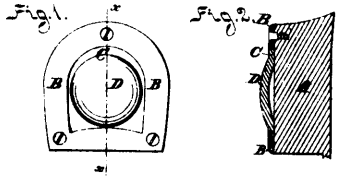

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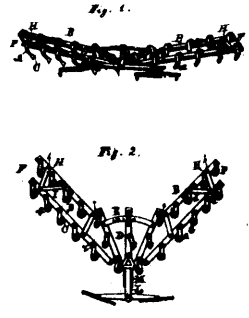

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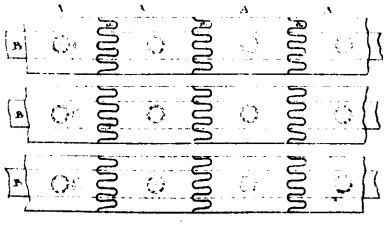

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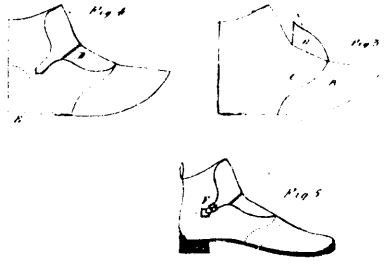

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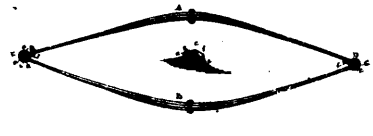

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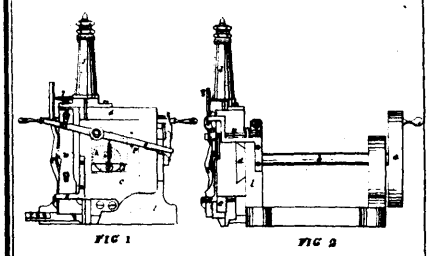

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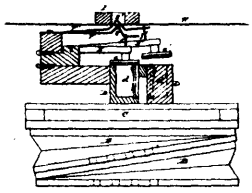

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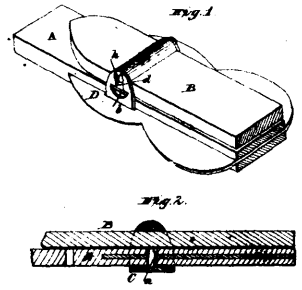

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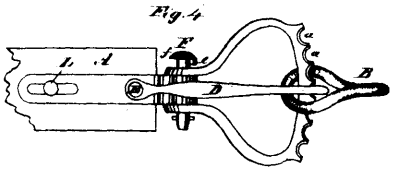

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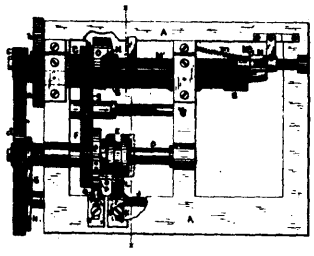

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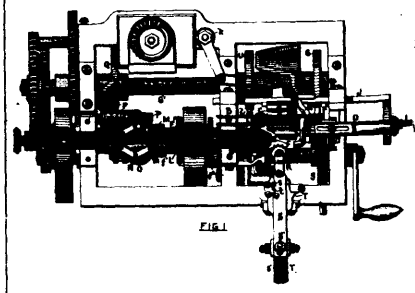

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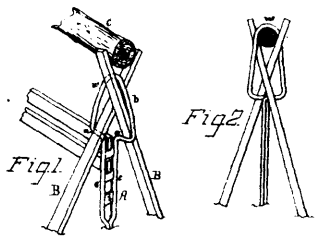

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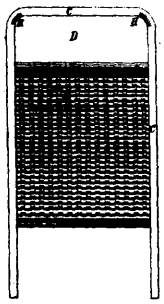

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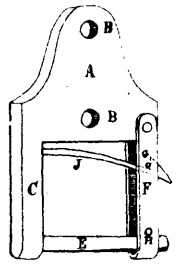

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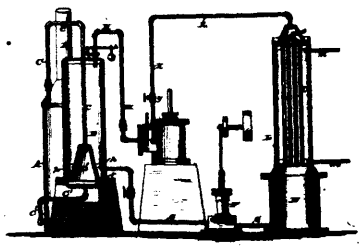

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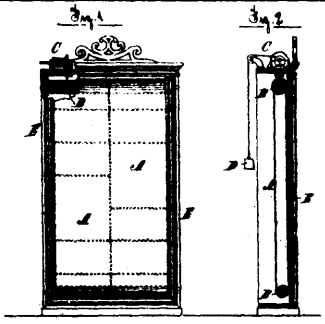

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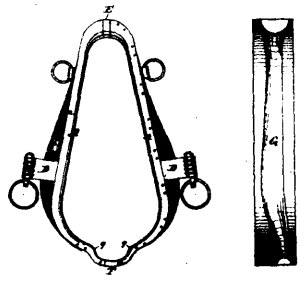

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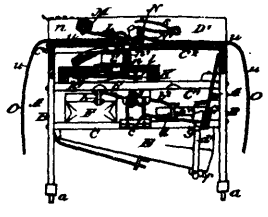

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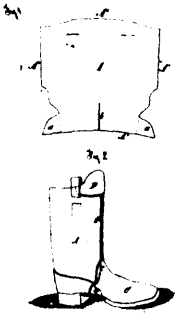

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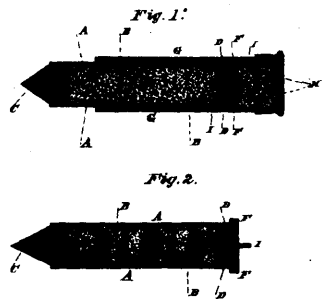

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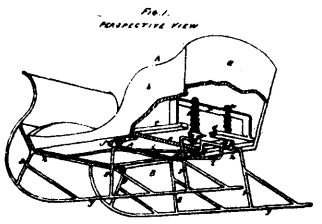

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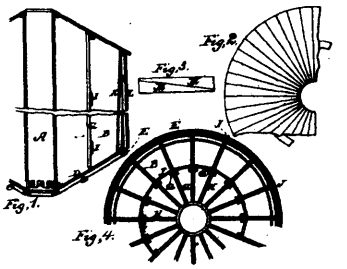

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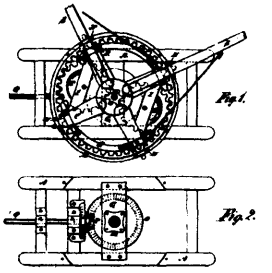

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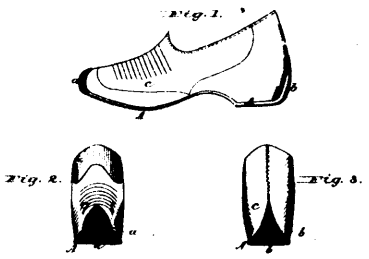

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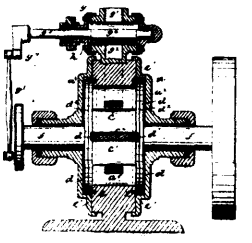

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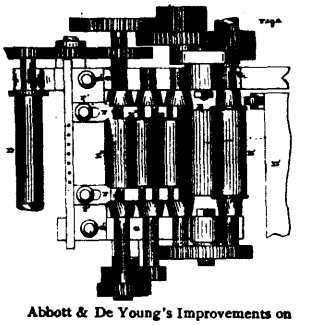

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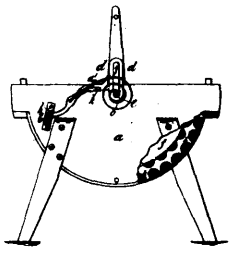

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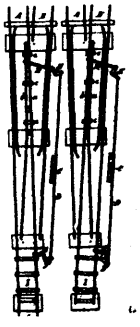

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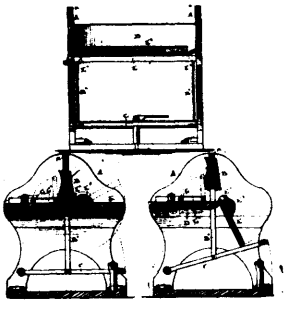

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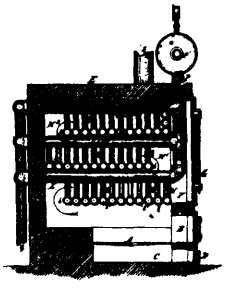

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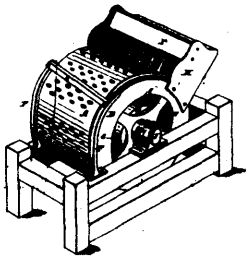

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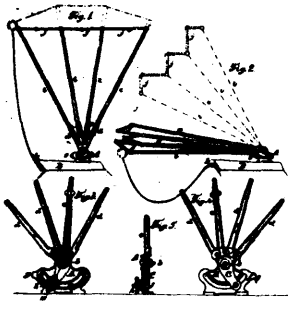

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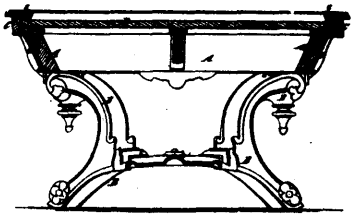

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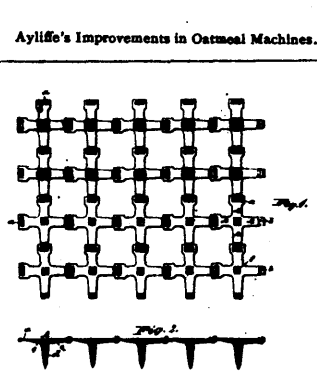

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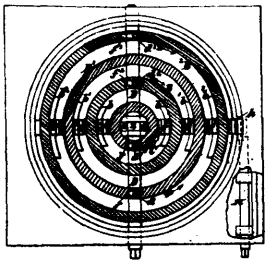

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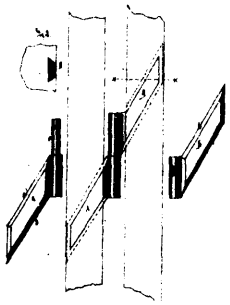

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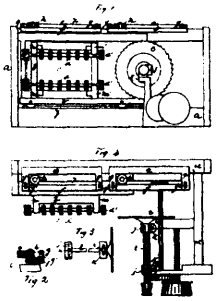

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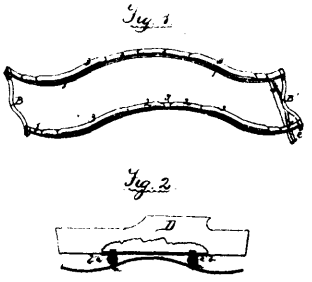

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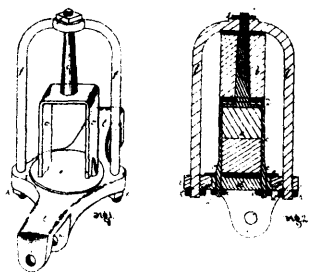
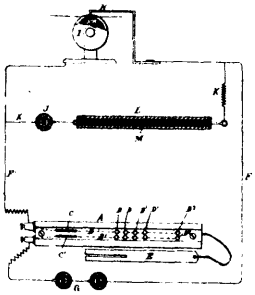
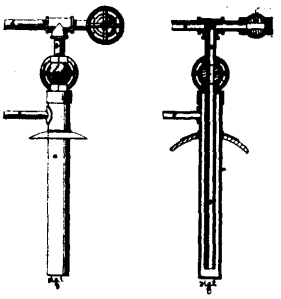


10393 Grier & Barr's Improvements on Fifth Wheel for Vehicles.

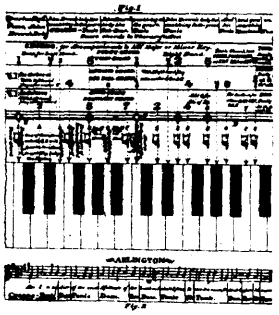


10394 Hadden's Telegraph Signalling Apparatus.

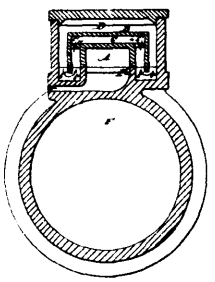


10395 Corey's Apparatus for Aging Liquors.

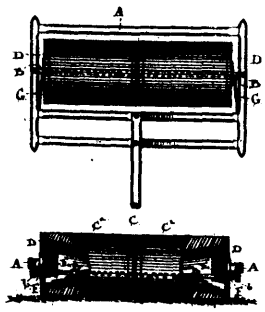
10396 Macfie's Shelf Supporters.



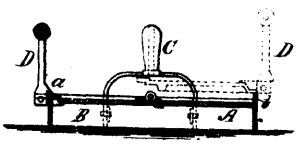
10397 Rice's Music Teaching Chart



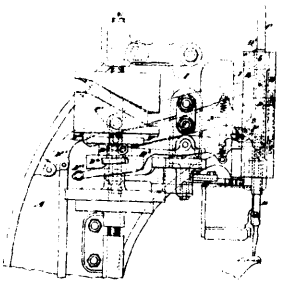
10398 Baker's Combined Sliding Box and Valve.



10399 Sampson's Improvements in Land Rollers.

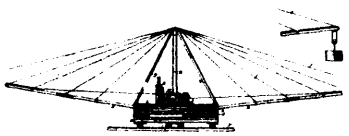


10400 Taylor's Improvements in Cake Griddles.

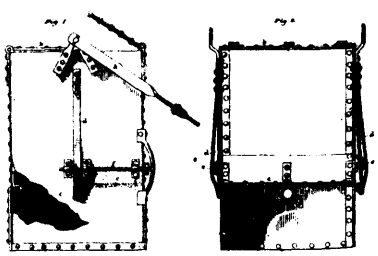


10401 Keats' Improvements in Sewing Machines and Cops.

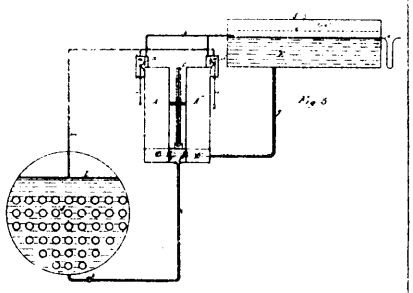
10402 Ball's Stove Pipe Screwing Machine.



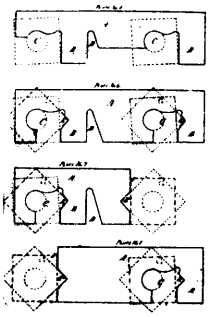
10403 Moore's Improvements in Derricks.



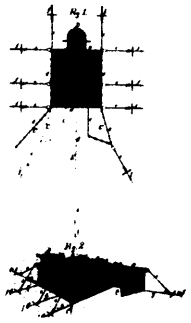
10404 Moore's Improvements on Concrete Skips.



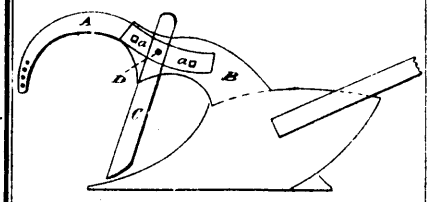
10406 Fitch's Improvements in Steam Boiler Feeders.



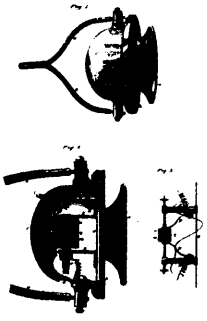
10407 Chapleau's Improvements on Nut Locks.



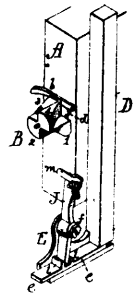
10408 Webb's Improvements in Fish Traps.



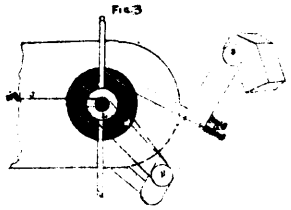

10409 Bentley's Improvements on Ploughs.



10410 Short's Improvements in Electric Telephones.

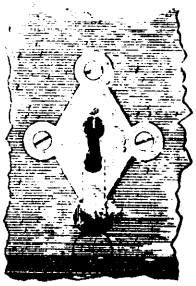



10411 Love's Improvements in Sewing Machines.

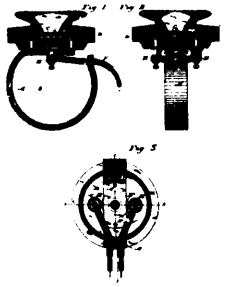



10412 Mullin's Elevator and Bag Holder.

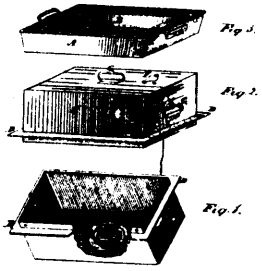
10413 Skoyles' Flour Manufacturing Process and Apparatus.



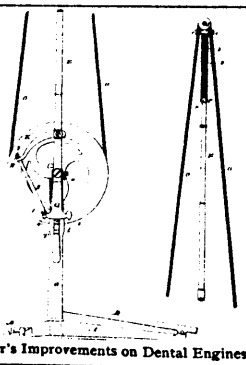
10414 Metcalfe's Device for Securing and Retaining Keys in Key Holes.



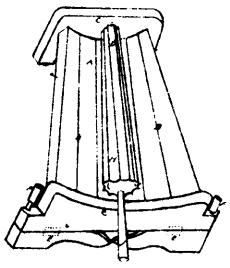
10416 Phelps' Improvements on Telephones.



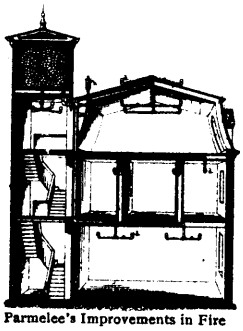

10417 Abrich's Improvements on Pans.



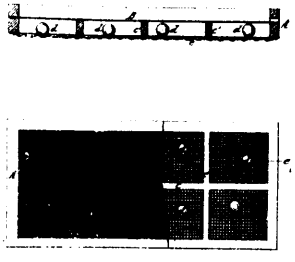
10418 Starr's Improvements on Dental Engines.



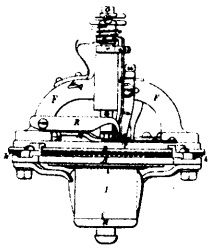
10419 Burbank's Butter Working Machine.



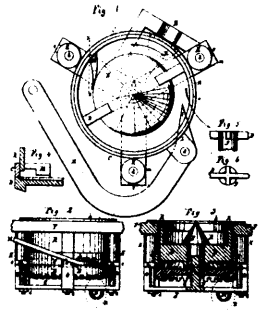
10420 Parmelee's Improvements in Fire Extinguishers.



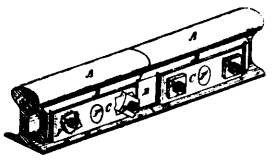
10421 Huntley, Holcomb & Heine's Means of Cleansing Bolting Screens.



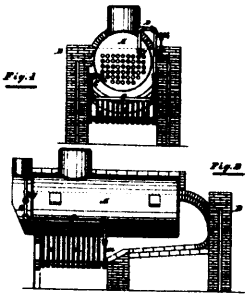
10422 Ballou's Knitting Machine.



10423 Marks & Jessup's Fertilizer Distributor.

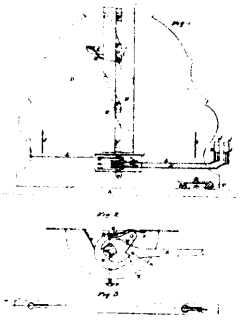


10426 Quesnel's Nut Locks.

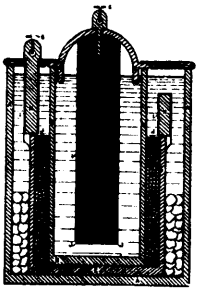


10428 Good's Steam Generator.

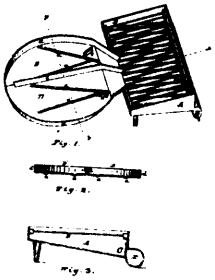
10429 Covert's Improvements in Rope Clamps.



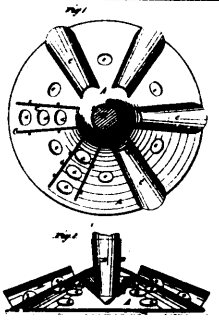
10430 Goodwin's Music Leaf Turner.



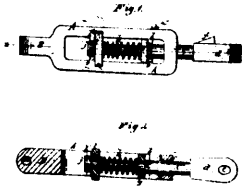
10431 Wilson's Galvanic Battery.



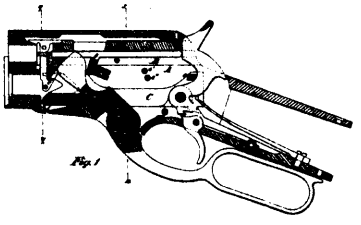
10433 Pflueger's Drip Basin for Barrels.



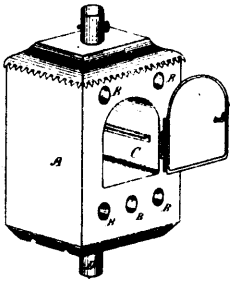
10434 Friedeborn's Churn Dasher.



10437 Hay's Improvements on Draw-Bars.

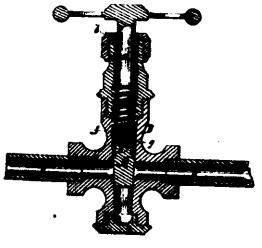


10438 Burgess' Improvements on Magazine Fire Arms.

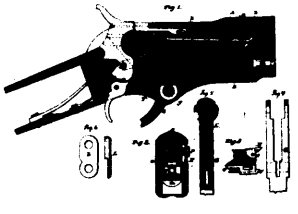


10439 Moreau's Improvements in Dumb Stoves.

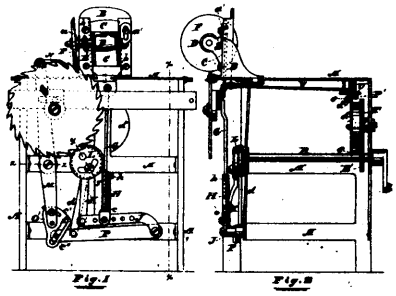
10440 Jordan's Improvements in Rock Drills.



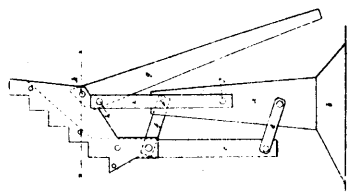
10441 Brown's Improvements on Valves.



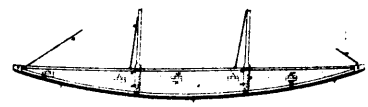
10442 Burgess' Improvements on Magazine Guns.



10443 Covel's Saw Sharpening Machine.

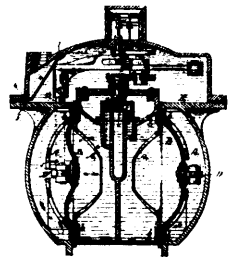


10444 Prescott's Improvements in Carriage Jacks

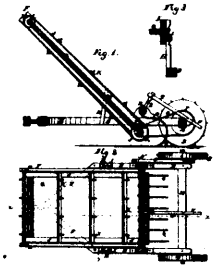


10445 McDonald's Improvements on Folding Boats.

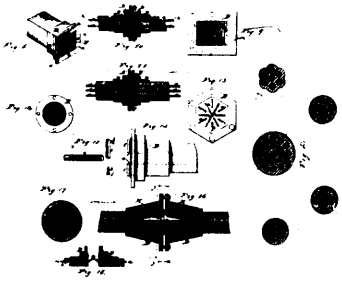
10447 Allen's Barbed Wire Fences.



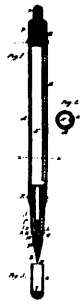
10448 Mounteney's Water Meter.



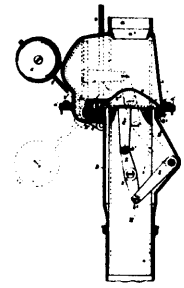
10449 Bovee's Combined Hay Rake and Loader.



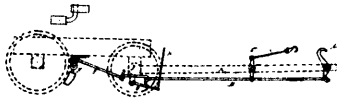
10450 Arbagast & McTighe's Underground Telegraph Conductor.



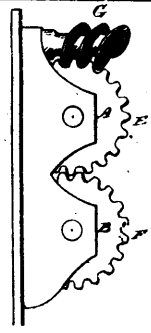
10451 Cross' Improvements on Fountain Pens.



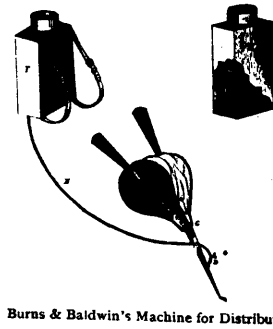
10453 Edwards' Improvements in Pipe Joints.



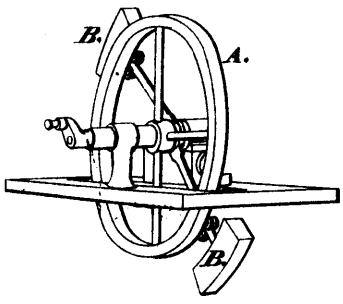
10455 Pattyson's Vehicle Brake.



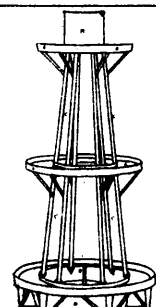
10456 Milner's Improvements on Sash Balances.



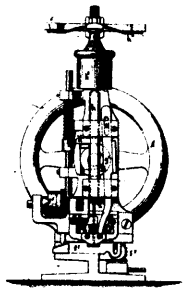
10457 Burns & Baldwin's Machine for Distributing Insecticide Liquid.



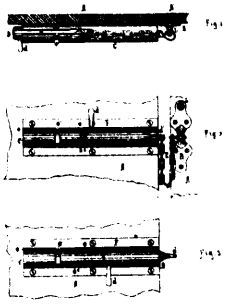

10458 Jay's Fly-Wheel for Engines.



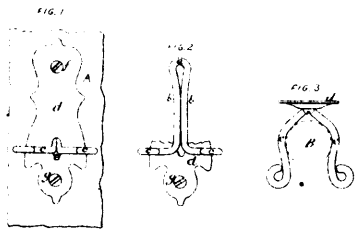
10460 Snyder's Improvements on Flower Stands.



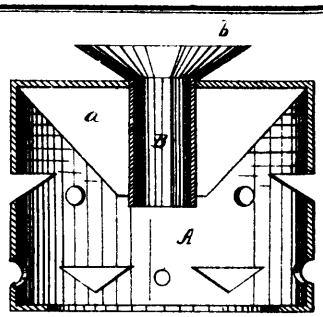
10461 Budlong's Boot and Shoe Pegging Machine.



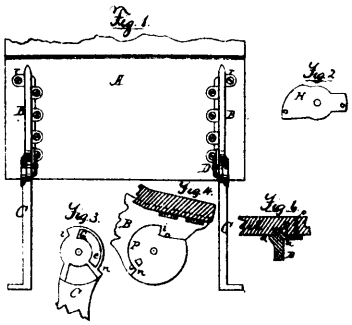
10462 White's Improvements in Door Fastenings.



10463 Leach's Broom Holder.

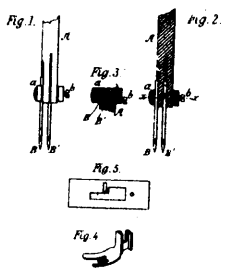


10464 Walker's Churn Dasher.

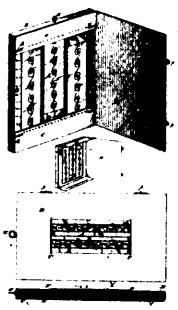


10465 Garretson's School Desk and Seat.

10466 Clarke's Improvements in Hosiery.

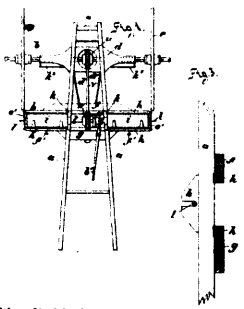


10467 Hayden's Improvements in Sewing Machines.

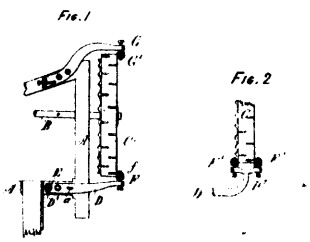


10468 Pulaski's Combined Box and Sample Card.

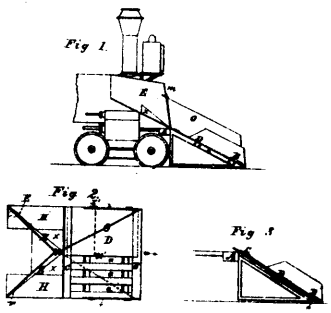
10469 Peterson's Improvements in Hydrants.



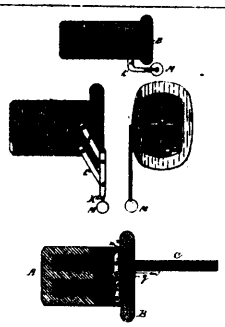
10470 Lockhead's Machine for Distributing Potato Bug Poison.



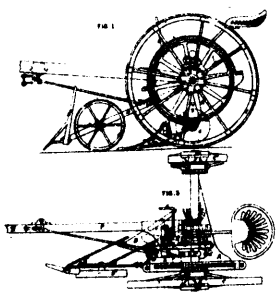
10471 Laurie's Mower and Reaper.



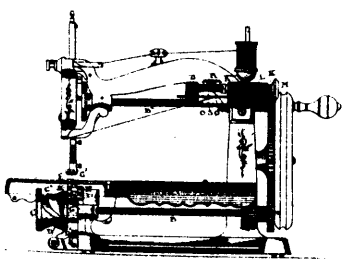
10472 Van Wagenen & Butler's Improvements on Locomotive Pilots and Snow Ploughs.



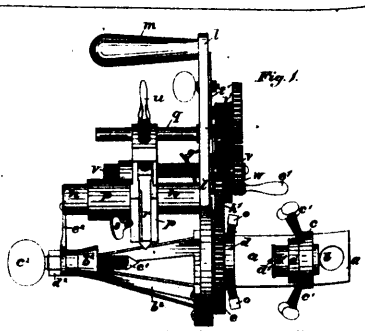
10473 Keim's Improvements on Car Couplings.



10474 Aspinwall's Improvements on Potato Diggers.



10475 Raymond's Improvements in Sewing Machines.



10476 Shaw's Drilling, Turning and Threading Machine.