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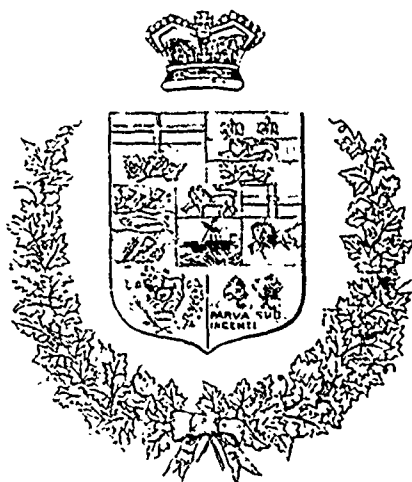
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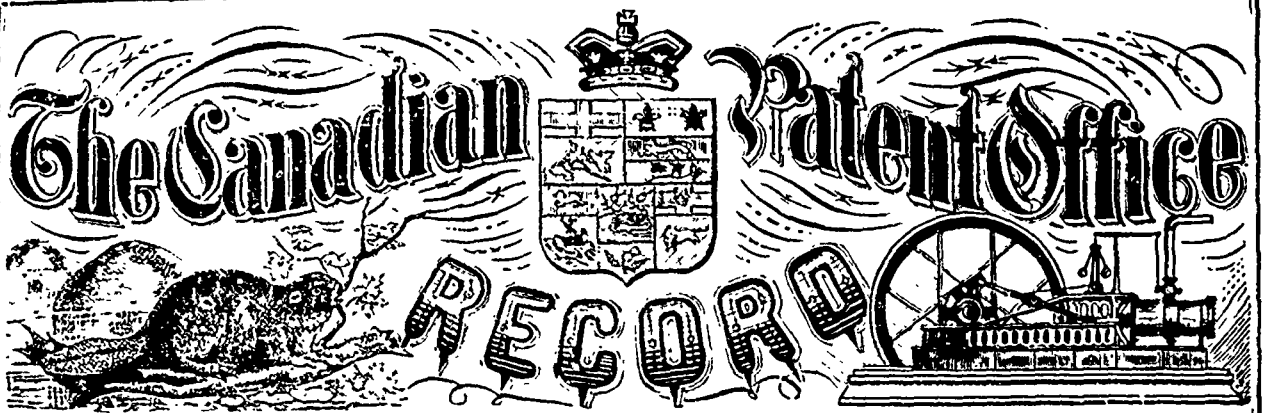


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“ J. Fillion.....	9,519	Ejector millstone air, J. H. Edlis et al.....	10,118
“ J. H. Stanton.....	9,165	Electric apparatus, C. F. Brush.....	10,253
“ drill and seeder, T. Galloway et al.....	10,112	“ “ J. L. Conte.....	9,811
“ ploughs, C. Huehn.....	10,067	“ machines, magneto, H. J. Smith.....	9,511
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“ “ L. D. Cleaveland et al.....	10,670	“ portable, A. W. Lamphere.....	10,097
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“ “ J. S. Henry.....	9,908	“ fly-wheel for, P. E. Jay.....	10,158
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“ bars for harvesters, R. Whiting et al.....	10,498	“ rotary, A. Lesperance.....	10,322
“ hoop, D. H. Burrell et al.....	9,185	“ “ A. Notman.....	10,378
“ pipe, W. L. Truland et al.....	10,283	“ steam, F. A. Gardner.....	10,284
“ rotary, W. J. Ingalls et al.....	9,530	“ “ H. Warkkeys.....	9,515
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“ “ stove pipe, A. A. Walker.....	9,661	“ steam, J. J. Anthony.....	9,681
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" H. Leclod.....	10,624	Iron and steel, C. Burgess.....	9,417
" L. Norton.....	9,657	" bathing, E. A. A. Grange.....	10,044
Harvester, C. C. Bradley.....	10,432	" laundry, E. P. Raether et al.....	9,758
" H. A. Howe.....	9,990	" sal, I. W. Williams et al.....	10,111
" cutter bars, R. Whiting et al.....	10,498	" " W. Buck.....	10,140
" pitmans, C. C. Bradley.....	10,214	" wires, enamelled cast, E. C. Quinby et al.....	10,049
" rakes, C. C. Bradley.....	10,296	Ironing board, R. Troy.....	10,680
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" " R. Dutton.....	10,614	Jack, carriage, Prescott and Gregory.....	10,444
" " S. Johnston.....	10,601	" lifting, J. H. Doherty et al.....	9,544
" " The McCormick Harvesting Ma- chine Co's.....	10,636	" " N. Hill.....	9,748
Hat holder, C. Nelson et al.....	10,499	" " T. Conford et al.....	9,863
" and ewe, T. W. Bracher.....	9,512	Jackets, steam boiler, J. W. Hammore.....	10,580
" felt, J. Helmann.....	10,097	Joint, rail, T. H. Tracy.....	10,548
" manufacturing, G. H. Hastings et al.....	10,062	Joints, cutting tube, T. Ford.....	10,250
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" rake and leader, D. W. Boyce.....	10,449	" pipe, A. Edwards.....	10,153
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" carriage, P. I. Ayres.....	9,444	Journal and axle boxes, W. L. Exland.....	10,526
" vehicle, C. Fiedler.....	9,418	" bearings, B. J. Downs.....	10,607
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" stilleners, G. L. Fisher.....	10,144	" gypsum, W. H. Merrill.....	10,002
" " J. Keller.....	9,947	" lime, M. Calton.....	10,618
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" " W. H. Hart.....	10,434	" grinding, I. Soupe.....	9,840
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" door, H. Collard.....	10,109	" temper, S. Collinson.....	9,663
" fanning mill, J. Hanna, Jr.....	10,083	" sharpening, P. Williams.....	10,035
" spring, J. Spruce.....	9,680	Knitting machine, D. Bickford.....	9,901
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" vehicles, O. M. Robinson.....	10,590	" burners, G. H. Hyde.....	10,317
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" for boots and shoes, S. N. Smith.....	10,513	" " W. E. Sawyer et al.....	10,088
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" cheese, R. S. Whitman et al.....	10,680	" hydro-carbon, T. Walsh.....	9,873
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" cutters, D. H. Burrell et al.....	9,485	" " C. S. Westland.....	10,121
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" " eqs, D. Curtis.....	10,071	Latch, door and gate, J. Dennis.....	10,576
" " detachers, J. Carr et al.....	10,296	Lathes gauge, J. M. Parker.....	9,772
" " power, A. P. Benjamin.....	10,224	Leaf-turner, music, O. H. Goodwin.....	10,470
" " J. McGroa et al.....	10,376	Leather cutting, E. Fisher.....	9,420
" " J. J. Herman.....	10,516	Lemon squeezers, L. Williams et al.....	10,046
" " elevator, P. K. Dederick.....	10,495	Lettering stone, T. Johnson.....	9,551
" " machines, J. Jackson.....	10,249	Light, electric, T. A. Edison.....	10,031
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" " J. Bleg.....	9,878	Lighting systems, E. J. Molera et al.....	10,367
" " L. H. Bellamy.....	10,049	Lightning conductor, H. W. Spang.....	10,039
" " W. Zartman.....	10,590	Liniments, S. C. Buchanan.....	10,061
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" " O. A. Childs.....	9,776	" furnace, S. M. Brinton.....	10,659
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" " worker, sheet, J. Fite.....	10,482	Ovens, J. R. Hayward.....	10,163
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" " W. J. Fenter.....	9,850	" " J. C. Tallman.....	10,078
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" cheese, W. R. Hayden.....	9,357	Rests, invalids, C. Forth.....	9,933
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INVENTIONS PATENTED.

No. 9408. Stench Trap for Sewers. (*Trappe d'égout.*)
Emmanuel Hollingshead, (Assignee of William Dunlop), Toronto, Ont., 22nd November, 1878, (Extension of Patent No. 2983), for 5 years.

No. 9409. Improvements on Brick Presses.
(*Perfectionnements aux presses à brique.*)
Augustus F. Nagle, Providence, R. I., U.S., 22nd November, 1878, for 15 years.

Claim.—1st. The combination with a die or mould C, of a piston rod F, piston G, steam cylinder A, valve for admitting and exhausting steam to and from one end of the cylinder, and a plunger E, which is mounted upon the piston rod and is forced into the mould by the pressure of steam upon the piston; 2nd. The combination with a mould C, a plunger E, a piston G and a piston rod F, carrying the plunger of a steam-cylinder A for the piston G, provided with a steam and exhaust port d at one end, and a passage or port g at the opposite end, and a valve or valves l m, which admit and exhaust steam to and from one end of the cylinder, and control the passage at the opposite end for cushioning the piston against the initial force of the live steam; 3rd. The combination with a mould C, a moveable head-block b which opens the mould, a plunger E, a piston G and its rod F, and a steam cylinder A and its valves l m, of a mechanical lifting device d, for forcing the plunger through the mould, substantially as described, whereby the compressed contents of the mould are ejected therefrom; 4th. The combination with a mould C, of a hopper B which is smaller at the top than at the bottom, whereby concrete may freely pass downward to the mould; 5th. The combination with a mould C, having a hardened cutting edge b, at its top, of a sliding head-block b provided with a hardened cutting edge, whereby particles of rock and concrete will not obstruct the movement of the block enclosing the mould; 6th. The combination with the mould C and a plunger E, provided with ducts e₂ and e₃, of an exterior reservoir e connected with the plunger E, whereby lubricating matter is supplied to the plunger while at work and thence distributed upon the surface of the mould; 7th. The combination with the plunger E, piston rod F and piston G, of a head o₂ on the rod below the plunger, and the recess or chamber o₁ to which the head is accurately fitted, whereby the fall of the plunger rod and piston is relieved from shock by the cushioning of air in the chamber.

No. 9410. Improvements on Ax-Poll Machines. (*Perfectionnements aux machines à faire les têtes des haches.*)
Charles L. Jeffords, Jamestown, N. Y., U.S., 22nd November, 1878, for 5 years.

Claim.—1st. The combination of the dies for giving shape to the blank, bending mechanism for folding the blank, pressing mechanism for giving the proper thickness to the poll and dies for welding and edging the bent blank; 2nd. The combination of the die rollers B B', gear wheels L, and bearing dies C C' C₂ C₃; 3rd. The combination of the gear wheels L, crank P, pitman P', arm M M' and rack N; with the plate or plunger for carrying the dies for bending, forming and trimming the ax-polls; 4th. The split dies and intermediate adjusting pieces; 5th. The combined welding and edging dies C C'; 6th. The combination of the adjustable gauges D, rollers B B' and dies C C' C₂ C₃.

No. 9411. Improvements on Steam Injectors.
(*Perfectionnements aux injecteurs de vapeur.*)
John H. Irwin, Philadelphia, Pa., U.S., 22nd November, 1878, for 15 years.

Claim.—1st. In an injector, a combining cone constructed with dimensions, that is, the greater diameter four times the smaller, and the length equal to the greater diameter; 2nd. A short combining cone of these dimensions, viz: the greater diameter and length equal, and the smaller diameter one-fourth

the greater, in combination with a steam cone, the jet opening of which is twice the smaller diameter of the combining cone; 3rd. A receiving cone having the following proportions: the length sixteen times the smaller diameter and the greater diameter twice the smaller; 4th. A steam cone A, in combination with a combining cone B and a receiving cone C, all constructed with the relative proportions specified; 5th. The casing sections D E, recessed as specified, in combination with the combining cone disc fitted to the recess and held between the section; 6th. The inlet chamber H, with its sides arranged at an angle of 45° to the axis of the instrument, in combination with the disc b and water pipe F arranged at the same angle; 7th. An adjustable steam cone, with the face at its jet end inclined at an angle of 45°, in combination with the combining cone; 8th. A steam cone A, having its inner face at the jet end inclined at an angle of 45°, in combination with a spindle K, provided with a short nozzle K' of about three-fourths the diameter of the jet opening in the steam cone, and a conical enlargement just back of the nozzle, inclined also at an angle of 45°; 9th. A combining cone B, in combination with an adjustable receiving cone C and a discharge pipe I, whereby the receiving cone is provided with a seat and forms a valve at either end with one of the other parts according to adjustment; 10th. A combining cone B, in combination with an adjustable receiving cone C and a discharge pipe I, whereby the receiving cone is provided with a seat and forms a valve at either end with one of the other parts according to adjustment; 11th. The disc b carrying the combining cone B, in combination with the water pipe F and overflow pipe G, arranged adjacent to each other, on opposite sides of the disc and inclined in opposite directions; 12th. A steam injector or steam cone, and a combining cone having relative forms and proportions, as specified, combined with a moveable receiving cone provided with a stuffing box or packing a; 13th. The combination in an injector of a steam cone and a combining cone, the orifices whereof have relative proportions, forms and positions; 14th. A steam cone provided at its outer end with a stuffing-box gland E₂ and a female screw outside of said stuffing box, combined with a spindle K, which is provided with a corresponding male screw, whereby said spindle may be removed or replaced without disturbing said gland.

No. 9412. Improvements on Clasps. (*Perfectionnements aux agrafes.*)

Francis B. Brown, Boston, Mass., U. S. A., 22nd November, 1878, for 5 years.

Claim.—1st. The jaws A A, the hinge pin b and spiral spring a with its extended ends a₁ a₂, the jaws being connected together by the hinge pin, b passing through the ears c, and also through the spiral spring holding it in place, each jaw having an opening in it to receive the upper and under portions of the spring.

No. 9413. Improvements in Fences. (*Perfectionnements dans les clôtures.*)

John Vance, Forest, Ont., 22nd November, 1878, (Extension of Patent No. 7968), for 5 years.

No. 9414. Improvements in Fences. (*Perfectionnements dans les clôtures.*)

John Vance, Forest, Ont., 23rd November, 1878, (Extension of Patent No. 7968), for 5 years.

No. 9415. Machine for Manufacturing Peat.
(*Machine pour fabriquer la tourbe.*)

James Hodges, Bulstrode, Que., 25th November, 1878, (Extension of Provincial Patent No. 1783), for 7 years 1 month and 21 days.

Claim.—1st. The new and novel apparatus for excavating peat or other substance on a floating vessel, or on a carriage on wheels, by means of revolving screw excavators, in connection with shield, scrapers, &c.; 2nd. The squeezer with its details of rollers, excentrics, endless bands, straining pockets, sliding divisions and cover-plates, by the use of which, acting together, peat is enclosed in a chamber and deprived of some forty per cent. of its weight by pressing out the water; 3rd. The pulping machine in its details of external casing, revolving shaft, knives, cutters, diaphragms, by means of which the fibre of the peat is cut, crushed and entirely destroyed; 4th. The propelling or steering wheel by the use of which the barge is kept in position, steered and made to progress at exactly the speed required to feed the cut of the screw excavators.

No. 9416. Machine for Pulping and Manufacturing Peat. (*Machine à décortiquer et fabriquer le tourbe.*)

James Hodges, Hulstrod, Que., 27th November 1878. (Extension of Provisional Patent No. 1928.) for 8 years.

Claim.—1st. In the feeder and separator, the novel arrangement of cylindrical shell revolving shaft spiral vanes diaphragms fixed curved bars and movable or revolving curved bars, all working together in the manner described. 2nd. The pulping and distributing trough in its novel arrangement of shell revolving shaft spiral vanes diaphragms apertures and valves, all working together in the manner described. 3rd. The whole machine working together for the purpose of pulping, distributing and depositing peat for fuel on beds or prepared grounds, immediately contiguous to the locality from which the peat is excavated by the screw excavators or other analogous machine, by the use of machinery much cheaper, better and in less time than the same can be accomplished by manual labour.

No. 9417. Improvements on Churn Dashers. (*Perfectionnements aux battis à beurre.*)

Edwin T. Carrington, West Bay City (Assignee of Stephen B. Rathbun, Bay City.) Mich., U.S., 28th November, 1878, for 15 years.

Claim.—1st. A churn agitator having wires strung continuously between shaft cross-bars the upper one of which is adjustable to draw and give said continuous wires the proper tension. 2nd. A churn agitator composed of the shouldered and screw threaded shaft *a*, the cross-bars *b*, the wires *c* strung between them and secured as stated, and the adjusting and clamping nuts *c*; 3rd. The combination with the wire strung agitator the central tube *f* and its vertically hinged and perforated wings *g*, adapted for operation and to form the central air chamber. 4th. The combination of the agitator, consisting of the strung wires *c* and the cross-bars *b* of the central tube *f*, the wings *g* pivoted thereto, the opposite side slots *i* in said tube and the bottom disc *h* and its radial slots *n*, whereby said tube, wings and disc are supported upon and carried by said agitator, and adapted for removal and replacement.

No. 9418. Improvements in Vehicle Tops.

(*Perfectionnements aux soufflets des voitures.*)

Charles Foekler, Dubuque, Iowa, U.S., 28th November, 1878, (Extension of Patent No. 8751.) for 5 years.

No. 9419. Process of Making Beer. (*Procédé de fabrication de la bière.*)

George Bartholomar, Chicago, Ill., U.S., 2nd December 1878, for 10 years.

Claim.—1st. The process of clarifying and settling beer in a series of hain g-casks, and equalizing the rate of fermentation in all of them whereby the beer is more rapidly and thoroughly clarified, and will be ready for sacking off in all the casks at the same time, and can be so kept by holding the beer in closed-connected shaving casks, under automatically controlled low pressure of the generated carbonic acid gas. 2nd. In casks AA provided with cocks *a*, flexible sections *k* and taps *N* N, in combination with main pipe *a*, water *c*, arm *C* and pressure gauge *e*.

No. 9420. Improvements on Leather Cutting Machines. (*Perfectionnements aux machines à couper le cuir.*)

Edwin Fisher, Worcester, Mass., U.S., 2nd December, 1878, for 5 years

Claim.—1st. The combination with the driving shaft D loose pulley E having lug or pin *e* and treadle L of the clutch device F having pin I with drawing lever F projecting beyond the disc, with pivot *f* and inclined segment head, the flat circular spring J the shaft H, stripper lever K with inclined guard K, stop-finger G and lug cam G G. 2nd. The combination with the stripper lever K, of the sleeve and stud I and adjusting screw *m*. 3rd. The combination of the block plate M, gear plate P screws N, spur-gear nut R, central spur-gear T, vertical shaft T, hand-wheel T and rods *n*. 4th. The combination with the frame A and block supporting screws N, of the gear-plate P provided with bosses *s* around the screw openings and beneath the bearings of the nut gears R. 5th. Mechanism constructed, combined and organized for operation in the peculiar manner set forth.

No. 9421. Tool for Trimming and Adjusting Waggon Axles and Wheels. (*Outil pour parachever et ajuster les essieux et les roues des wagons.*)

Charles D. Marshall and Howard D. Tasey, Fitch Bay, Que., 2nd December, 1878, for 5 years.

Claim.—The combination of the adjustable forked guides BB with the cutter C arranged and adjusted by the adjustable screws D D and secured to the frame A by the set screws E F E.

No. 9422. Improvements in Stop Cocks.

(*Perfectionnements aux chantelles pleures.*)

Samuel M. Dennison, Silver City, Idaho, U.S., 2nd December, 1878, for 5 years

Claim.—1st. The tube B having the exterior screw threads and split longitudinally, each part having one half of the T-shaped head C, so that the two parts may be introduced to a can from the outside and receive a faucet. 2nd. A stop-cock attachment composed of the tapered tube D having the nipple, the flange F and the portion G fitted to receive a wrench. 3rd. The combination of the split and threaded tube B having the T-shaped head C and the stop-cock A.

No. 9423. Improvements on Blacking Boxes.

(*Perfectionnement aux boîtes à crayer.*)

Charles H. Angel, Rochester, N. Y., U.S., 2nd December, 1878, for 5 years.

Claim.—The blacking or stove-polish box or holder provided with the internal groove, to prevent the charge or paste when dry or contracted from falling out of place in such box.

No. 9424. Improvements on Fanning Mills. (*Perfectionnements aux tarares-cribleurs.*)

John G. Malcolm and James Pelton, Inverkip, Ont., 2nd December, 1878, for 5 years.

Claim.—1st. The method of attaching an elevator to a fanning mill by running it upward and forward in front of the mill in the direction and as indicated at A B, and for the purpose of bagging the grain. 2nd. The method of attaching it to the front of the mill by means of hooks *r*. 3rd. The stretcher as applied to key, the canvas tight seen at E. 4th. The use of a canvas with slots fastened to it, to carry up the grain and deliver it into bags as seen at R.

No. 9425. Improvements in Heating Stoves.

(*Perfectionnements aux poêles de chauffage.*)

Edward Robinson, Clatham, (Assignee of Alfred F. Holmes, Napanee, Ont., 2nd December, 1878, for 5 years.

Claim.—1st. A hot air chamber A encircling the fire pot B and supplied with cold air, in combination with the flues C or their equivalent. 2nd. The smoke flue E passing through the base of the stove, and divided so as to form a return tube, in combination with the air chamber A.

No. 9426. Improvement in Heating and Ventilating Buildings. (*Perfectionnement dans le chauffage et l'aération des bâtiments.*)

William F. Flagg, Bloomington, Ill., U.S., 2nd December, 1878, for 5 years.

Claim.—In passing fresh heated air from the furnace direct to the room or rooms to be heated, and returning it to the furnace room from which the hot air is discharged into the open air, while the better portions of the air are subjected to radiated heat and again returned to the room or rooms being heated.

No. 9427. Improvements in Producing Copies of Writings, Drawings and Delineations. (*Perfectionnements dans la reproduction des manuscrits, dessins et croquis.*)

Engrino de Zucato, London, Eng., 2nd December, 1878, for 5 years.

Claim.—1st. The process of producing stencils by means of a cutting surface, metallic or otherwise, and by a style as described. 2nd. The process of producing copies of writings, drawings and delineations from stencils by using an india-rubber scraper and the apparatus to hold the stencil.

No. 9428. Improvements in Mechanical Movements. (*Perfectionnements dans les mouvements mécaniques.*)

Isaac N. Ellis and Robert W. Rule, Aylmer, Ont., 2nd December, 1878, for 5 years.

Claim.—1st. A mechanism for converting alternate reciprocating into continuous rotary motion, a reciprocating part duplicate clamping devices arranged to be rotated in opposite directions simultaneously by the reciprocating part, and a shaft arranged to be acted upon alternately and to be rotated continuously by the said duplicate clamping devices. 2nd. A clamping mechanism composed of a shaft arranged to rotate in bearings and provided with levers or arms *b* arranged obliquely with the radius of the shaft the wedges *c* on the ends of the arms, the segments *d* *d* and the drums G. 3rd. The combination of the drums G G and their enclosed clamping mechanism, the shaft D, the frame I or its equivalent, arranged to be reciprocated, and the chains or belts H H. 4th. The combination of the drums G G and their enclosed clamping mechanism, the shaft D and a reciprocating part. 5th. The combination of the frame I or its equivalent, the chains or belts H H, the drums G G and the take up springs J J. 6th. The combination of the drums G G provided with teeth pinions I, L, mounted on shafts K K, pinion M on main shaft D and rack J.

No. 9429. Improvements on Wash Boards.

(*Perfectionnements aux planches à savonner.*)

Isaac Darling, Norwalk, and Isaac N. Poe, Toledo, Ohio, U.S., 2nd December 1878, for 5 years.

Claim.—1st. A wash-board plate composed of a surface provided with abrupt elevations and depressions, in combination with plain transverse ridges or flutes, at intervals. 2nd. A wash-board surface composed of abrupt elevations D arranged in rows across the board, and broken by shallow depressions D extending transversely of the board, in combination with plain ridges B.

No. 9430. Improvements on Ore Separators.

(*Perfectionnements aux séparateurs des minerais.*)

Tristram S. Lewis, Saco, and Chadbourne W. Whitmore, Gardiner, Me., U.S., 2nd December, 1878, for 15 years.

Claim.—1st. An inclined table for the separating of ores, the grooves *g* *g* which are circular in shape, or nearly so at the upper end and gradually diminish in width and depth. 2nd. In combination with a suitable air blowing device, a table or platform having the grooves *g* *g* inclined and oscillated. 3rd. A table for the separation of ores provided with grooves having at the bottom of their upper portion the slotted plate. 4th. The hinged plate *e* in combination with the arms *g* *g* and *h* and screw clamp. 5th. In combination with a table for the separation of ores, having grooves *g* *g* and air guide *m*, the hinged plate *e*. 6th. In combination with a table for the separation of ores and device for oscillating the same, the hammer K.

No. 9431. Improvements on Dairy Cans.

(*Perfectionnements aux jattes à lait.*)

William D. C. Pattison and Noah S. Woodward, Sherbrooke, Que., 2nd December, 1878, for 5 years.

Claim.—1st. The can A; 2nd. A flexible tube B and gage wire C. 3rd. The combination of can A, tube B and wire C.

No. 9432. Improvements in Valve Spindles.

(Perfectionnements aux noix des valves.)

Alexander Korr and Lyon Silverman, Montreal, Que., 2nd December, 1878, for 5 years.

Claim—1st. The combination of the neck E having one half of the joint H formed thereon, & the spindle F receiving the screw D having the other half of the joint H formed thereon. 2nd. On the spindle of a valve, the collar G forming a joint with the neck E.

No. 9433. Improvements on Steam Cooking Kettles. *(Perfectionnements aux bouillottes de cuisine à vapeur.)*

William G. Flanders, Newport, N. H., U. S., 2nd December, 1878, for 5 years.

Claim—1st. The double chambered urinary vessel made in detachable parts A and B each provided with a steam escape pipe P, which has an outlet through the bottom of the boiler. 2nd. In combination with the cover H, the automatic spring valve N constructed to open by pressure of steam within the vessel, and allow its escape through the pipe P into the fire and prevent the passage of odors in the opposite direction through the pipe and valve. 3rd. In combination with the boiler A, the supply tube B constructed with its open end near the bottom of the boiler and having a steam escape or whistle S connected with the cap I at its upper end; 4th. In combination with the boiler A, the groove C and packing D, arranged so as to receive the downward projecting flange E of the cover H. 5th. In combination with the boiler A having the groove C and packing D, the cover H having the springs L and hinged hoops J or their equivalents; 6th. In combination with boiler A having the groove C, packing D and catches K, the steamer B having the flange L, groove C, packing D and spring-catches K.

No. 9434. Improvements on Anti-friction Compounds. *(Perfectionnements aux composés anti-friction.)*

John Kimball, Boston, Mass., U. S., 3rd December, 1878, for 5 years.

Claim—A compound of finely pulverized French chalk, soapstone or any other suitable base mixed with water alone, or with a suitable paste to a consistency which will enable it to be deposited upon a level surface in a uniform manner.

No. 9435. Improvement on Water Pressure Regulators. *(Perfectionnement aux régulateurs de la pression de l'eau.)*

Jonathan B. West, Genesee, N. Y., U. S., 3rd December, 1878, for 5 years.

Claim—1st. The combination of the valve e, packing disc m, follower k and flexible diaphragm h, with a water passage g over said diaphragm and communicating with the main water passage on the induction side of the valve. 2nd. The combination with the valve e and follower k connected by the stem l, of the flexible packing disc m, so as to allow said valve and follower to play freely up and down.

No. 9436. Improvement in Illuminating Gas. *(Perfectionnement dans le gaz d'éclairage.)*

Myron H. Strong, Brooklyn, N. Y., U. S., 3rd December, 1878, for 5 years.

Claim—1st. The combination with the decomposing chamber for making non-luminous gas, of a holder for the same, a retort for making olefant gas, a supply tank for liquid hydro-carbon to the retort, a gas pipe and burner for heating such retort and connecting pipes, and a steam injector for mixing the gases. 2nd. The combination of a decomposing chamber for making non-luminous gas, a holder for storing such non-luminous gas, a retort for the production of olefant gas, an apparatus for supplying liquid hydro-carbon to such retort, a burner or burners for heating such retort by the combustion of non-luminous gas and means for mixing the non-luminous gas and the olefant gas in the proper proportion for producing the illuminating gas.

No. 9437. Improvements on Sewer Traps. *(Perfectionnements aux trappes des égouts.)*

Thomas Dark, Buffalo, N. Y., U. S., 3rd December, 1878, for 5 years.

Claim—The metal receiver made of the two parts A A' a b, with the slanting front c and straight back d and connected together by the flanges e, e', and in combination with the bowl or trap B.

No. 9438. Apparatus for Distillation of Oils. *(Appareil de distillation des huiles.)*

Herman Frash, Cleveland, Ohio, U. S., 3rd December, 1878, for 5 years.

Claim—1st. The combination with the vaporizer of the hood or condenser and a pipe, which latter conveys the liquid above the vaporizer and discharges it over the latter, said hood or condenser being made readily removable from the vaporizer and connected with the remaining apparatus by a water joint at its base. 2nd. The combination with the vaporizer of the hood or condenser formed with the water chamber on its top, said water chamber extending over its entire upper surface and provided with notched or serrated sides adapted to discharge its contents in little streams or drippings over the vertical sides of the hood. 3rd. The combination with the vaporizer provided with the trough D of the hood or condenser I and trough E. 4th. The combination with the vaporizer and condenser of the distillate receivers J, K, &c. formed in a vertical series upon the side wall of the condenser. 5th. The condenser or hood I provided with the deflecting flanges or drips F. 6th. The apparatus for separating from oil its more volatile ingredients and for collecting the different products, which consists in a vaporizer feeding mechanism for delivering the liquid to be treated in drops, films, spray, or other disseminated form upon the vaporizer, said vaporizer being disconnected from any condensing surface that would direct any condensed ingredient back into the liquid that has passed over the vaporizer, and a condenser adjacent to the vaporizer, said vaporizer and condenser each provided with separate conduits and receptacles for collecting the products. 7th. An apparatus for separating from oil its more volatile ingredients and for collecting the different products, a vaporizer feeding mechanism for

delivering the liquid to be treated in drops, films, spray or other disseminated form upon the vaporizer, said vaporizer being disconnected from any condensing surface that would direct any product of condensation back into the liquid that has passed over the vaporizer and in connection therewith a condenser substantially parallel with and in such close proximity to the vaporizer that the vapors set free will be condensed as soon as they are given off said condenser and vaporizer provided with separate conduits to gather the respective products. 8th. An apparatus for separating from oil its more volatile ingredients and for collecting separately those condensable ingredients that are of different specific gravity, a vaporizer feeding mechanism for delivering the liquids in drops, films, spray and other disseminated form upon the vaporizer, said vaporizer being disconnected from any condensing surface that would direct any product of condensation back into the liquid that has passed over the vaporizer and in combination therewith a condenser closely adjacent to the vaporizer adapted to condense the vapors as soon as they are given off without permitting them to mix with those given off from the hotter portions of the vaporizer, said condenser provided with conduits at different points for collecting separately the condensed vapours given off from differently heated portions of the vaporizer.

No. 9439. Improvements on Deodorizing, Purifying and Utilizing Sewage, Urine, Night Soil, and Refuse Matters. *(Perfectionnements dans la méthode de désinfecter, purifier et utiliser les vidanges, les urines, les ordures, les excréments et les déchets.)*

William C. Sillar, London, Robert G. Sillar, Lee and Christopher Rawson, London, Eng., 5th December, 1878, (Extension of Patent No. 2899,) for 5 years.

No. 9440. Improvements in Dredging Machines. *(Perfectionnements aux machines à draguer.)*

James Canan, Allanburg, Ont., 5th December 1878, for 4 years.

Claim—A dredging machine shovel having its bottom so arranged that it will open when it comes in contact with the water allowing the water to pass freely through the shovel.

No. 9441. Improvements in Thill Couplings. *(Perfectionnements aux ferrures des limoniers.)*

John Carr, Minneapolis, Minn., U. S., 5th December, 1878, for 5 years.

Claim—1st. The combination of the shackle A, thill iron B, rubber D, bolt a, piece C and pin b. 2nd. The shackle A having one end dovetailed to receive C, and having also the hole e and groove c' to receive the pin b. 3rd. The sliding piece C with its dovetailed bottom and end and hole e' for pin b. 4th. The combination of the shackle A, sliding piece C and pin b.

No. 9442. Improvement in Railway Cushions. *(Perfectionnement aux tampons de railroads.)*

Fredenck W. Schroeder, N. Y., U. S., 5th December 1878, for 5 years.

Claim—1st. The laminated cushion A, B B formed of a central sheet A of indiarubber with two contiguous elastic pieces B, B firmly cemented respectively on its opposite sides. 2nd. The laminated cushion A, B B constructed as described and enveloped in a covering C of canvas or other suitable material.

No. 9443. Improvement in Insulating Telegraph Wires and Laying Telegraph Cables. *(Perfectionnements dans la manière d'isoler les fils et poser les câbles télégraphiques.)*

David Brooks, Philadelphia, Pa., U. S., 5th December, 1878, for 5 years.

Claim—1st. The mode of insulating telegraph wires clothed with fibrous wrapping, that is to say first heating the said clothed wires to about 300° Fah., and while at this heat immersing them in paraffine oil. 2nd. Insulating clothed telegraph wires by immersing them in paraffine oil heated to a temperature of about 300° Fah. 3rd. The mode of preparing a group of clothed telegraph wires for under ground or sub-aqueous use, that is to say, first confining the group with suitable fibrous wrapping, second heating the wrapped group to about 300° Fah. and then immersing it in paraffine oil, or immersing it into a heated metal tube. 4th. A telegraphic cable made of a series of coupled pipes containing a wrapped group of wires insulated with paraffine oil. 5th. A metal pipe containing one or more clothed wires embedded in insulating material and having one or more joints protected at one end of the said pipe by a detachable tube. 6th. A metal pipe containing a clothed wire or wires embedded in insulating material and having at one end a T-piece with detachable short tube into which the wire or wires are turned. 7th. The mode of coupling the said pipes together and connecting and insulating the connections of the wires in the said pipes, that is to say, twisting the wires together metal to metal wrapping the twisted ends and pressing the same by a tube into which fluid insulating material is poured. 8th. The mode of removing the moisture from the exposed portions of the clothed wires at the joint, that is by heating the said pipe and coupling at the joint to a temperature of about 300° Fah. and then applying paraffine oil in the manner described. 9th. The mode of laying the pipes containing the clothed wire or wires under water, that is to say by sinking the coupled pipes as section after section is added. 10th. The mode of keeping the clothed wire or wires in the pipes, in a constantly insulated condition by maintaining within the pipes a supply of insulating fluid under pressure.

No. 9444. Improvements on a Carpet Tack. *(Perfectionnements à la broquette à tapisserie.)*

John Hartley, Wallaeburg, Ont., 5th December, 1878, for 5 years.

Claim—The combination of the square oblongated head C, with sharp curved hook A and point B.

No. 9445. Instrument for Designing and Cutting Scrolls and Curved Lines. (*Instrument pour tracer et tailler les enroulements et les lignes courbes.*)

Israel Kinney, London, Ont., 5th December, 1878, (Extension of Patent No. 2954), for 5 years.

No. 9446. Improvements in Fog Horns. (*Perfectionnements aux signaux de brume.*)

Edwin R. Whitney and Horace J. Beemer, Montreal, Que., 6th December, 1878, for 5 years.

Claim.—1st. The vibration of the sound producing reed by the direct impact of steam; 2nd. The device whereby steam is alternately admitted from the steam chamber into the fog horn, and shut off therefrom at regulated intervals; 3rd. The device whereby without changing the mechanism, the respective duration of the sound and silent interval may be varied; 4th. The sound for producing mechanism, consisting of a vibrating plate secured edgewise in the slit of a diaphragm set in the horn; 5th. The combination of the drum F with internal cylinder G adjustable as to position and communicating with wheel H.

No. 9447. Manufacture of Iron and Steel. (*Fabrication du fer et de l'acier.*)

Charles Burgess, Portsmouth, Ohio, U. S., 10th December, 1878, (Extension of Patent No. 2927), for 5 years.

No. 9448. Wood Working Machine. (*Machine à travailler le bois.*)

Myron T. Boulton, Battle Creek, Mich., U. S., 10th December, 1878, (Extension of Patent No. 2941), for 5 years.

No. 9449. Improvements in Car Trucks. (*Perfectionnements aux trains des wagons.*)

Frederick W. Schroeder, N. Y., U. S., 10th December, 1878, for 5 years.

Claim.—1st. The central axle support B b; b combined with the bearing truck beam A^c and the axles C C; 2nd. The laminated cushion H interposed between the car beam or bolster E and the bearing head f of the king bolt or pivot pin F; 3rd. A movable follower L and a laminated cushion K and interposed between the truck springs N and the truck frame A; 4th. The movable follower M and the laminated cushions R and R^t interposed between the journal bearings P and the truck springs N; 5th. The laminated spring K formed of a central sheet x of indiarubber, and suitable protecting sheets x of some elastic material thoroughly cemented together, so as to form a solid laminated elastic cushion in combination with a car-wheel journal box; 6th. The laminated springs R and R^t formed of a central sheet x of indiarubber, and suitable protecting sheets x of some elastic material, thoroughly cemented together so as to form a solid laminated elastic cushion, in combination with a car wheel journal box; 7th. In the journal bearing P, formed of two pieces p and p^t and united by the fixing bolts p², in combination with a follower M, and the interposed cushions R and R^t.

No. 9450. Improvement on Water Meters. (*Perfectionnement aux compteurs à eau.*)

Charles C. Barton, Rochester, N. Y., U. S., 10th December, 1878, for 5 years.

Claim.—1st. The combination with the compartments b b, provided with the valve openings f f; g g, of the valve plates k k having a corresponding set of valves h h; g g, covering the openings, said valve plates being connected by links l l and provided with knife edged bearings m m; 2nd. The two valve plates k k connected by the links l l and carrying the valves f f; g g; and arranged as described, so that the valves at the opposite ends of each plate will alternately cover and uncover their valve openings as the plates are swung as described; 3rd. The valve plates k k connected by links l l and provided with knife edged bearings m m, the distance between the knife edged bearings being less than the length of the links, so that the valve plates will spring of their own accord as they pass the dead center to carry the valves to their seats; 4th. In combination with the valves f f; g g and the valve plates k k, the spring connection n and the lever r, for automatically shifting said valves by the reciprocations of the piston; 5th. The spring connection u attached upon pivots o, so as to swing in the arc of a circle, in combination with a lever r provided with the knife edged bearing s s, the spring connection enclosing the lever and being connected therewith by the bearing point t; 6th. The combination with the cylinder or case A of the separate barrel I of smaller diameter and of less length than the interior of the cylinder and arranged as described, so as to leave the water channel f and port j between the barrel and cylinder; 7th. The piston c made approximately of the specific gravity of water and provided with a packing on its periphery.

No. 9451. Improvements in Boots and Shoes. (*Perfectionnements dans les chaussures.*)

Collins A. Weage, Chicago, Ill., and George W. Hayes, Pierceton, Ind., (Assignees of William H. Van Wormer, Pierceton, Ind.,) U. S., 10th December, 1878, for 5 years.

Claim.—Two metal plates D E placed on opposite sides of the counter A, and between it and the lining G, and between the seams B and back seam C, or stitching at the back of the counter, said plates being separate at their rear parts or ends so as to leave wholly a leather surface between them at the middle part of the boot or shoe heel.

No. 9452. Improvements on Tobacco Plugs. (*Perfectionnements aux tablettes de tabac.*)

David H. Ferguson, Montreal, Que., 10th December, 1878, for 5 years.

Claim.—1st. Impressing the letters or other marks directly into the sides of the plugs during the process of manufacture and by the pressure employed in making the plugs; 2nd. A tobacco plug marked with an impression as described.

No. 9453. Improvements on Machine for Granulating Grain. (*Perfectionnements aux machines à granuler le grain.*)

William Eberhard and Robert Turner, Akron, Ohio, U. S., 10th December, 1878, for 5 years.

Claim.—1st. The combination of the roller D F, whether made solid or in sections, having circular rows of holes in its face and ring grooves through the said holes, and the knife H and its supporting and clamping bars G I with each other and with the frame A B C and the hopper J K; 2nd. The combination of the grooved bar L, the clearers M and the separating blocks N, with the roller D F and the frame A B C.

No. 9454. Improvements on Hydrants. (*Perfectionnements aux bornes-fontaines.*)

William McNamara and Lewis Mertens, Erie, Pa., U. S., 10th December, 1878, for 5 years.

Claim.—1st. The valve shell provided with the chambers or passages A A^t B and a, and provided for the attachment of pipes H^t and A^t; 2nd. The combination of the pipes A^t and H^t, leading from the surface, the shell of one casting and containing the chambers A A^t B, valve seat formed by a ledge between the chambers A A^t B and the waste a with its mouth deflected down the side of the shell, by which combination and construction the hydrant is adapted to be used without a surrounding case or box.

No. 9455. Improvements in Milk Vats. (*Perfectionnements aux boites à lait.*)

Rodney S. Whitman, David H. Burrell and Walter W. Whitman, (Assignees of David H. Burrell and George L. Freeman,) Little Falls, N. Y., U. S., 10th December, 1878, for 5 years.

Claim.—1st. In a milk vat, the outer casing constructed of wood, as shown and described, in combination with the tank having inlet and outlet pipes and devices for causing a circulation of the enclosed water or other heat conveying fluid; 2nd. In the freely swinging pipe coil, in combination with the milk receptacle, so constructed and arranged as to be used for heating or cooling the milk; 3rd. The stationary pipe coil, under and in combination with the milk receiver and swinging pipe coil; 4th. The ice pans, in combination with the milk receptacle; 5th. The removable cover formed with an outer and inner shell having an air space between them; 6th. The supporting frame composed of the standards and cross piece and provided with the supporting brackets, in combination with the driving shafts and their bevel gears which operate the agitators; 7th. The agitators composed of the inclined blades and their operating shafts, in combination with their driving mechanism and the milk receptacle; 8th. A non conducting cover for a milk vat so constructed as to prevent the ingress of air to the milk and prevent sudden changes in its temperature as well as the absorption of deteriorating germs; 9th. The combination with a milk receptacle provided with a surrounding air and water space, of an ice pan or pans so arranged as to allow the water from the melting ice to percolate between the milk receptacle and outer case; 10th. The combination of an air tight cover, refrigerating ice pans, a swinging pipe coil and milk receptacle, these devices being arranged for alternate heating or cooling the contents of the milk receptacle; 11th. The process of treating milk by placing it in the vat as drawn, heating it to a temperature of 145 degrees, by steam driven directly through and into the milk, then cooling it quickly by the refrigerating means and process described, and covering the vat with an air tight non-conducting cover, until the cream has separated from the milk; 12th. The process of treating skim milk in the manufacture of cheese, by agitating it within the vat, then heating it to 80 degrees when sufficient rennet is added to coagulate the milk in fifteen minutes, the whey drawn off and steam admitted directly to the curd.

No. 9456. Uterine Mediator. (*Injecteur.*)

Emily A. Tefft, Toronto, Ont., 10th December, 1878, for 5 years.

Claim.—1st. The plunger or piston C, in combination with the fluid chamber A provided with the discharging nozzle B; 2nd. The combination of the retaining flange D with the chamber A and nozzle B.

No. 9457. Improvements in Folding Chairs. (*Perfectionnements aux pliants.*)

Robert Dick, Buffalo, N. Y., U. S., 10th December, 1878, for 5 years.

Claim.—1st. In connection with the seat frame provided with front bar B and pivoted to back frame N N, the legs F F provided with the concavities f f at their upper ends; 2nd. In combination with the seat frame composed of the sides A A and the bars B C and pivoted to the back frame N N, the frame F F, the bar K provided with the projections K K and the perforation K^t; 3rd. In combination with the back leg frame F F provided with the concavities f f, the seat frame composed of the side pieces A A and the bars B C and the elastic ben wire G.

No. 9458. Improvements on Washing Machines. (*Perfectionnements aux machines à laver.*)

George A. Westhaver, Mahone Bay, N. S., 10th December, 1878, for 5 years.

Claim.—1st. The tripodal frames H secured to the cover D, constituting bearings for the journal of the intermediate cog wheel I; 2nd. The cog wheel I, having a plain section b with a lever socket L midway of the terminations thereof, in combination with pinion J and shaft K and a cruciform head N; 3rd. The cross head N provided with vertical pegs O, at the extremity of the arms, in combination with shaft K, pinion J and cog wheel I; 4th. The tub A provided with tangential bottom slats P, vertical side slats O intermediate thereto; 5th. A tub A having a cruciform head N, provided with pegs O semi-rotatively operated within the same by shaft K, pinion J, cog wheel I and levers M.

No. 9459. Improvements in Carriage Springs.
(*Perfectionnements aux ressorts des voitures.*)

James G. Bailey, Guelph, Ont., 10th December, 1878, for 5 years.

Claim.—1st. Providing the ends of the spring plates with cupped face either formed out of the solid metal of the plates or formed by attached lugs riveted thereon, the said cupped faces being retained in place by a ferrule or its equivalent and a bolt, pin or rivet; 2nd. The spring plates A and B provided with the burred ends a, b, in combination with the enclosing ferrule or casing C and bolt D.

No. 9460. Improvements in Hooks.
(*Perfectionnements aux crochets.*)

Frank Korting, San Francisco, Cal., U.S., 10th December, 1878, for 5 years.

Claim.—1st. A link connection and lock consisting of the hook C hinged to the centre of the circular head G of the connecting bar, so that its point moves close to the periphery of the disc or head G and prevents the ring or link F from being withdrawn while it is allowed free movement; 2nd The connecting bar A, having the circular disc G slotted or notched at B, in combination with the hook C pivoted to the centre of the head, so that it may be moved past the notch to allow the link F to be introduced or removed.

No. 9461. Process for Cleaning Plush and Cloth.
(*Procédé de nettoyage de la peluche et du drap.*)

John Besanson, Titusville, Pa., U.S., 10th December, 1878, for 5 years.

Claim.—Removing all dust and stains, colouring with extract of cochineal or other colour, acetic acid, flavin and salts of tin, then steaming, sponging and brushing, again s eaming and applying gum tragacanth and salt dissolved in water, and finally drying and brushing.

No. 9462. Improvements in Garden Sprinklers.
(*Perfectionnements aux arrosoirs de jardins.*)

Lucius N. Wisewell and Joseph F. Hanrahan, Ottawa, Ont., 10th December, 1878, for 5 years.

Claim.—1st. The revolving brushes N N, in combination with the subdivided shaft M and pulley drum J; 2nd. The combination of the frame A, handles a, reservoir B, tubes P, cups F, shaft M, pulley drum J and brushes N N, with a driving and carrying wheel C; 3rd. The cups F and revolving brushes N N combined with a wheeled frame A to operate for sprinkling.

No. 9463. Improvements on Boots.
(*Perfectionnements aux chaussures.*)

Edward Roos, Galt, Ont., 10th December, 1878, for 5 years.

Claim.—1st. The combination of the parts cut and stitched together as described; 2nd. The integral vamp and quarter, cut with the gusset slit d; 3rd. The mode of forming the crimp and lap over the instep and foot by the insertion of the gusset; 4th. The gusset piece, for insertion as described, having strap portion f cut integrally therewith.

No. 9464. Improvements on Flax Scutching Machines.
(*Perfectionnements aux machines à teiller le lin.*)

William Keane, Stratford, Ont., 10th December, 1878, for 5 years.

Claim.—1st. The combination with the grating D of the guard board C and the scutching board B; 2nd. The combination of the trough e and the grating F, with the knives a a; 3rd. The combination of the boards G and slit or opening H.

No. 9465. Improvements on Hernia Trusses.
(*Perfectionnements aux bandages herniaires.*)

John C. Ward, Albany, N. Y., U. S., 10th December, 1878, for 5 years.

Claim.—1st. The pad E made of solid and unyielding material and combining the form of the several portions of the face side of the same in the manner described; 2nd. The pad arm C, having, at its upper end, the sleeve D perforated to receive the round connecting bar B and set screw, and slotted near its lower end, all constructed of a single piece, in combination with the adjustable pad E.

No. 9466. Neck Yoke Attachment.
(*Ferrure de joug.*)

Benjamin Foltz, Rockford, Ill., U. S., 10th December, 1878, for 5 years.

Claim.—1st. In a pole-tip, the combination of a hold back post, a forward projecting guard, a permanent lug forward of the holdback post and a pivoted drop latch, adapted to rise to admit the neck yoke ring between the holdback post and the permanent lug forward of the post; 2nd. The combination of the vehicle pole, the upper strap iron the holdback post, the guard B, the permanent lug C and the pivotal locking latch; 3rd. In a vehicle pole having the upper and lower strap iron, the combination of the holdback post, the permanently secured lug for use in the forward draft, and the spring latch for securing purposes; 4th. The combination of the tongue, tongue iron A, holdback plate B, lip B, recessed lug C, latch C and spring c, all the parts arranged and operating in conjunction with the neck yoke.

No. 9467. Improvements on Cultivators.
(*Perfectionnements aux cultivateurs.*)

John H. Stanton, Jordan Station, Ont., 10th December, 1878, for 5 years.

Claim.—1st. The tooth frame supported in such manner on the machine that it can be adjusted to a level independently of the wheels; 2nd. The divided shaft F from which the tooth frame is adjusted by quadrant plates and chains, arranged in such manner that each section can be operated independently of the other to vary the level of tooth frame, or both sections may be combined to form practically one shaft operated by one lever; 3rd. The tooth frame connected to the draught pole by angle draught rods, which rods are coupled to the frame at or near the centre thereof communicatively to it

and teeth attached thereto, a forward tilt or inclination for the purpose of keeping the point of the teeth to their work; 4th. The forwardly extending brace J₃ attached to the cultivator frame and connected to the draught pole by a flexible joint; 5th. The cultivator teeth provided with the rear brace, in combination with shoulder and socket plate K; 6th. The cultivator tooth provided with the forwardly projecting joint J₂, and the toe or blade arranged at an acute angle with the surface of the ground.

No. 9468. Improvements in Sieves.
(*Perfectionnements aux tamis.*)

Edward Stewart, Fort Maddison, Iowa, U.S., 10th December, 1878, for 5 years.

Claim.—1st. A sieve hoop having sliding ends, a groove j and rim b; 2nd. A sieve hoop, the body of which has sliding ends and a catch C, in combination with a detachable bottom.

No. 9469. Improvement on Heating Apparatus.
(*Perfectionnement aux appareils de chauffage.*)

Austin V. M. Sprague, Edmund O'Campagh, George W. R. Lewin, Rochester, N. Y., and Isaiah Rudy, Philadelphia, Pa., (Assignees of Abner Burbank, Rochester N. Y.) U.S., 10th December, 1878, for 5 years.

Claim.—1st. A portable heating apparatus for burning hydro-carbons, in which are combined a cylinder H having tube f, receptacle C, chimney or heat conductor E, the separate boiler G resting on the chimney with a pipe b proceeding from the boiler, and a pipe g proceeding from an oil fount, the two pipes uniting in front of the tube f for conveying oil and steam, and injecting the oil through said tube to the interior of the cylinder H; 2nd. The combination of the oil fount C, chimney or heat conductor E and separate boiler G provided with the pipes b g constituting an injector, the whole forming an attachment capable of raising the oil and injecting the same through pipe f, into the cylinder H; 3rd. The combination with pipes b g of the perforated screens h h inclosing the induction ends of said pipes, and having their perforations as small as, or smaller than, the discharge orifices of said pipes.

No. 9470. Improvements on Hay Pitching Machines.
(*Perfectionnements aux fourches à foin.*)

Mitchell T. Buchanan, Dorchester, Ont., 10th December, 1878, for 5 years.

Claim.—1st. The handle D pivoted at E and arms F F, in combination with outer and inner frames A B and guides C; 2nd. The points G G pivoted at H I to outer and inner frame A B; 3rd. The slot O and catch P, in combination with the dog J and movable bolt K.

No. 9471. Improved Vaginal Syringe.
(*Seringue vaginale perfectionnée.*)

Robert H. Woodward, Fort Wayne, Ind., U. S., 10th December, 1878, for 5 years.

Claim.—1st. The combination of an air conducting tube C with the tube B and the compressible bulb of a vaginal syringe; 2nd. The combination of the drip bulb D with the air tube C, bulb A and vaginal tube B.

No. 9472. Combined Harrow and Seeding Machine.
(*Hersse et semoir combinés.*)

George W. Roberson and Henry F. Roberson, Salem, N. Y., U.S., 10th December, 1878, for 5 years.

Claim.—1st. In the drag-bars F, in combination with the drag or scraper K having pivoted arms k and slotted brackets D; 2nd. The combination of the slotted arms or brackets D, rod E, drag or scraper K, having pivoted arms k, and chains l for adjusting the pitch or angle of the scraper; 3rd. The combination of the perforated cross bar G having rods or chains g g for connecting it with suitably constructed elevating levers, suspension rods h having retaining keys or wedges k with springs I, pivoted drag bars F, rod E and pivoted arms k carrying the drag or scraper K, whereby the drag bars and scraper may be raised simultaneously by operating the lever for elevating cross bar G.

No. 9473. Improvement on Carriage Springs.
(*Perfectionnement aux ressorts des voitures.*)

Archibald H. Brintnell, Colborne, Ont., 10th December 1878, for 5 years.

Claim.—The spring a a having its central upward curvature fastened in its centre to the centre of the side bar b, curving upwards at each end in the form of an evolute and attached at each end to the upper side of side bar b and fitted with fastenings d at hind axle, fastening e at head block and having clips c, the whole combined as described.

No. 9474. Improvements on Farm Gates.
(*Perfectionnements aux barrières.*)

Daniel Cummins, Mount Forest, Ont., 10th December, 1878, for 5 years.

Claim.—1st. The combination of the lateral extension hinge A, the intum M, the vertical rod O and the guard W; 2nd. The combination of the gate fastenings, the swing T T, slide S and groove G.

No. 9475. Improvements on Fences.
(*Perfectionnements aux clôtures.*)

John B. Miller and Archibald M. Miller, Parkhill, Ont., 10th December, 1878, for 5 years.

Claim.—A fence specially designed for crossing streams, rivers and flooded land, made of posts A, pickets B, boards C D, wires E F G H I and staples J.

No. 9476. Improvements on Reaping Machines.
(*Perfectionnements aux moissonneuses.*)

William Russell, Dundas, Ont., 10th December, 1878, for 5 years.

Claim.—1st. The combination of the hand lever A with frame K, links B E and raising bar C and slide D of table; 2nd. The combination of the lever A, bearings G G, links B F, raising bar C and slide D.

No. 9477. Improvements on Screw Propellers.*(Perfectionnement aux hélices propulseurs.)*

Edwin Town, Wilmington, Del., U. S., 12th December, 1878, for 5 years

Claim.—1st A wheel or propeller whose wing-shaped and strictly spiral flanges embrace as to their surfaces an area equal to and, it desired, greater than the area of a circle of equal diameter to the diameter of the wheel or propeller. 2nd A wheel or propeller having wing shaped spiral flanges slightly extended in their crested extremities by curved concave butts or hp formed additions.

No. 9478. Improvements on Cheek Hinges.*(Perfectionnement aux pentures d'arrêt.)*

Alexander B. Seobie and David S. Adams, Toronto, Ont., 12th December, 1878, for 5 years.

Claim.—A cheek or locking attachment C, hinged or pivoted to the wings A B and having a hinge corresponding with the hinge connecting the said hinge.

No. 9479. Root Sprinkler and Duster.*(Arrosoir-époussoir pour les plantes sarclées.)*

Montagu A. B. Shipman, Ottawa, Ont., 12th December, 1878, for 5 years

Claim.—1st. A revolving distributor or distributors *d d* combined with a reservoir *n* by means of a distributing pipe or pipes *b b*, through which the liquid to be distributed is carried to, and brought in contact with *d d*. 2nd The combination of the thumb and valve rods *e e* with valves *f f*, pipes *b b*, and distributors *d d*. 3rd The combination of the wheel *z*, frame *h h h*, rod *g* and agitator *j*. 4th The combination of a sprinkler *a*, rubber ring *o* and pipe *b*. 5th The combination of a rotating duster with the sprinkler *a* and distributor *d*. 6th. A rotating duster revolving by the action of the machine on which it is carried

No. 9480. Apparatus for Transmitting Sounds*Telegraphically. (Appareil télégraphique pour transmettre les sons.)*

Elisha Gray, Chicago, Ill., U. S., 12th December, 1878, (Re-issue of Patent No. 4985) 11 years 5 months and 6 days.

Claim.—1st. The improvements in the art, method or system of audibly and simultaneously reproducing upon a metal disc, plate or diaphragm, through the intervention of an electro-magnet included in an electric circuit, two or more series of rhythmical impulses or vibrations representing musical impressions or sounds, ore composite tones. 2nd The improvements in the art, method or system of intensifying in a resonator, composite tones produced by the conjoint operation of an electro-magnet included in an electric circuit, and a disc, diaphragm or plate of metal vibrating in unison therewith. 3rd The improvements in the art, method or system of simultaneously transmitting two or more series of rhythmical impulses or vibrations representing composite tones, through an electric circuit and reproducing them through the intervention of a magnet and a disc, diaphragm or plate of metal vibrating in unison therewith at the receiving end of the line; 4th The improvements in the method or system of simultaneously reproducing in an electric circuit, two or more series of rhythmical impulses or vibrations representing musical impressions, or sounds, or composite tones by the conjoint operation of a disc, diaphragm or plate of metal vibrated in unison with an electro-magnet by induced current of electricity.

No. 9481. Apparatus for Transmitting Sounds*Telegraphically. (Appareil télégraphique pour transmettre les sons.)*

Elisha Gray, Chicago, Ill., U. S., 12th December, 1878, (Re-issue of Patent No. 4949) for 11 years, 5 months and 6 days.

Claim.—1st A diaphragm, disc or plate of metal (capable of responding to all kinds of tones) vibrating in unison with an electro-magnet included in an electric circuit; 2nd. A sound intensifying chamber or resonator having a disc, diaphragm, plate, end, or wall of metal, responsive to rhythmical impulses or vibrations representing musical impressions or sounds produced in an electric circuit through the intervention of an electro-magnet; 3rd. The combination of an electric circuit or sound intensifying chamber or resonator a diaphragm, disc or plate of metal, and an electro-magnet, the two latter vibrating responsively to rhythmical impulses or vibrations representing musical impressions or sounds transmitted through said circuit; 4th. The combination of a primary circuit, a secondary circuit, an electro-magnet and a disc, diaphragm or plate of metal, responsively vibrated by induced currents of electricity to reproduce rhythmical impulses or vibrations representing musical impressions or sounds; 5th. The combination of a transmitter consisting of a coil or helix whereby rhythmical electric impulses or vibrations may be induced in a telegraphic circuit without interrupting the continuity of the same, and a receiver consisting of an electro-magnet having a metal disc, diaphragm or plate for its armature, these being so arranged as to vibrate in unison with each other and with the impulses or vibrations proceeding from the transmitting or inducing coil; 6th. The combination of a telegraph circuit a series of circuit breakers, capable of producing musical tones of different pitch, a series of keys (for throwing said circuit breakers into or out of operation), and an electro-magnet receiver which is thrown into vibration by the transmitters, whereby tones of different pitch may be reproduced at the receiving end of the line by the employment of a single circuit

No. 9482. Art of, and Apparatus for, Transmitting and Analyzing Sounds*Telegraphically. (Art de transmettre et analyser les sons par la télégraphie, et appareil pour cet objet.)*

Elisha Gray, Chicago, Ill., U. S., 12th December, 1878, (Re-issue of Patent No. 6101.) for 12 years, 4 months and 11 days.

Claim.—1st. The improvements in the art, method or system of working a constantly closed electric circuit with a continuous current, upon which continuous current rhythmical impulses, vibrations or waves representing composite tones are superposed by throwing them upon the line from a suitable

generator or transmitter; 2nd The improvements in the art, method or system of working a constantly closed electric circuit with a continuous current, upon which continuous current, rhythmical vibrations representing composite tones are superposed by throwing them upon the line from a suitable generator transmitting them through said circuit and reproducing them at the receiving end of the line upon a constantly charged electro-magnet; 3rd. The improvements in the art, method or system of working a constantly closed electric circuit with a continuous current upon which continuous current rhythmical vibrations, representing composite tones, are superposed by throwing them upon the line from a suitable generator transmitting them through said circuit and reproducing them at the receiving end of the line upon a constantly charged electro magnet, and controlling said transmission and reproduction by suitable signalling apparatus so as to produce intelligible signals at a distant station; 4th. The improvements in the art, method or system of transmitting rhythmical vibrations representing sounds composed of two or more co-existent simple tones, by the production in a constantly closed circuit of an electric current, the intensity or effective strength of which may be increased or decreased by the generating or transmitting apparatus, so as to be at all times proportionate to the amplitude of the compound resultant vibrations essential to the production of sound required; 5th The improvements in the art, method or system of producing in a constantly closed circuit an electric current of varying strength or intensity which is used to produce, at the distant station, all the various distinctive characteristics of physical waves or vibrations, the amplitude of the composite vibration required to be reproduced at any given moment being correlated with and represented by a corresponding degree of strength in the electric current traversing the circuit at the same moment; 6th. The improvements in the art, method or system of telegraphically transmitting composite tones, which consists in working a closed electric circuit with a continuous current from a main battery, portions or the whole of which current are thrown into vibrations at will by the generators or transmitters; 7th The improvements in the method or system of telegraphically transmitting and analyzing composite tones by working a closed circuit with a continuous current from a main battery, portions or the whole of which current are thrown into vibrations at will by the generators or transmitters, each set of vibrations being audibly reproduced by a corresponding receiver.

No. 9483. Art of, and Apparatus for, Transmitting and Analyzing Sounds*Telegraphically. (Art de transmettre et analyser les sons par la télégraphie, et appareil pour cet objet.)*

Elisha Gray, (Chicago, Ill U. S., 12th December 1878 (Re-issue of Patent No. 6201.) for 12 years, 5 months and 26 days.

Claim.—1st The combination of a constantly closed primary electric circuit or main line and apparatus for generating two or more series of rhythmical vibrations representing musical impressions for sounds or composite tones so arranged as to throw said vibrations upon the main line without interrupting the continuity of its current. 2nd The combination of a constantly closed primary electric circuit or main line apparatus for generating and transmitting rhythmical vibrations, represent ing composite tones capable of being thrown into or out of action, without interrupting the continuity of the main line circuit, and a permanently charged electro-magnet included in the closed main circuit. 3rd The combination of a series of transmitters, each operated by a local battery, a main battery, a primary electric circuit or main line through which a continuous current flows from said battery and shunt or short circuits between the main battery and transmitters, 4th The combination of a series of transmitters, a main battery connected therewith by short or shunt circuits, a closed primary electric circuit or main line through which a current continuously flows from the main battery and a series of receivers included in the circuit.

No. 9484. Cement Lined Metal Pipe.*(Pipeau métallique doublé en ciment.)*

Melvin Stevens, Brooklyn, N. Y., U. S., 15th December, 1878, (Extension of Patent No. 2947) for 5 years

No. 9485. Improvements in Hoop Cutters.*(Perfectionnement aux machines à tailler les cercles.)*

David H. Burrell, James H. Ives, Rodney S. Whitman, and Walter W. Whitman and David H. Burrell, Little Falls, (Assignees of John B. Daugherty, Rochester,) N. Y. U. S. 17th December, 1878, for 5 years

Claim.—1st The combination of the driving shaft with the cam shaft, its cam, the pawl carrying lever and feed shaft with its actuating ratchet. 2nd The combination of the leading devices with a brake applied to the periphery of the log to prevent, its being lifted by the knife or too rapid advance. 3rd The feed shaft provided with tooth feeding rolls and ratchets, in combination with the differential spring pawls to prevent reaction of the feed shaft. 4th The vertically adjustable centre H providing with a deflecting screw for the purpose of adjusting the grain of the wood in line with the edge of the vertical cutting knife. 5th The knife carrier L in combination with the radial arms *d*, one set of the arms being longer than the others, so that in cutting one end off, the knife shall enter the log before the other. 6th The centre H made vertically adjustable by means of the wedge J, in combination with the centre H and its adjusting screw L, as a means for raising and lowering the log. 7th The method of cutting hoops from a log by first making the edge out and secondly the radial or side cut for the purpose of relieving the knife and preventing checking of the hoop. 8th. The centres H and H' made vertically adjustable by the adjusting screws as a means for raising and lowering the log

No. 9486. Improvements on Animal Traps.*(Perfectionnement aux pièges à vermine.)*

Thomas G. Rice, Montreal, Que., 17th December, 1878, for 5 years

Claim.—1st. The combination of the pawl F and projection I with springs D and catch C. 2nd. The combination of the projection I and pawl F with the catch C.

No. 9487. Improvements in Boots and Shoes.

(*Perfectionnements dans les chaussures.*)

Robert Church and Bradstreet D. Johnson Montreal Que. 17th December 1878, for 5 years.

Claim—In combination with the fly of a button boot or shoe detached pieces C of kid or other leather secured thereto and having the button hole subsequently cut through them and the substance of the fly at once.

No. 9488. Improvements in Screw Stocks.

(*Perfectionnements aux fileuses à vis.*)

Perival Everitt, Frank B. Wheeler and Harry Olrick London, Eng., 17th December, 1878, for 5 years.

Claim—The combination with a screw stock A, of a gripping cam or eccentric B, for advancing the sliding die or cutter to, or holding it in contact with the work while the act of cutting the screw is being performed and releasing the work from the dies when the screw thread is formed.

No. 9489. Improvements on Planing Machines.

(*Perfectionnements aux machines à raboter.*)

Joshua Ross, Buffalo N. Y. U. S. 17th December, 1878, for 5 years.

Claim—1st. The standards A having the bearings for and in combination with the main shaft T having the hand wheel U and worm S the worm wheel R shaft Q with the pinions P and the gear toothed rack bars O on the table G. 2nd. The combination with the feed rollers C pivoted within the yokes F of the levers J and weights K said levers being fulcrumed at I and caused to act upon the yokes midway between the rollers C. 3rd. Planing machines having a hood V provided with projecting sliding bars b and rear projections X said projections b being constructed to engage inclined guides a on the standards A A, and the projections X to rest upon the rollers C. 4th. The combination with the standards A A having the obliquely arranged guides a of the hood and chip breaker V provided with the projecting slides h.

No. 9490. Improvements on Blind Awnings.

(*Perfectionnements aux persiennes-fermes.*)

Charles P. Dearborn, Boston, Mass., U. S., 17th December, 1878, for 5 years.

Claim—1st. In combination with a blind awning having a double hinge at its top the sliding lower hinge adapted to operate so that the blind may be detached from the lower pottle without elevating said blinds; 2nd. The combination with the convertible blind awning A B of the locking bolt D provided with the slotted socket E. 3rd. The combination with the convertible blind awning A B, of the sliding hinge I and plate G. 4th. In combination with a window blind, a pottle for a hinge attached to the window casing, and a sliding hinge I adapted to be detached from said pottle or connected therewith by elevating or depressing said hinge independently of the blind.

No. 9491. Improvement on Safes.

(*Perfectionnement aux coffres-forts.*)

Thomas Saunders, Toronto, Ont., 17th December, 1878, for 5 years.

Claim—A fire-proof composition composed of calcined gypsum sand and sea dust mixed in the proportions set forth.

No. 9492. Composition of Matter for Making Paint.

(*Composé pour faire de la peinture.*)

Alfred Fletcher, Sarnia, Ont., 17th December, 1878, for 5 years.

Claim—A compound composed of surface natural oil or petroleum, sal soda, common salt and borax boiled together and mixed in the proportions set forth.

No. 9493. Improvements on Axle Oilers.

(*Perfectionnements aux boîtes à graisses.*)

Albert McDonald Wallaceburgh, Ont., 17th December, 1878, for 5 years.

Claim—The combination of the tube A with the cap screw G and the plunger E.

No. 9494. Improvements in Bed Bottoms.

(*Perfectionnements aux fonds de lits.*)

Noah Dutton, Jamesville, Wis., U. S., 17th December, 1878, for 5 years.

Claim—The canvas A having the weighted strips a a a inserted in its four edges, the whole being adapted to rest directly upon the coiled or other bed springs and to support and be wholly covered by the upholstered mattress.

No. 9495. Improvements on Sawing Machines.

(*Perfectionnements aux scieries.*)

Senall T. Moffett, Lisbon, N. H., U. S., 17th December, 1878, for 5 years.

Claim—1st. The saw and log carriages arranged in and applied to the frame as described, and provided with mechanism for revolving and otherwise moving the saw and elevating and turning the log. 2nd. The combination for intermittently elevating the log carriage and revolving the log, such consisting of the screws r r, bevel gears s s s t, shaft u, spur gear v r, u log arbors op, ratchet wheel y, draw pawl z, lever ai, spring et, series of bent levers fi hi ki and the cam mi, all being applied and arranged with the frame and the saw and log carriages.

No. 9496. Improvements on Gasoline Stoves.

(*Perfectionnements aux cuisinières à gaz.*)

Fordyce A. Lyman, Cleveland, Ohio, U. S., 17th December, 1878, for 5 years.

Claim—1st. The combination with the vaporizing chamber and heating chamber surrounding the same and having perforations h, of the burning paste i; 2nd. The combination with the vaporizing chamber provided with suitable valve mechanism and the heating chamber which surrounds it, and

is formed with the perforations h, of the valve H, and the horizontal burning plate I provided with or without the wood shield J. 3rd. The combination with the vaporizing chamber and the annular heating chamber, of the burner proper, the intermediate vertical tube and the standards or open support upon which said tube and burner are raised independently above the vapor jet orifice. 4th. The combination with the burner F formed with slot 5 of the angular upwardly flaring plate f formed on the top thereof below said slot; 5th. The combination with the vaporizing chamber of the air rounding chamber H provided with burning jets b and valve H for supplying gasoline or vapour to the said jets. 6th. The combination with the main vapour jet of the chamber H, plate I and perforations h. 7th. A gasoline burner the valve shaft D having the screw thread at the top. 8th. The combination of the valve shaft D having its screw thread near the top, with the generating tube D provided with the smooth base I connection and packing box.

No. 9497. Sole Edge Trimming Machine.

(*Machine pour faire le bécot des semelles.*)

Charles J. Addy Boston, Mass., U. S. 17th December 1878 for 5 years.

Claim—1st. The swivelling tubular handle connected with a universally movable support a blade or knife carried by the said handle and mechanism within the handle to operate the blade for all positions of the handle. 2nd. The swivelling tubular handle and reciprocating knife combined with the link y ball jointed with the carrier and with the shaft and eccentric to operate the link and knife. 3rd. The swivelling tubular handle and gauge connected therewith to bear upon the sole edge in advance of the knife combined with an edge trimming knife. 4th. The swivelling tubular handle and its edge cutting blade combined with the hand gauge and the sole edge gauge connected with the handle or bracket attached thereto. 5th. The swivelling tubular handle and edge cutting blade combined with upper gauge a.

No. 9498. Machine for Washing Clothes.

(*Machine à laver le linge.*)

Zéphirin M. Gélins, Ste. Anne d'Yamachiche Que. 18th December, 1878 for 5 years.

Résumé—Le mouvement giratoire de va-et-vient des rouleaux a b c produit par les roues d'engrenage d e f et les pignons y e h la construction particulière des roues d'engrenage d e f et des pignons y e h.

No. 9499. Improvements on Stove Grates.

(*Perfectionnements aux grilles des poêles.*)

William McClave Pittston, and John A. Price Scranton Pa. U. S. 18th December, 1878, for 5 years.

Claim—1st. reversible stove grate composed of two parallel grate sections hung in the stove or grate frame and each constructed with like surfaces upon both or opposite sides. 2nd. The reversible grate sections connected at one end by pinions or gear wheels. 3rd. The reversible grate sections constructed with shaped grate bars connected by longitudinal strips or bars. 4th. The combination, in a stove or furnace of the two grate sections constructed of the shaped grate bars connected together and adapted to be reversed by gear wheels attached to their journals so as to present like surfaces to the fire above at each reversal. 5th. The reversible grate bars so constructed as to counteract their tendency to warp under the action of the heat in the stove. 6th. The reversible grate bars as shown. 7th. The curved plates, grates or fingers combined with the reversible grate sections. 8th. The handle of a reversible stove grate provided with a lug or projection at any suitable point. 9th. The handle of a reversible stove grate adapted to be applied to a journal of the grate, and when turned to come in contact with a stop on the stove for the purpose of arresting the further rotation of the grate, as soon as it reaches the proper point to support the fire in the stove above.

No. 9500. Improvements in Refrigerators.

(*Perfectionnements aux garde-manger.*)

George F. Smith, Henry C. Smith Charles W. Woods and Abram R. Colborn, Michigan, Ind., U. S., 18th December, 1878 for 5 years.

Claim—1st. The combination of the following elements, viz. an ice box, the width of the provision chambers occupying the entire upper portion except spaces at each end for ascending air currents, a central opening in the bottom of the ice box provision chambers below the ice box occupying the entire width and air passages out of such chambers around the ends of the ice box. 2nd. The combination of the following elements, viz. an ice box the width of the provision chambers occupying the entire upper portion except spaces at each end for ascending air currents, an air discharge opening above the centre of the ice box, a central air discharge opening in the bottom of the ice box and air passages out of the provision chambers around the ends of the ice box. 3rd. The combination of the following elements, viz. an ice box, the width of the provision chambers occupying the entire upper portion except spaces at each end for ascending air currents, a central air discharge opening in the bottom of the ice box, and a false bottom raised above the bottom of the ice box having openings near its ends only and an air passage under it. 4th. The combination of the following elements viz. an ice box, the width of the provision chambers occupying the entire upper portion except spaces at each end for ascending air currents, a central air discharging opening in the bottom of the ice box and a partition directly under such opening, dividing the air currents as well as the provision chambers and air passages out of the provision chambers around the ends of the ice box. 5th. The combination with the two provision chambers E E, and the single ice box D provided with openings d and situated above said provision chambers and extending the entire width of the refrigerator of the side flues F F, air box K having openings h and the false bottom I having the side openings e e.

No. 9501. Improvements on Sewing Machines.

(*Perfectionnements aux machines à coudre.*)

John M. Fair and William Hinge Buffalo N. Y. U. S., 18th December, 1878, for 10 years.

Claim—1st. In combination with the bearing wall of a shuttle race, of one or more friction rollers, the periphery or peripheries of which project through or inwardly toward the shuttle passage, beyond said wall and from a

portion of the shuttle bearing; 2nd. In combination with the shuttle bearing wall of a sewing machine shuttle race, of one or more friction rollers journaled in adjustable bearings secured to the machine frame, and adapted to be placed in position to support said friction roller or rollers with the periphery or peripheries thereof, flush with or projecting through an opening or openings in the bearing face of said wall at different distances.

No. 9502. Improvements on Adjustable Sieves.

(*Perfectionnements aux tamis mobiles.*)

John Dildine, Milton, Pa., U. S., 18th December, 1878, for 5 years.

Claim.—1st. An adjustable sieve formed of the bars A hinged to each other at their adjacent ends, the wire cloth B and the cross wires C; 2nd. The combination of strengthening sectors E with the adjacent hinged ends of the bars A, the wire cloth B and the cross wires C; 3rd. The combination of the curved arm F and its screw or pin G with the hinged bars A, the wire cloth B and the cross wires C; 4th. An adjustable sieve formed of the hinged bars A, the wire cloth B, the cross wires C, the angle strips D, the strengthening sectors E, the curved bar F and its screw or pin G.

No. 9503. Improvements on Sewing Machines.

(*Perfectionnements aux machines à coudre.*)

Henry J. Watkiss, Hudson, Mass., U. S., 18th December, 1878, for 5 years.

Claim.—1st. The combination of a needle moving vertically to make its stitch and vibrating to feed the fabric, and a slotted feed plate and a presser foot, both adapted to reciprocate horizontally at right angles to the line of the feed, for the purpose of moving the fabric alternately away from and across the needle path; 2nd. In a sewing machine adapted for overseaming leather, the combination of a perforating awl, a vertically moving needle adapted to vibrate to feed the fabric, a horizontally reciprocating needle plate and a presser foot adapted to move coincidentally therewith; 3rd. The combination of a reciprocating needle plate *l*, arm *x*, pivoted upon said plate, a vertically and horizontally reciprocating presser foot *t* and a vibrating sewing and feeding needle; 4th. The combination of a cam grooved cylinder *o*, lever *p* having a pin projecting into the groove of said cylinder, the horizontally reciprocating needle plate *l*, pivoted arm *x* and presser foot *t*; 5th. A sewing machine attachment composed of a needle plate having a laterally projecting arm provided with a cam bearing or bearings, and mounted upon a shaft and adapted to receive motion from a sewing machine shaft, a presser foot connected to a standard on the arm of the needle plate by a pivoted link, a guide block fitted loosely to a horizontal slide firmly attached to the shank of a presser foot, and adapted for attachment to the presser foot bar of a sewing machine, and a lifting bar jointed to the presser foot and adapted for attachment to a sewing machine and operation by a suitable moving part thereof, whereby an overseam may be formed and the presser foot lifted to allow the material in process of sewing to be fed at alternate stitches; 6th. The combination in a sewing machine attachment of a needle plate and a connected presser foot, both adapted for lateral reciprocation in overseaming, with a presser bar and a lifting bar connected with the presser foot and adapted for attachment to a sewing machine as described, whereby said presser foot is lifted automatically at every other forward movement of the feeding device of the machine; 7th. In a sewing machine attachment, the combination of the needle plate B, having arm B₁, arranged to move longitudinally in suitable guides, and provided with the cam faced standards *c*, rotary cam D adapted to receive motion from a sewing machine shaft, presser foot L adapted for lateral movement and connected with plate B, and suitable device for lifting said presser foot.

No. 9504. Process of Preparing Roasted Coffee.

(*Procédé de préparation du café torréfié.*)

James Todhunter and John Hackemer, Toronto, Ont., 20th December, 1878, for 5 years.

Claim.—Glazing or coating coffee beans after roasting with a mixture composed of Irish sea moss, eggs and sugar or any other equivalent material or materials, for the purpose of preventing the escape of the rich aromatic essences of the coffee.

No. 9505. Apparatus for Counting Coin.

(*Appareil pour compter la monnaie.*)

John W. Meaker, Chicago, Ill., Harvey B. Merrell, Morristown, N. J., and Thomas Ferguson, Detroit, Mich., U. S., 20th December, 1878, for 5 years.

Claim.—1st. A tray provided with one or more series of semi-cylindrical recesses, each series forming one continued recess consisting of several smaller ones; 2nd. The combination of the semi-cylindrical inclines C and spring F, with the gate D and plate H; 3rd. The tray B cast with one or more semi-cylindrical series of recesses F on its upper surface, in combination with one or more semi-cylindrical inclines C provided with the gate D, plate H and spring F.

No. 9506. Improvements on Door Fastenings.

(*Perfectionnements aux fermetures des portes.*)

Jeffrey H. Burland, Montreal, Que., 20th December, 1878, for 5 years.

Claim.—1st. The combination of the levers E and H, the bolts C and G, the spring F and catches B and K; 2nd. The combination of the gate bar I by a chain or other connection, with the lever H.

No. 9507. Apparatus for Testing and Adjusting Railway Rails.

(*Appareil pour poser les voies des railways.*)

John W. Currier, Troy, Vt., U. S., 24th December, 1878, for 5 years.

Claim.—1st. The combination of a straight edge provided with a level D; and gauge projections B, whereby the gauge and level of the rails are simultaneously tested; 2nd. The combination of the straight edge C, having level D₁, with the straight edge A; 3rd. The combination of the straight edge C, having level D₁, with straight edge A and locking, clamping or securing device; 4th. The combination of the straight edge C, having level D₁, with straight edge A and locking, clamping or securing device provided with notches, marks or catches, indicating standards of measure.

No. 9508. Method of Forming Joints in Gas and Water Mains.

(*Méthode de confection des joints pour les tuyaux principaux de gaz et d'eau.*)

William Painter, Baltimore, Md., U. S., 24th December, 1878, for 5 years.

Claim.—1st. The method of sealing the joints of gas and water mains by interposing a gasket between the pipe sections and forcibly seating the same, by means of hydrostatic pressure external to, or independent of that within the mains; 2nd. A pipe joint having a gasket adapted to be seated by external hydrostatic pressure; 3rd. In a pipe joint, a bell having an annular gasket and a curved interior surface with or without an enlargement at the orifice; 4th. A pipe joint composed of a bell and spigot having an interposed gasket seated by means of external fluid pressure.

No. 9509. Apparatus for the Manufacture of Nitric Acid.

(*Appareil de fabrication de l'acide nitrique.*)

Carl W. Volney, Brookville, Ont., 24th December, 1878, for 5 years.

Claim.—1st. A retort A in which the vapours are generated, having earthenware pipe C, a line of straight glass conducting tubes D E F connecting therewith, a section E of said tube provided with a water jacket condenser through which passes a flow of cold water to condense the vapours and cooling the acid of distillation; 2nd. A retort A having a removably fixed flange pipe C inserted in the vapour exit from the inside of the retort; 3rd. The improved mode of connecting the glass tubes D E F and pipe C, consisting of an earthenware or plastic moulded cement collar K sleeved in the small end of the tubes and butting against the large end, the joints closed by outside rings L of plastic cement.

No. 9510. Improved Butter Package.

(*Tinette à beurre perfectionnée.*)

Arthur White, Stanstead, Que., 24th December, 1878, for 5 years.

Claim.—1st. The close firkin and its internal lining and supporting strips thereof, combined and arranged as specified; 2nd. The close firkin and the internal lining and its supporting strips combined as set forth, and having top and bung holes disposed in the two next adjacent heads of the said firkin and lining.

No. 9511. Magneto-Electric Machines.

(*Machines magnéto-électriques.*)

Henry J. Smith, Mountain View, N. J., U. S., 24th December, 1878, for 5 years.

Claim.—1st. The combination, with the operating device of the rotary armature of a dynamo-magneto-electric machine of a bridge or switch arranged in the condensing circuit of said machine, and in the path of said operating device and adapted to be opened by direct impingement of said device thereupon; 2nd. The combination with the operating rack bar of the rotary armature of a dynamo-magneto-electric machine, of a shunt or bridge consisting of a spring bar terminal of the condensing circuit, and a rigid terminal plate with which said spring bar is kept in contact by its elasticity, said spring bar being arranged in the path of the rack bar, so as to be struck or removed from the rigid terminal by said rack bar or at near the completion of its armature operating stroke, whereby the condensing circuit of the machine is broken and the developed current of electricity caused to pass wholly to a working circuit for application to its intended purpose; 3rd. The combination, with the rotating armature of a dynamo-magneto-electric machine, of a loose pinion arranged upon the arbor of said armature, a rack bar gearing with said pinion and a clutch for engaging with and disengaging from said pinion, causing the arbor and armature to revolve therewith when rotated in one direction, but which disengages therefrom and permits said pinion to revolve in the opposite direction, independently of the arbor and armature.

No. 9512. Improvements on Hats and Caps.

(*Perfectionnements aux chapeaux.*)

Thomas W. Bracher, New-York, U. S., 24th December, 1878, for 5 years.

Claim.—1st. A sweat band, for hats and caps, composed of leather or other equivalent material, and a lining of oil silk or other equivalent material, both being secured together by a row of stitches, and either the lining or the band being provided with a flap adapted to be folded over the row of stitches and to protect the body of the hat or cap against the perspiration which will otherwise follow the thread composing the stitches; 2nd. A sweat band, for hats and caps, consisting of leather or other equivalent material, having its outer edge stiffened with hatter's varnish or similar material, turned over and curved or bent and set to form an outwardly turned flange or brim that shall overlie and snugly fit the outer edge or corner of the head opening in hat or cap; 3rd. The combination of a lapped and stretched edge sweat band with a reed, cord or wire secured in said lapped and stretched edge; 4th. The combination of a reed cord or wire coated with india rubber or other suitable adhesive substance with the turned over or lapped edge of a sweat band; 5th. A sweat band having a lapped or turned over edge enclosing a reed, cord or wire covered with india rubber or other adhesive material which, on being subjected to heat, secures the folded edge and said reed, cord or wire in position; 6th. A sweat band having an attached backing of oil silk, or other suitable material, adapted to be secured to the crown of a hat or cap by cement or other means, and to hold the sweat band in position.

No. 9513. Improvements on Stove Casings.

(*Perfectionnements aux enveloppes des calorifères.*)

William P. Moore, Georgetown, Ont., 24th December, 1878, for 5 years.

Claim.—1st. The flanges C C C, in connection with the casing A and round wood stove B; 2nd. The hole H in the casing A.

No. 9514. Improvements on Skate Fasteners.

(*Perfectionnements aux attache-patins.*)

Robert Thomson, Jr., Montreal, Que., 24th December, 1878, for 5 years.

Claim.—1st. The combination of the double rack bar T, gears S and clamps R provided with rack teeth; 2nd. The combination with the double rack

bar T, gears S, rack toothed clamps R, spindle G and plate D provided with clamps E. 3rd. The combination of the plate C having slot I and plate D having clamps E and holes I, also pin K with the spindle G and spring M. 4th. The combination of the double rack bar T, gears S and clamps R with spindle G, plate D provided with clamps E and spring M.

No. 9515. Compound for Medical Purposes.
(*Composé médicinal.*)

Emily A. Feist, Toronto, Ont., 24th December, 1878, for 5 years
Claim.—A compound of pulverised alum, borax, caustic potassa or soda, sulphate of morphia, extract of cumm hydrasts tannin olive oil and benzoeated ointment, the whole prepared in the proportions set forth.

No. 9516. Wood Finishing Machine.
(*Machine à polir le bois.*)

John Lamb, Ottawa, Ont. 24th December, 1878, for 5 years.
Claim.—1st. The combination of the shaft D, countershaft J gear wheels M and N, girt B, and bed pieces R with the upright feed rollers P and Q. 2nd. The combination of the girt B, bed pieces R and upright feed rollers P and Q with the standard A, adjustable boxes C, D and cutters F. 3rd. The graders L arranged in pairs. 4th. The edge dresser composed of the top and bottom pieces a b, uprights c holders d, edge pieces e grooves f, keys g and weight h. 5th. The combination of the table A and graders L with the upright feed rollers P and Q, cutter heads C, shaft D and countershaft J.

No. 9517. Apparatus for Filling and Corking Bottles.
(*Appareil pour emplir et boucher les bouteilles.*)

Allan Macdonell, Newry, Ireland, 24th December, 1878, for 5 years.
Claim.—The corking apparatus H composed of the holder K, constructed as shown, with the enlarged opening m and contracted part n for compressing the cork before being driven into the mouth of the bottle, in combination with bell crank lever K, spring stand h and piston r. 2nd. The filling tubes i constructed and arranged so that they may also act as pistons for driving home the stoppering corks. 3rd. The combination with revolving frame A, receiving motion through worm F and worm wheel G or their equivalent, of the conical valve or cock I with pipes f and g for filling the bottles and drawing off the surplus liquid, the cauls L M and N mounted on the shaft B and actuating respectively the corking apparatus H, spring stand h and pistons r. 4th. The combination with revolving frame A, receiving motion through worm F and worm wheel G or their equivalent, of the cauls L M and N mounted on the shaft B and actuating respectively the corking apparatus H, spring stands h and pistons r, thereby insuring the automatic corking of the several bottles and allowing each bottle to pass through the successive gradatory stages, while the machine operates continuously.

No. 9518. Improvements on Steam Generators.
(*Perfectionnements aux générateurs de vapeur.*)

Alvan D. Brock, Grantville, Mass., U.S., 24th December, 1878, for 5 years
Claim.—1st. The combination of two vertical circulation tubes B, B₂, a series of spiral coils of pipes D each connected at its ends to the circulation tubes, a transverse diaphragm b₁ placed in one of the circulation tubes above the level of the coils, a steam and water reservoir communicating with the circulation tubes above the level of the diaphragm, and a pipe B which communicates at top with the reservoir and at bottom with one of the circulation tubes B₁ at a point below the diaphragm thereto; 2nd. The combination of one or more spiral coils of pipe D connected to two vertical circulation tubes B₁ and B₂, a steam and water reservoir communicating with the circulation tubes and an inclosing casing G; 3rd. The combination of two vertical circulation tubes B₁ and B₂, a transverse diaphragm b₁ placed in one of the circulation tubes, a steam and water reservoir connected with the circulation tubes, and a pipe B communicating at top of said reservoir and at bottom with one of the circulation tubes, at a point below the diaphragm therein; 4th. The combination of a steam and water reservoir communicating with two vertical circulation tubes B₁ and B₂, a diaphragm b₁ placed in one of said circulation tubes below the level of said reservoir, a pipe B communicating at top with said reservoir and at bottom with the circulation tube containing the diaphragm at a point below the level of the diaphragm, and a feed water pipe C delivering to said communicating pipe or to the circulation tube to which it is connected; 5th. The combination of two vertical circulation tubes B₁ and B₂ and one or more coils of pipe D connected at each of their ends to the circulation tube; 6th. A metal pipe D bent spirally so as to form a double coil; 7th. An apparatus for coiling metal pipe consisting of a base plate I, a grooved hub formed in removable sections J, and a connecting pin or bolt G; 8th. The combination, in a steam generator, of two vertical circulation tubes B₁ and B₂ connected by coils of pipe D and a superposed or elevated steam and water reservoir; 9th. The combination of the circulation tubes B₁ B₂, the quarter turn or elbow d connected to the end of the coil, and a bolt d' uniting the elbow and circulation tube.

No. 9519. Improvements on Sewer Traps.
(*Perfectionnements aux trappes d'égouts.*)

James Sargent, Rochester, N.Y., U.S., 24th December, 1878, for 5 years.
Claim.—1st. A section of sewer or drain pipe having its opposite ends in the same longitudinal plane and provided with an interior gate or valve opening outward or toward the end of the section intended to be laid toward the main sewer, said section being adapted for insertion into a line of pipe; 2nd. A section of sewer or drain pipe provided with an interior gate or valve, and having its inner area on the outward or sewer side of said gate circular in cross section, while on the inward side of said gate the cross section of said area is elliptical, whereby the current of drainage is contracted in width and rendered deeper, thereby increasing its head so that solid matter will not be liable to lodge at or prevented from opening and passing the gate; 3rd. A section of drain pipe provided with an interior gate opening in the direction of the flow and adapted at its inward portion for connection with a pipe for conducting air into a flue of drain pipe at the rear of the gate, whereby sewer gases and foul air are prevented from escaping from a sewer through the line of pipes leading from a house, and instead pure air is re-

ceived into said drain pipe. 4th. The combination with a section of drain pipe, having its opposite end openings in practically the same plane and its inward portion contracted of a gravity gate or valve provided with a separate inclined jamb or bearing adapted for insertion and removal at will; 5th. The combination with a gravity gate or valve of a separate jamb or bearing adapted for insertion into, and removal from a section of drain pipe at will and having wings projecting from each side thereof in the direction of the gate when opening, between which wings and against which the sides of the gate play; 6th. The combination with a drain pipe of a gravity gate or valve arranged to open in the direction of the sewer but prevented from opening in the opposite direction an air pipe leading from said drain pipe at the rear or house side of its gate and a valve arranged in said pipe and adapted to open inwardly but prevented from opening outwardly; 7th. The combination with a cylindrical water trap case of a yielding conical valve, the apex of which extends within said case while its curved outer surface has its bearing on the lower edge thereof so that the opening of the valve will be entirely on a horizontal line and only sufficient to permit the passage of the volume of water by the depression of the cone is occasioned whereby the escape of foul air or sewer gas is prevented from escaping through the trap; 8th. A removable sewer trap composed of a depending casing having at its lower end a valve for closing and opening said casing and an outward flange at its upper edge constructed or provided with an upwardly projecting bail or handle; 9th. In a drain pipe the combination with a cylindrical case of a yielding conical valve, the apex of which projects therein, suitable devices for returning said valve to its bearing against the lower edge of said case, and guides for holding it in a vertical and central position during its movement; 10th. A sewer shaft or well curb formed in one piece and provided with an interior annular ledge or bearing adapted for the suspension and support, in said curb, of a sewer trap; 11th. A sewer shaft or well curb formed with an interior ledge or bearing for supporting a trap or trap case, and preventing caving in of the surrounding earth or masonry which might obstruct the proper operation of the trap; 12th. The combination with a drain or waste pipe and siphon trap of an enlarged chamber or swell connected to or formed in one piece with the education end of said trap, and an air supply pipe or passage leading from said chamber or swell whereby siphoning of the trap of a water closet, urinal, wash basin or sink is prevented and sewer gases and foul air excluded from passing through said traps; 13th. The combination with a water trap or seal, of an enlarged or swell connected to the education of said trap a ventilating pipe leading from the said chamber or swell to the open air, and a flue or wall ventilating passage; 14th. The tubular limbs b b₁ of the reversely bent pipe B and the enlarged chamber or swell C formed in one piece therewith and adapted for connection to a ventilating pipe; 15th. As a new article of manufacture, a combined wash or water closet basin trap and ventilating swell formed near the lower terminal of said trap and adapted for connection with a ventilating pipe, the whole formed in one piece of metal, earthenware, or other suitable material; 16th. The combination of the trap I, swell K, gate m and the intermediate ventilating pipe n, whereby sewer emanations are excluded from, and pure air admitted to the house pipe H and connecting waste pipes; 17th. The combination of the water closet, basin A and wash basin A₁, each provided with a trap and connecting with a common waste pipe G above the swell C whereby one ventilated swell may serve for two basins.

No. 9520. Improvements on Nut Locks.
(*Perfectionnements aux serre-écrous.*)

Joseph A. Sénon-Langlais and Jean B. Allard, Quebec, Que., 27th December, 1878, for 5 years.
Résumé.—10. La platine A ayant une ou deux rainures b pour un ou deux écrous, 20. La pointe c de la platine A lorsqu'elle est employée pour les ouvrages en bois.

No. 9521. Improvements on Invalids' Chairs.
(*Perfectionnements aux chaises d'invalides.*)

Charles E. Anderson, London, Ont., 27th December, 1878, for 5 years.
Claim.—1st. The combination of the lever I, bar K, dog H, spring plunger G, slide F, grooved wheel M, bolt O, pins I and bars N N₁ with extra pair of legs A₁; 2nd. The combination of the ratchet E working either way, cord C and pulley wheel D with chair A having a back B working on a bolt hinge B₁.

No. 9522. Improvements on Fire Kindlers.
(*Perfectionnements aux allumeurs de feu.*)

Russell B. Whitel, Muskegon Mich U S 28th December, 1878, for 5 years.
Claim.—The wooden block A, provided with transverse grooves B and C intersecting each other within the body of the block.

No. 9523. Improvements in Steam Boilers.
(*Perfectionnements aux chaudières à vapeur.*)

Josiah M. Simpson, Oshkosh, Wis U S and Welington Ault, Barrie, Ont., 28th December, 1878, for 5 years.
Claim.—1st. The conical bottomed stand pipe B provided with the supporting lugs J and blow off and inlet pipe D in combination with the shell A; 2nd. The right and left hand water coils C C secured to, and in combination with the stand pipe B; 3rd. The steam coil E secured to, and in combination with the stand pipe B.

No. 9524. Safety Lock for Hoisting Machines.
(*Arrêt de sûreté pour les élévateurs.*)

Charles Stokes, (Assignee of Joseph G. Austro), Chicago, Ill., U.S., 28th December, 1878, for 5 years.
Claim.—The slotted dogs N having fulcrums and sliding movements on pins b, in combination with guides S, draw bar and head F M, spring E, frame D, plate I, adjusting nut J, jamb nut K and lifting beam A.

No. 9525. Improvements on Washing Machines.
(*Perfectionnements aux machines à laver.*)

Francis Atmore, Boston, Mass (Assignee of George J. Richardson, Salisbury, N.C.) U.S., 28th December, 1878, for 10 years.
Claim.—The combination of the cylinder A, the base B attached to the bottom of the cylinder, the series of tubes K K K attached to the bottom of

the cylinder and forming a communication between the interior of the cylinder and the hollow base, the solid piston D, the handle G and the dome shaped cover F screwed to the top of the cylinder.

No. 9526. Improvements on Rotary Pumps.

(*Perfectionnements aux pompes rotatoires.*)

Alonzo Noteman, Toledo, Ohio, U. S., 28th December 1878, for 5 years

Claim.—1st. The semi-circular abutment B constructed with the recess B₂ and cam surface B₁, and having its ends or points B₁ extended past the central line or diameter of the cylinder A₁ and having through it water passages communicating with the ports A₂ and the inner chamber of the casing, in combination with the piston head C and piston E; 2nd. The head plates D constructed with the guide channels D₂, in combination with the piston head C and piston E; 3rd. The pistons E, constructed as described and divided into two equal parts E₁ and held in line by a pin and provided with a spring and placed so as to move at right angles across each other, in combination with the piston head C having channels C₁ formed at right angles to each other, and head plates D constructed with channels D₂; 4th. The casing A constructed with the cylindrical part A₁ having rabbets or packing grooves d formed around its edges or rim, abutment B and plates A₂ arranged and adapted to receive and retain the head plates in supporting and carrying the piston head C and piston E.

No. 9527. Improvement on Abdominal Supporters.

(*Perfectionnement aux suspensoirs abdominaux.*)

Robert W. Gray, South Paris, Me., and Timothy S. Foster, Laconia, N.H., U.S., 28th December, 1878, for 5 years.

Claim.—An abdominal supporter composed of front and rear portions A B, each provided with permanently curved bones or stiffening material, the bones at the front of the supporter being curved to fit the convexity of the abdomen, and those at the rear to fit the concavity of the back of the wearer to, thereby, prevent the supporter from rising.

No. 9528. Improvement on Sugar Evaporators.

(*Perfectionnement aux évaporateurs à sucre.*)

David H. Ingalls and Charles E. Ingalls, Dunham, Que., 28th December, 1878, for 5 years.

Claim.—1st. The combination of the sloping guides B in one piece, with the bottom D of the evaporator; 2nd. The combination of the guides C in one piece, with the bottom D; 3rd. The combination shape and manner of securing the sloping ends E of the guides C in one piece, with the bottom D.

No. 9529. Improvements on Metallic Packing.

(*Perfectionnements aux garnitures métalliques.*)

William Jagger, Horsforth, Eng., 28th December, 1878, for 5 years.

Claim.—1st. The combination of the tubular or nearly tubular segments F having one radially cut and one under cut edge or face, with the wedge pieces G having correspondingly cut faces, and arranged to alternate with the segments; 2nd. The combination of the tubular or partly tubular segments F, each having one under cut and one radially cut face or edge, the triangular wedge pieces G having curved bases to fit the rod or moving part, and faces to fit and correspond with the faces of the segments, and suitable springs arranged to keep the parts of the packing normally pressed against the moving part; 3rd. Metallic packing for piston rods and similar parts consisting of alternately arranged segments F and intermediate wedge pieces G, the joints between the parts being alternately radial and bevelled, the segments overlapping upon the smaller pieces.

No. 9530. Improvements on Rotary Cutters.

(*Perfectionnements aux tranches rotatoires.*)

Walter J. Ingalls and Austin N. Ruiter, Abcorn, Que., 28th December 1878, for 5 years.

Claim.—1st. A cutting tool consisting of the stock A having a bent end a, thumb screw c, chuck block B and a cutter D slidingly operated by a screw gear feed and rotary handle I; 2nd. The tool described, provided with a gauge bar N for engagement with a peripheral grooved hub L.

No. 9531. Improvements on Animal Traps.

(*Perfectionnements aux pièges à vermine.*)

David R. Nichols, Brockville, Ont., 31st December, 1878, for 5 years.

Claim.—1st. In combination with a tilting platform C counterbalanced to rest in a frame A, the vertical post F having a trigger lever E engaging with the platform C, tilting shelf I operating the lever and a bait hook K above the shelf, whereby the animal in reaching the bait, by his fore-paws, lifts the shelf and releases the platform; 2nd. The combination with the strap H and catch lever E having a bent b, which holds the tilting platform C, of the tilting shelf I passing through and balanced on a bait post F beneath the bait hook.

No. 9532. Improvements on Lamp Extinguishers.

(*Perfectionnements aux éteignoirs de lampes.*)

James E. Riley, Burlington, Vt., U.S., 31st December, 1878, for 5 years.

Claim.—1st. The shape of the weight h, whose diameter shall not exceed that of the cone measured across the top of the wick tube a; 2nd. The single lever d suspended on the flange D, of the burner A; 3rd. The combination of the burner A, sleeve or jacket B, weight h and spring c; 4th. The combination of the burner A, sleeve or jacket B, wick tube a, weight h, spring c and lever d.

No. 9533. Improvements in Axle Cutters.

(*Perfectionnements aux tranches à essieux.*)

Jerry Patnaude, (Assignee of Frank F. Gokey,) Winooski, Vt., U.S., 31st December, 1878, for 5 years.

Claim.—1st. The part A provided with interior adjustable jaws a a, and adjusting devices; 2nd. The combination of the part A, adjustable jaws a a set screws bb, and a suitable device d for retaining the jaws in position; 3rd. The part B having a means for attachment to the part A, in combination with the feed nut D and spindle E provided with the mill F and crank G 4th. The combination of the two parts A B with suitable detachable means for uniting them together, jaws a a, screw nuts bb, feed nut D and spindle E, provided with the mill F; 5th. The part B having the openings opposite the mill.

No. 9534. Improvements on Petroleum Stoves.

(*Perfectionnements aux poêles à pétrole.*)

John G. Cooley, St. John, N. B., 31st December, 1878, for 5 years.

Claim.—1st. In an apparatus for burning crude petroleum as fuel in stoves and grates, of a fire pot A having connected channelled bars b with intermediate perforated openings f within a smoke chamber B and a superposed perforated heating chamber E, the two chambers connected by a perforated combustion tube C, as set forth; 2nd. A fire pot A for burning crude petroleum within an enclosed smoke chamber B, constructed of a surrounding rim a having distributing channelled bars b, with intermediate air spaces f perforated or covered with wire netting or cloth g, the said bars having communication with each other for flowing the oil; 3rd. A fire pot A for burning crude petroleum, consisting of a rimmed vessel having perforated air spaces f, between connected channelled fire bars b, containing mineral wool, asbestos, or other non-combustible fibrous material, whereby the oil fed to the fire pot A is absorbed, distributed and consumed; 4th. The two tanks G H connectedly combined, surrounded by a packing of asbestos or mineral wool, and an enclosing jacket I divided by a hollow wall J, having a packing of asbestos or mineral wool, and provided with a pipe connecting with one tank and passing through the other; 5th. The two tanks G H connectedly combined by an exterior jacket I and a hollow wall partition J, the tank G having a feed pipe passing through the tank H, whereby the oil in the tank G is secured against fire, and the feed pipe kept cool by passing through the water; 6th. In combination with a stove or fire-place, the oil tank G, water tank H, feed pipe h, fire pot A, smoke chamber B, combustion duo C and heating chamber E.

No. 9535. Improvements on Steam Engines.

(*Perfectionnements aux machines à vapeur.*)

Henry Vatkeys, Syracuse, N.Y., U.S., 31st December, 1878, for 5 years.

Claim.—1st. A valve seat mounted loose on the cylinder and confined in its position by either studs, lugs, shoulders, or other stays, rigidly connected with either the cylinder or steam chest, all so constructed and arranged that the valve seat may be readily attached to, and detached from the cylinder without loosening the said stays from the parts which contain them; 2nd. In combination with a valve seat mounted loose on the cylinder and confined in its position in the manner described, set screws, keys, or wedges arranged to adjust and tighten the seat in its position.

No. 9536. Improvements on Lamps.

(*Perfectionnements aux lampes.*)

Frank Rhind, Brooklyn, N.Y., U.S., 31st December, 1878, for 5 years.

Claim.—1st. A movable sleeve or standard having its lower end made to rest upon the table or other support for the lamp; 2nd. A lamp provided with a movable sleeve or base and a supporting standard, the lower end of the sleeve being made to project through the top of the base and rest upon the table; 3rd. A lamp provided with a movable sleeve and a rod for actuating the extinguishing device, the rod being connected to the upper end of the sleeve; 4th. An extinguisher rod i having a grooved collar attached to the upper end; 5th. A vertically moving rod l having a hook to catch at each end passing up through, and supported entirely in the burner; 6th. The extinguisher r, pivoted eccentrically to the inside of the cone upon the arm or rod o, in combination with an actuating rod for moving the extinguisher up to the top of the wick; 7th. A bowl or sphere in which the tube it is formed with the bowl and has its upper end joined to the top of the bowl by means of a cap; 8th. A glass globe or bowl having an opening to receive the usual burner and collars, a glass tube forming an integral part of the bowl, and which projects up at one side of the central opening, and an opening d close to one side of the main opening; 9th. The combination of an extinguisher, a vertically moving rod l, a grooved collar and rod i that is actuated by the movable sleeve; 10th. A slide or rod connected to the extinguisher at its upper end, and catching in or under a ring that is secured to the upper part of the rod connected to the sleeve.

No. 9537. Improvements on Door Fasteners.

(*Perfectionnements aux fermetures des portes.*)

Truman Fairchild and Channing Hazeltine, Derby, Vt., U.S., 31st December, 1878, for 5 years.

Claim.—1st. The combination of the disc D, having two or more slots SS, the outer extremities of the same describing circles, radial lines from which meet at the centre of the disc D with the bolts B B; 2nd. In combination with the door A, bolts B B and disc D, having slots SS made as described, the bracket C placed at an angle of 45° with the bolts B B.

No. 9538. Improvements on Adjustable Chairs.

(*Perfectionnements aux pliants.*)

Duncan Campbell, Ingersoll, Ont., 31st December, 1878, for 5 years.

Claim.—1st. The combination of the back c, seat D, limb rest F and foot rest F, connectedly linked together, the back and limb rest pivotally connected by arm rests n and bar l hinged together, and the back pivoted to posts k, and the bar l to posts m of the supporting frame B, whereby the back and limb rest move adjustably in the same inclined plane and with the

seat form a horizontal plane by automatic movement: 2nd. The provision to the back C and posts k, of the supporting frame B of a quadrant G, and screw clamp o, for securing the movement of the chair joints in any adjusted position: 3rd. The provision of the limb rest E, of arms p, and to the seat D of a shaft having loops q to swing over the ends of the arms, to secure the limb rest in line with the seat. 4th. The provision of discs H secured to the bar l, to shield clothes from entanglement with the central and lower pivotal connections of said bar. 5th. The combination with the legs of the chair supporting rectangular frame B having racks g, of the rectangular frame A having shafts c c c bevelled gears d d and pinions e e e e for bodily elevating the chair by the crank handle h, 6th. The provision to the frame A and

shaft c, of pawl j and wheel i, to maintain the frame B at an elevated adjustment.

No. 9539. Improvements on Wringers.
(*Perfectionnements aux essoreuses.*)

Melvin N Lovell, Erie, Pa., U.S., 7th January, 1879 for 5 years.

Claim.—The metallic plate N adapted to be applied to the inner face and outer edges of the wooden wringer standaris, for the purpose of binding their parts firmly together in combination with the swivelled clamp-legs E having their bearings in said plate

List of Patents issued up to 21st January, 1879, but not yet Officially published in the Patent Office Record.

- No 9540. F. E. Dixon, Toronto, Ont. Sash Fastener (Extension of Patent No. 2990), 9th January, 1879.
- No. 9541. J. H. Doherty, C. A. Schem and G. L. Traenkle, Buffalo, N. Y., U.S.A., "Lifting Jack," 13th January, 1879.
- No 9542. W. P. Clotworthy, Baltimore, Md., U.S.A., "Baking Powder," 13th January, 1879.
- No 9543. C. T. Ham and P. DeWitt Clarke (Assignees of J. W. Orphy) Rochester, N. Y., U.S.A., "Lantern," 13th January, 1879.
- No 9544. P. J. Ayres, Lindsay, Ont., Buggy Top, 13th January, 1879.
- No 9545. T. E. McDonald, New Brunswick, N.J., U.S.A., "Washing Machine," 13th January, 1879.
- No 9546. A. Berthiaume, St. Roch de Richelieu, and J. Berthiaume, Boucherville, Que., "Hay Press," 13th January, 1879.
- No 9547. J. Terrace, Hamilton Ont., "Cigarette Making Machine," 13th January, 1879.
- No 9548. R. Soper and J. F. Wahnsley, London, Ont., "Portable Foot Power Band Saw," 13th January, 1879.
- N 9549. J. Filion Ste Thérèse de Blainville, Que., "Cultivator," 13th January, 1879.
- N. 9550. A. Ross and S. J. Parker, Rochester, N.Y., U.S.A., "Grain Binding Attachment for Reapers," 13th January, 1879.
- No 9551. L. Côté St. Hyacinthe, Que., "Rotary Machine for Shaping Stuffers," (Extension of Patent No. 3026), 13th January, 1879.
- No. 9552. L. Côté, St. Hyacinthe, Que., "Rotary Machine for Shaping Stuffers," 14th January, 1879.
- No 9553. H. A. House and D. Wheeler Bridgeport, Ct., U.S.A., "Manufacture of Articles of Felt," 14th January, 1879.

- No 9554. T. Johnson Toronto, Ont. Metallic Lettering for Stone and Marble," 14th January, 1879.
- No 9555. C. Boynton, Chicago, Ill., U.S.A., "Grain Drying Kilm," 14th January, 1879.
- No. 9556. H. Sawyer, Chelsea, Mass. U.S.A., "Improved Blueing Package," 14th January, 1879.
- No 9557. W. R. Hayden, Ashfield, Ont., "Cheese Press," 14th January, 1879.
- No 9558. D. McPhee, Hamilton, Ont., "Hot Water Radiator," 14th January, 1879.
- No 9559. W. R. Campbell, Montreal, Que., "Water Filter," 14th January, 1879.
- No 9560. W. A. Kirby and D. M. Osborne, Auburn, N. Y., U.S.A., "Mower," (Extension of Patent No. 3144), 14th January, 1879.
- No 9561. W. A. Kirby and D. M. Osborne, Auburn, N. Y., U.S.A., "Mower," (Extension of Patent No. 3144), 15th January, 1879.
- No. 9562. G. P. Gauster, Reading, Pa., U.S.A., "Self-Lighter and Extinguisher," 21st January, 1879.
- No. 9563. W. A. Carpenter and B. Weirath, Townsend, Ont., "Farm Gate," 21st January, 1879.
- No. 9564. W. W. Glover, Aurora, Ill., U.S.A., "Belt Fastener," 21st January, 1879.
- No 9565. E. Wells, A. E. Richardson, W. J. Van Patton and H. Wells, Burlington, Vt., U.S.A., "Process of Refining and Packing Catechu," 21st January, 1879.
- No. 9566. J. H. Hodgdon and W. Beatty, Gray, Me., U.S.A., "Horse Blanket," 21st January, 1879.
- No 9567. J. McBride Des Moines, Iowa, U.S.A., "Sulky Plow Attachment," 21st January, 1879.

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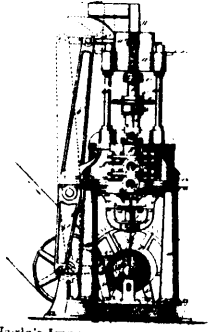
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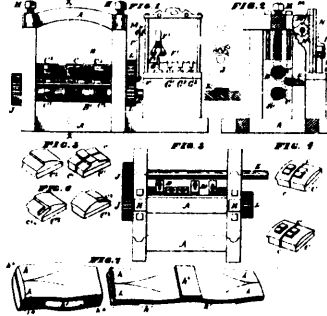
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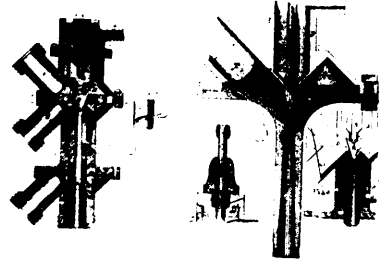
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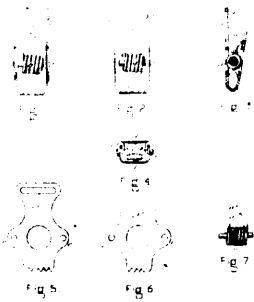
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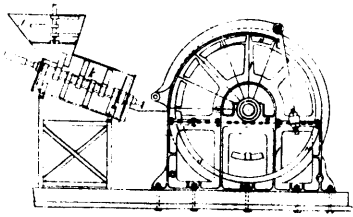
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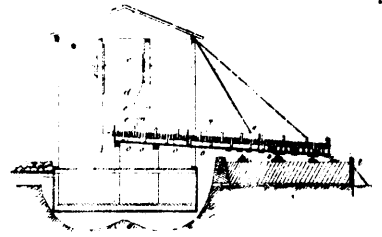
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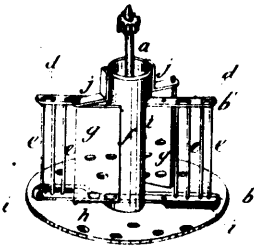
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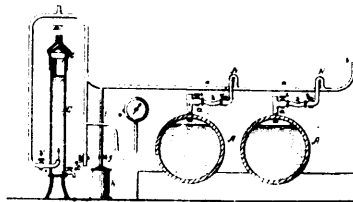
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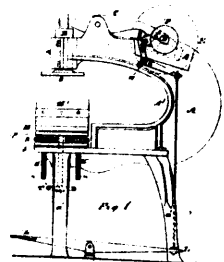
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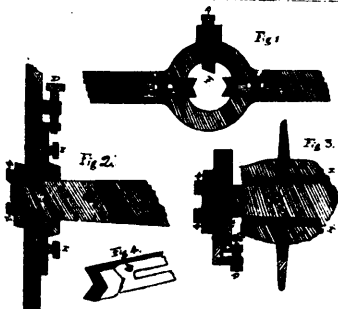
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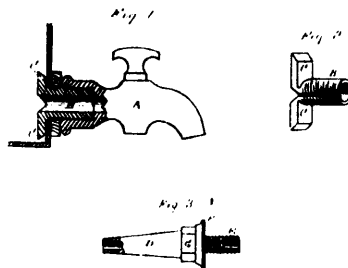
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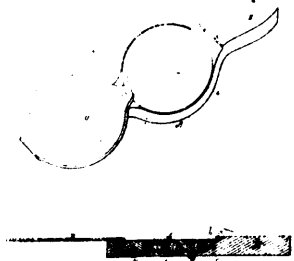
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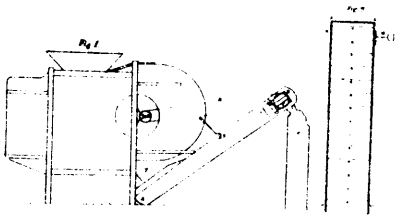
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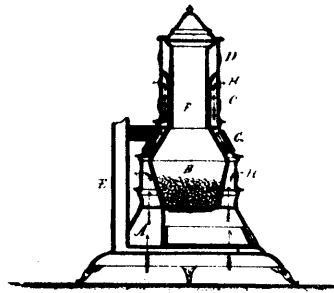
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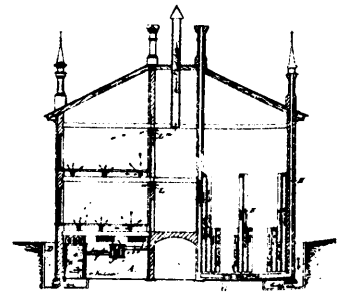
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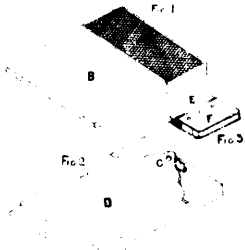
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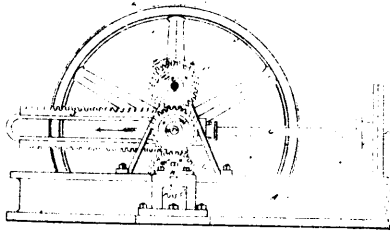
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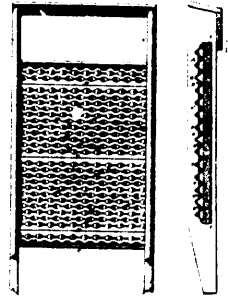
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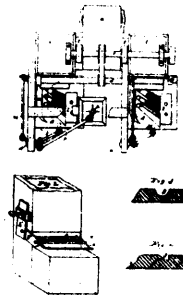
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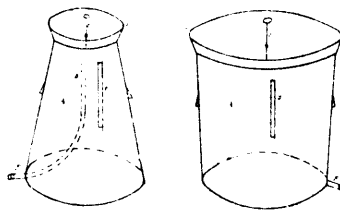
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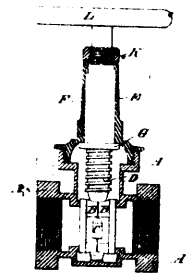
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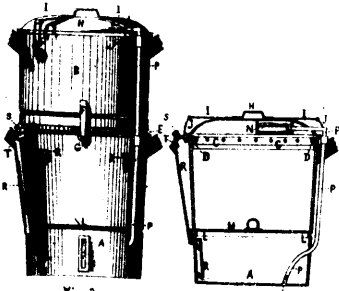
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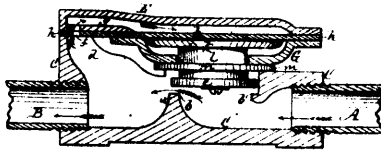
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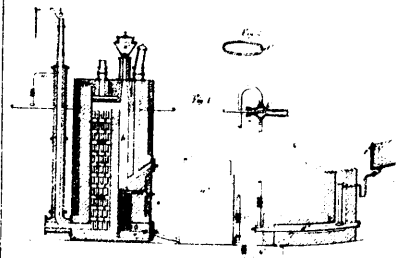
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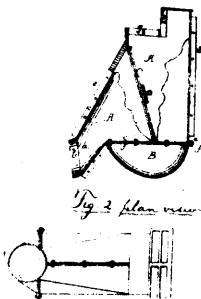
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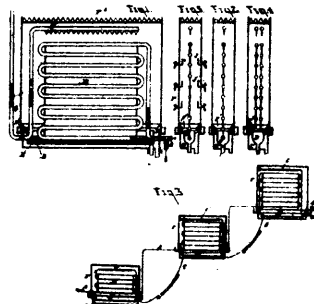
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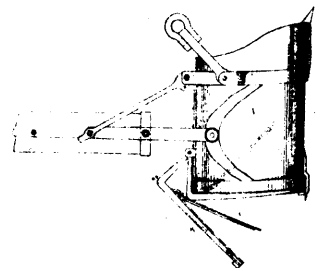
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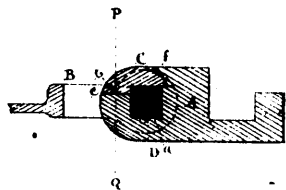
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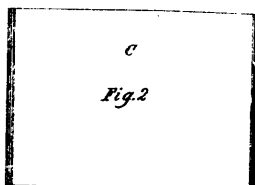
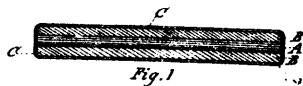
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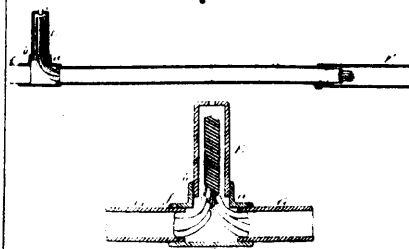
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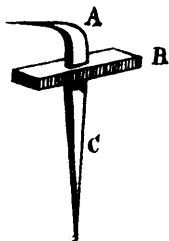
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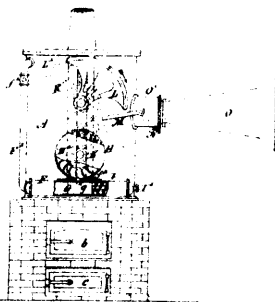
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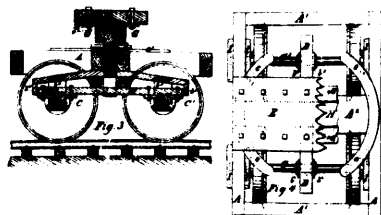
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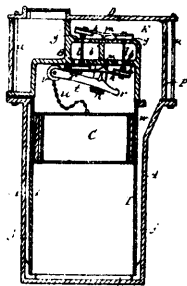
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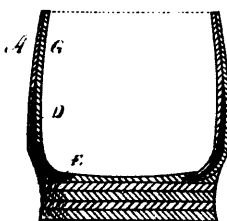
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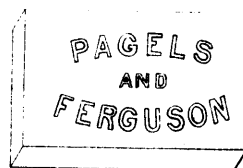
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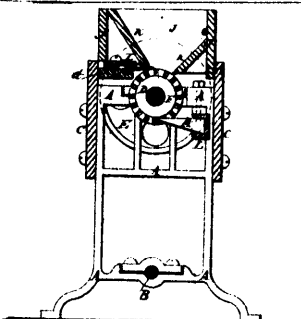
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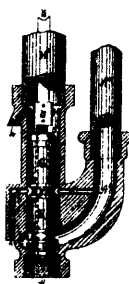
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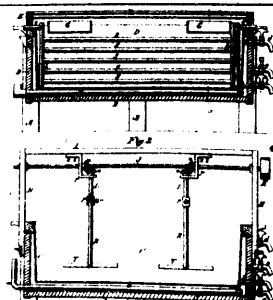
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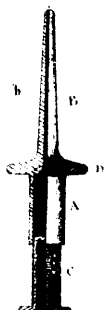
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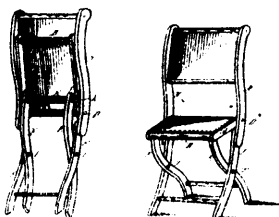
9454 McNamara & Mertens' Improvements on Hydrants.



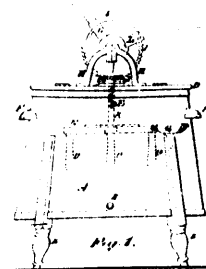
9455 Burrell & Freeman's Improvements in Milk Vats.



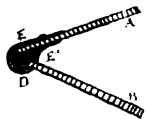
9456 Teff's Uterine Mediator.



9457 Dick's Improvements in Folding Chairs.



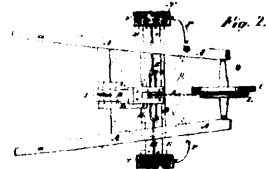
9458 Westhaver's Improvements on Washing Machines.



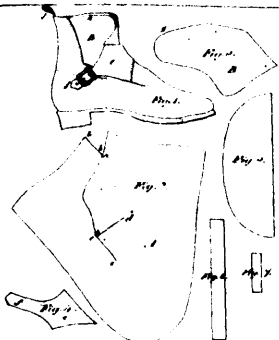
9459 Bailey's Improvements in Carriage Springs.



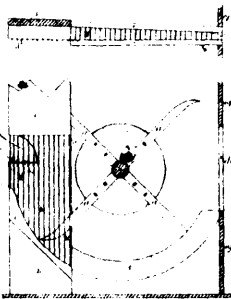
9461 Kortek's Improvements in Hooks.



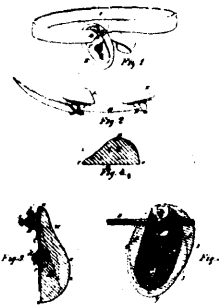
9462 Wisewell & Hanrahan's Improvements in Garden Sprinklers.



9463 Roos' Improvements on Boots.



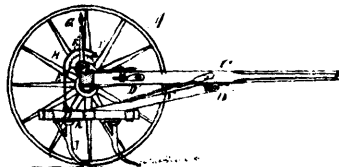
9464 Keane's Improvements on Flax Scutching Machines.



9465 Ward's Improvements on Hernia Trusses.



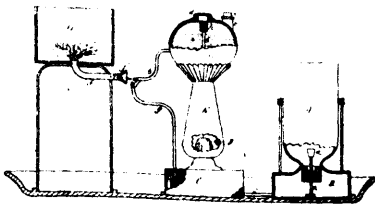
9466 Fultz's Neck Yoke Attachment.



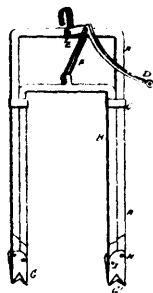
9467 Stanton's Improvements on Cultivators.



9468 Stewart's Improvements in Sieves.



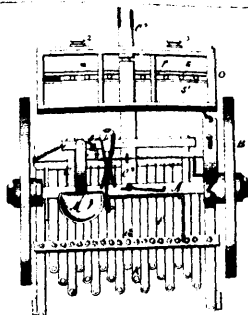
9469 Burbank's Improvement on Heating Apparatus.



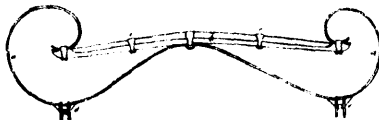
9470 Buchanan's Improvements on Hay Pitching Machines.



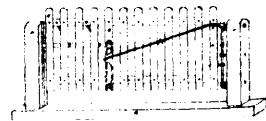
9471 Woodward's Improved Vaginal Syringe.



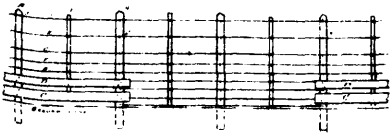
9472 Roberson's Combined Harrow and Seeding Machine.



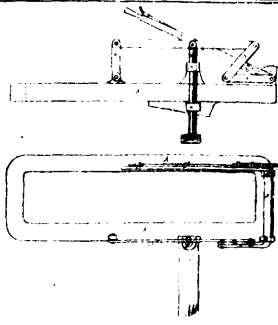
9473 Brintnell's Improvement on Carriage Springs.



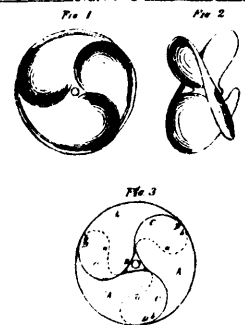
9474 Cummins' Improvements on Farm Gates.



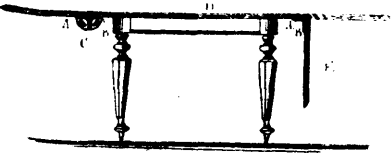
9475 Miller's Improvements on Fences.



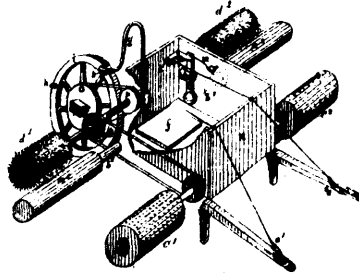
9476 Russell's Improvements on Reaping Machines.



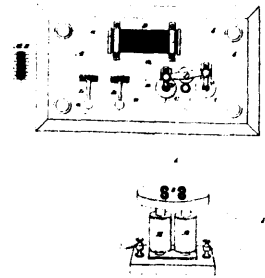
9477 Town's Improvements on Screw Propellers.



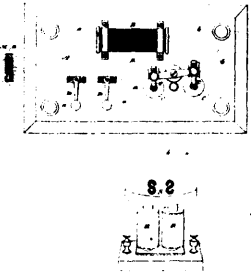
9478 Scobie & Adams' Improvements on Check Hinges.



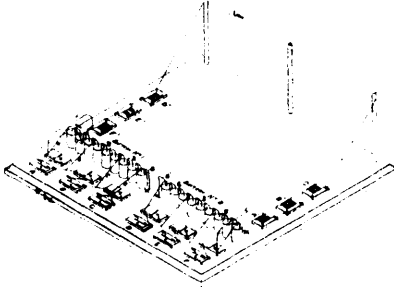
9479 Shipman's Sprinker and Duster.



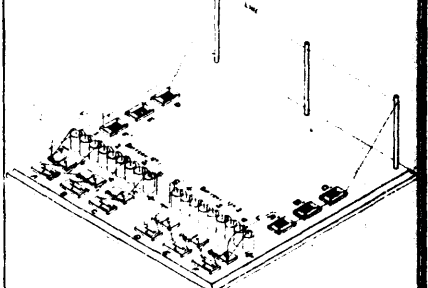
9480 Gray's Apparatus for Transmitting Sounds Telegraphically.



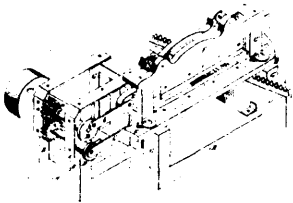
9481 Gray's Apparatus for Transmitting Sounds Telegraphically.



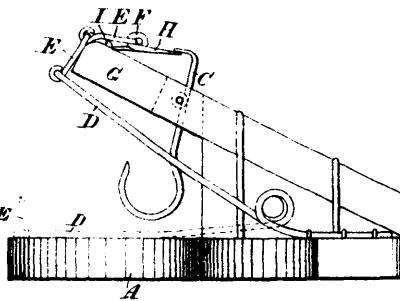
9482 Gray's Art of, and Apparatus for, Transmitting and Analyzing Sounds Telegraphically.



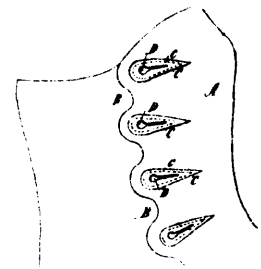
9483 Gray's Art of, and Apparatus for, Transmitting and Analyzing Sounds Telegraphically.



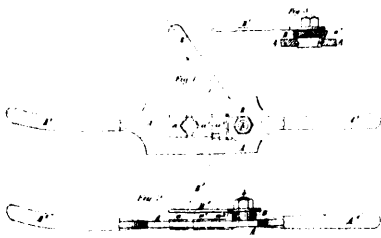
9485 Dougherty's Improvements in Hoop Cutters.



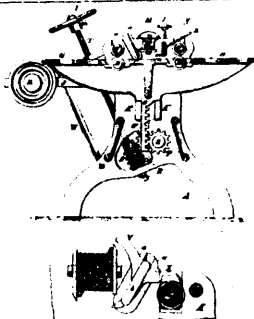
9486 Rice's Improvements on Animal Traps.



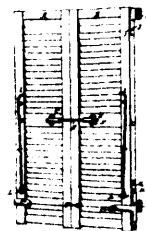
9487 Church & Johnson's Improvements in Boots and Shoes.



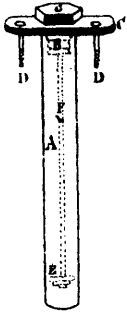
9488 Everitt, Wheeler & Olrick's Improvements in Screw Stocks.



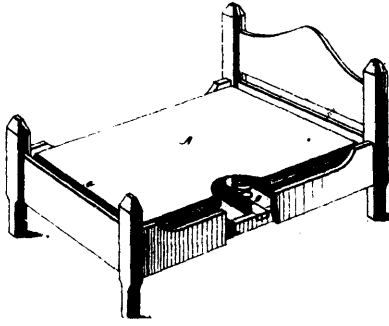
9489 Ross' Improvements on Planing Machines.



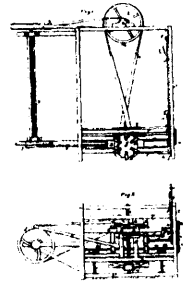
9490 Dearborn's Improvements on Blind Awnings.



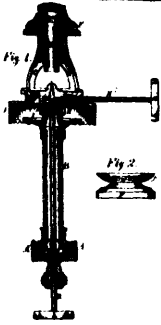
9493 McDonald's Improvements on Axle Oilers.



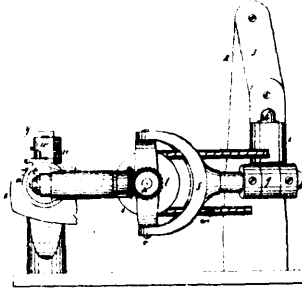
9494 Duttan's Improvements in Bed Bottoms.



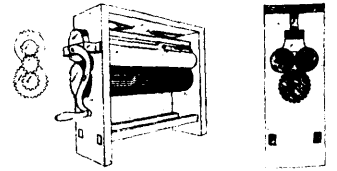
9495 Moffett's Improvements on Sawing Machines.



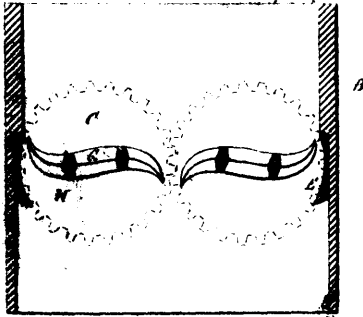
9496 Lyman's Improvements on Gasoline Stoves.



9497 Addy's Sole Edge Trimming Machine.



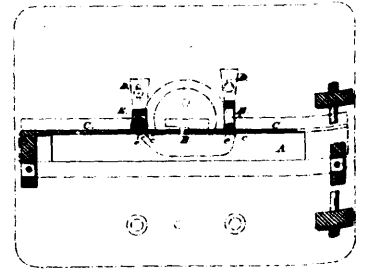
9498 Gálinas' Machine for Washing Clothes.



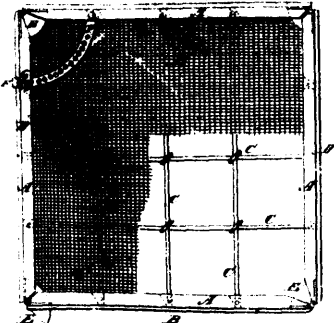
9499 McClave's Improvements on Stove Grates.



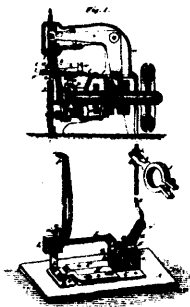
9500 Smith, Woods & Colborn's Improvements in Refrigerators.



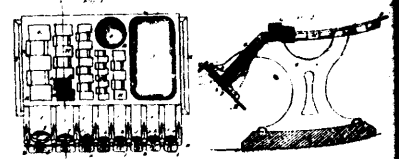
9501 Fair & Hinge's Improvements on Sewing Machines.



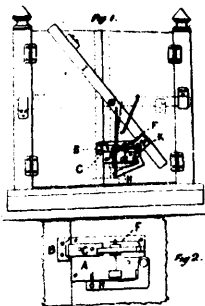
9502 Dillie's Improvements on Adjustable Sieves.



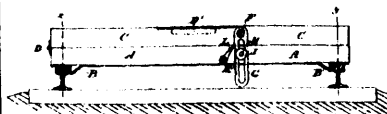
9503 Watkins' Improvements on Sewing Machines.



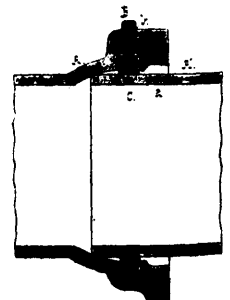
9505 Meaker, Merrell & Ferguson's Apparatus for Counting Coin.



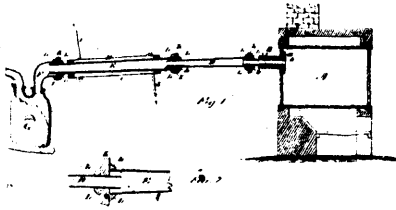
9508 Burlaud's Improvements on Door Fastenings.



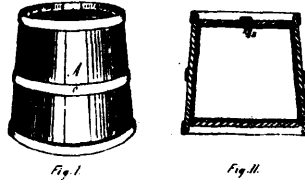
9507 Currier's Apparatus for Testing and Adjusting Railway Rails.



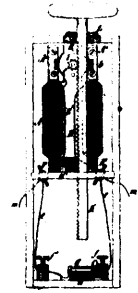
9508 Painter's Method of Forming Joints in Gas and Water Mains.



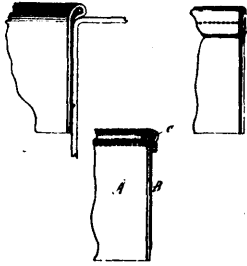
9509 Volney's Apparatus for the Manufacture of Nitric Acid.



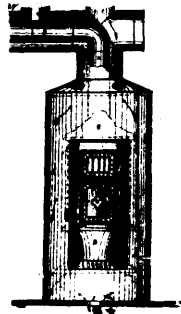
9510 White's Improved Butter Package



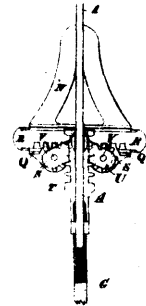
9511 Smith's Magneto-Electric Machines



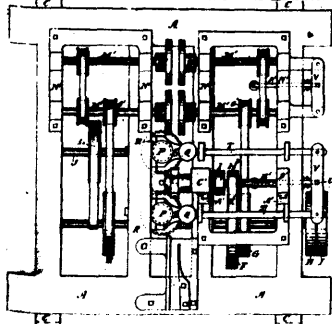
9512 Bracher's Improvements on Hats and Caps.



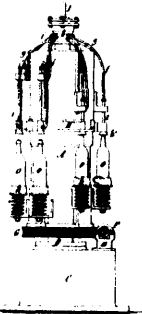
9513 Moore's Improvements on Stove Casings.



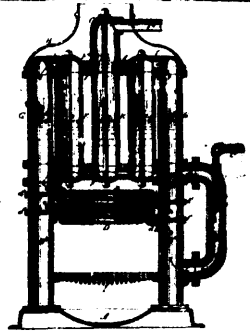
9514 Thomson's Improvements on Skate Fasteners.



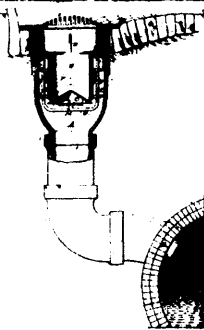
9516 Lamb's Wood Finishing Machine.



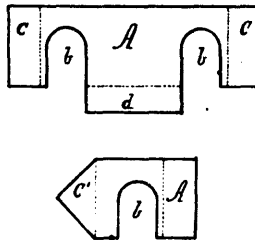
9517 Macdonell's Apparatus for Filling and Corking Bottles.



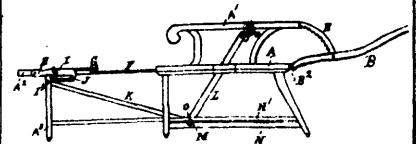
9518 Brock's Improvements on Steam Generators.



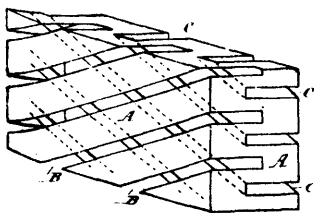
9519 Sargent's Improvements on Sewer Traps.



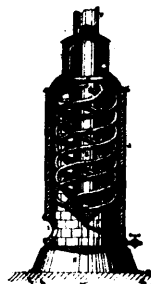
9520 Sérien-Langlais & Allard's Improvements on Nut Locks.



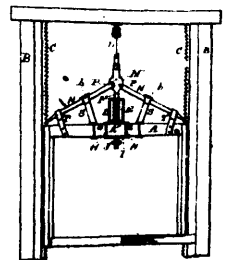
9521 Anderson's Improvements on Invalids' Chairs.



9522 Whitzel's Improvements on Fire Kindlers.



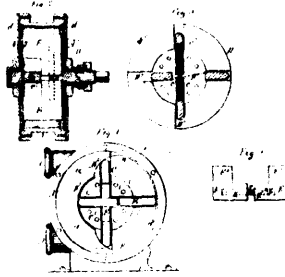
9523 Simpson & Ault's Improvements in Steam Boilers.



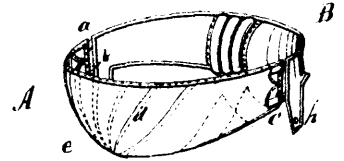
9524 Austin's Safety Lock for Dressing Machines.



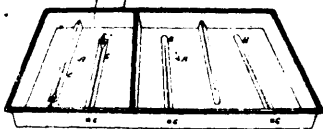
9525 Richardson's Improvements on Washing Machines.



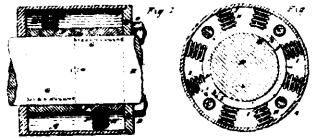
9526 Noteman's Improvements on Rotary Pumps.



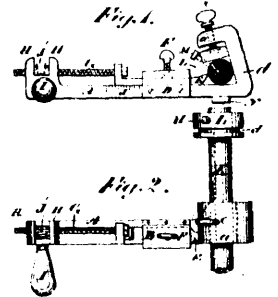
9527 Gray & Foster's Improvement on Additional Supporters.



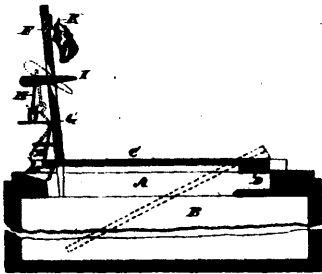
9528 Ingalls' Improvement on Sugar Evaporators.



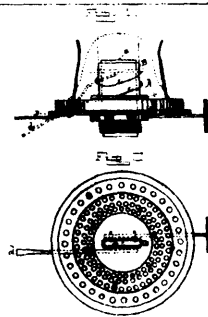
9529 Jagger's Improvements on Metallic Packing.



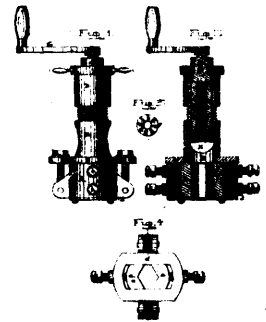
9530 Ingalls & Ruiter's Improvements on Rotary Cutters.



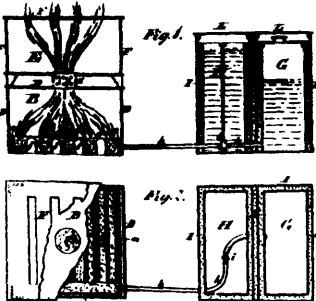
9531 Nichols' Improvements on Animal Traps.



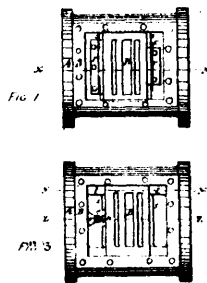
9532 Riley's Improvements on Lamp Extinguishers.



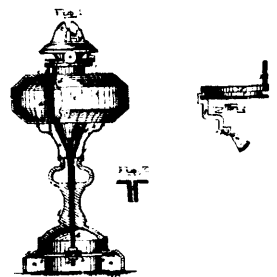
9533 Gokey's Improvements in Axle Cutters.



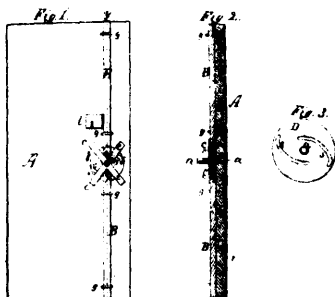
9534 Cooley's Improvements on Petroleum Stoves.



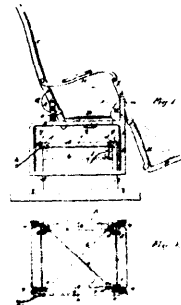
9535 Watkeys' Improvements on Steam Engines.



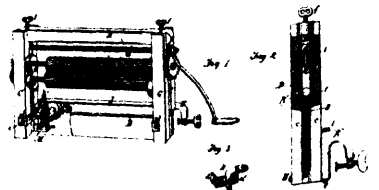
9536 Rhind's Improvements on Lamps.



9537 Fairchild & Hazeltine's Improvements on Door Fasteners.



9538 Campbell's Improvements on Adjustable Chairs.



9539 Lovell's Improvements on Wringers.