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The Canadian Patent Office Record

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CONTENTS.

INVENTIONS PATENTED.

No. 4774. JOHN NICHOLSON, Jr., Pittsburgh, Pa., U. S., 4th June, 1875, for 5 years: "Improvements on Glass Furnaces." (Perfectionnements aux fourneaux de verre.)

Claim. — 1st. A melting furnace for the manufacture of glass furnished with a well for catching the glass flowing from cracked or leaking pots: 2nd. The crown D, provided with opening *e*, having a lid or valve *f*, for allowing the surplus heat to escape into the stack; 3rd. The flues *b*, *c*, *d*, under the bottom of the melting pots; 4th. Surrounding the well or eye of the furnace with an air chamber communicating with the interior of said well or eye.

No. 4775. WILLIAM ASCOUGH, Buffalo, N. Y., U. S., 4th June, 1875, for 5 years: "Pontoon-boat." (Bâteau-ponton.)

Claim.—1st. The combination with the pontoons A, of the wheel box E, paddle-wheel C, and the operating device consisting of the levers D, connecting-rods D^1, and F, and the cranks D^2; 2nd. The combination with the levers L, of the connecting-rods F, with the keys G, whereby one set of levers is made inoperative; 3rd. The combination with a boat of the steering apparatus consisting essentially of the treadle H, rods I, bell-cranks K, and a suitable rudder; 4th. The combination with the bell-cranks K, of the nut L, set-screw N, and the rod I.

No. 4776. THOMAS J. BLAKE, Pittsburgh, Pa., U. S., 4th June, 1875, for 15 years: "Mode of Manufacturing Shovels." (Méthode de fabrication des pelles.)

Claim. — 1st. Setting up and shaping the socket and straps while heated, by means of suitable dies and a mandrel, 2nd. The combination of the dies or swages A, B, and the mandrel C.

No. 4777. ORSON B. KENDALL, Buffalo, N. Y., U. S, 4th June, 1875, for 5 years: "Water Regulator and Indicator." (Régulateur et indicateur du niveau d'eau.)

Claim —1st. The combination with the cylinder A, steam-chest A^1, of the float D, link *a*, lever E, shaft *b*, lever J, rods *a*, *d*, and the adjustable lever G; 2nd The combination of the regulating-valve stem K, pointer H, and lever G, 3rd. The combination with the cylinder A, float D, rod *a*, levers E, and J, rods *d*, *d*, and lever G, the whistle M, lever L, and rod *c*, having loop or slot c^1.

No. 4778. PATRICK B. HENNESSY, Hamilton, Ont., 4th June, 1875, for 5 years: "Time Lock." (Serrure à mécanisme d'horlogerie.)

Claim—1st. The lever E, provided with pin *d*, *e*, *f*, arms *g*, g^1, and guide *m*, hinged on the pin *f*, and acted upon by springs O, and *s*, wheels G, and *b*; 2nd. The arrangement of the wheel G, with notch c^1, and the wheel *b*, with notch *c*, for operating the lever E, and pawl K; 3rd. The arrangement of the locking-bolt H, on the pin J, and provided with arm I, actuated by the lever E, and pawl K; 4th The pawl K, with its spring O, and catch *r*, for holding-up the lever E; 5th. The knob Q^1, on the shaft Q, for simultaneously giving the motive-power and also setting the hand D, on the dial to any hour.

No. 4779. GEORGE HENRY, Lennoxville, Que., 4th June, 1875, for 5 years: "Regulators for Feed Apparatus." (Régulateurs pour les appareils d'alimentation.)

Claim.—In combination with the boiler A, the chamber D, and pipe C; 2nd. The combination of the float E, spindle *a*, and valves *c*, *c*; 3rd. In combination with the pipes *B*, and G, and chamber D, the valve-chamber F, having valve-seats *i*, *i*, ports *n*, *n*, annular space or passage *d*, and branch *g*.

No. 4780. ROBERT G. MCLELLAN, Woodstock, Ont., 4th June, 1875, for 15 years: "Improvements on Coat Measurers and Drafting Scales." (Perfectionnements aux mesures d'habits et aux échelles à tracer.)

Claim.—1st. The flexible-band A, having studs B, C, D, E, F, and G, and straps H, I, and provided with an adjustable transverse-bar J, fixable by clamp screw and nut K, L, having studs M; 2nd A drafting-square having a scale O, and notches P, R, S, and provided with a pivoted-arm N, having a slot O, and sliding-button; 3rd. A drafting-chart having studs correspondingly located thereon to the band A, and a rectangular intersection corresponding to the bar J, and diagonal lines A^4, B^4, A^2, C^2, and scale D^2, E^2, F^2, and geometrical tables for sleeve measurement and proportions of bodies.

No. 4781. HENRY E. SUSAND, and WILLIAM A. SUSAND, Berlin, Ont., and JAMES H. BAKER, Bay City, Mich., U. S., 4th June, 1875, for 5 years: "Improvement in Saw-mill Dogs." (Perfectionnement des clameaux de scieries.)

Claim.—1st. The combination of the bar B, slide F, spring-bolts G, J, with the adjustable-dog I; 2nd. The combination of the bar B, slide F, spring-bolt G, dog I, spring-bolt J, with the lever E, connecting-bar *d*, and dog D.

No. 4782. HENRY HAGAN, JOHN BRYCE, and JOSEPH G. GIBSON, Toronto, Ont., 4th June, 1875, for 5 years: "Manufacture of Concrete Blocks Veneered with Marble." (Fabrication de blocs de béton plaqués en marbre.)

Claim.—1st. The veneering of concrete-blocks with marble, or any other real stone or slate, 2nd. The method of veneering concrete-blocks C, with marble, or any other real stone or slate.

No. 4783. WILLIAM SCHNABEL, Orillia, Ont., 4th June, 1875, for 5 years: "Wood Elastic Seat." (Siége élastique en bois.)

Claim.—1st The elastic seat A, caused by the incisions G; 2nd. The frame B, on account of its elliptic shape without which the seat *a*, when attached would not retain the requisite amount of elasticity, combined with strength; 3rd. The bridge E, and mode of attachment to the frame.

No. 4784. ALFRED G. BAYLES, New York, U. S., 4th June, 1875, for 5 years: "Gas Burner." (Bec à gaz.)

Claim.—The hollow-cap C, with wire gauze discs *g*, in combination with chamber A, with inlet pipe *b*, and burner *d*.

No. 4785. ELISHA DRAPER. London, Ont., 4th June, 1875, for 5 years: "Apparatus to Facilitate the Study of Music." (Appareil à faciliter l'étude de la musique.)

Claim.—The *slides* B, B, *with* the *letters* of the musical-scale placed thereon, and the springs I, I, attached thereto, the tuned sonorents D, D, balls E, E, guards F, F, cross-bars H, H, H, and supports L, L, *in combination with* a musical staff and key-board as shown, and the combination and arrangement of all the parts.

No. 4786. WILLIAM M. LEYDE, Newport, and JOHN J. STOTWELL, Cottage Grove, Min., U. S., 4th June, 1875, for 5 years: "Thrashing Machine." (Machine à battre.)

Claim.—1st. *In combination with the* primary carrier A, and secondary carrier G, the picker D, *provided with* the convex edged blades or *flanges d*; 2nd. In combination with the *primary carrier* A, the secondary carrier G, the sides of which project over the main body of the machine; 3rd. The combination of the primary-carrier A, picker D, and beater or agitator F, each provided with blades, with *secondary-carrier* G, *made of a width greater than* the primary-carrier A; 4th. The combination with the secondary straw-carrier G, of the agitator *n*.

No. 4787. WILLIAM P. YEOMAN, Waukegon, Ill., U. S., 4th June, 1875, for 5 years: "Ear Ring." (Pendant d'oreille.)

Claim.—The combination of the arm *b*, and *cup c*, with the hinged arm *i*, *and* sleeve *h*.

No. 4788. LUTHER M. BISSELL, Addison, Ont., 4th June, 1875, for 5 years: "Sower Shaker Attachment for Vehicles." (Ajustage des agite-semoirs pour les voitures.)

Claim.—1st. The cam-ring A, attachable to a hub *or* wheel of a vehicle for operating a rocking-bar G, connecting with a lever for giving longitudinal motion to the distributor of a seed-box; 2nd. The combination of the lever E, *mounted on* the *clip* D, attached to the axle, rock-bar G, pivoted to said lever and elbow-lever H, connecting with said rock-bar, and axially mounted on the fulcrum-pin F, for connection with and *operation* of *the distributor* of a seed-box; 3rd. The cam-lever I, pivoted to the lever E, to bring the rock-bar G, into or out of engagement with the cam-ring A, for stopping or operating the distributor.

No. 4789. LEWIS J. ATWOOD, Waterbury, Ct., U. S., 4th June, 1875, for 5 years: "Improvements on Lamps." (Perfectionnements aux lampes.)

Claim.—1st. The *removable portion* of the burner made with a circular chimney rest and *spring chimney clamps*, *a* cylindrical body *g*, and a deflector at the top of the cylinder all rigidly united together, *in combination with the stationary* portion of the burner containing the wick tube *a*, the air *distributor k*, and the cylindrical body *c*, over which the removable cylinder *g*, is placed when the parts of the burner are put together and which cylinders are of nearly equal length so as to firmly sustain the *removable* portion of the burner; 2nd. The wick raising wheels made of sheet-metal with a cylindrical hub on one side, surrounding the shaft; 3rd. The combination with the cylinder *c*, air distributor *k*, deflector *f*, and cylinder *g*, of the chimney holder *h*, adapted to receive the flattened base and the chimney fastenings *l*.

No. 4790. DUNCAN A. MCDONELL, Charlottenburg, Ont., 27th May, 1875, (Extension of Patent No. 421), for 5 years: "Improvements on Sleighs for Drawing Timber, Cord Wood, &c." (Perfectionnements aux traineaux à trainer le bois de haute futaie, de corde, &c.)

Claim.—The beams E, and the raves *D*, being connected with the crown-pieces B, by means of screw bolts, which completely perforate the crown pieces, the beams and the raves; the *sand-board* F, of the front-sleigh projecting a short distance beyond the hind beam of said sleigh; the small-pole L, of the hind-sleigh being attached to the said projected sand-board F, by means of a pair of clevises which are arranged in the following manner, to wit: the clevis on the projected sand-board F, attached to it by bolts which perforate the *sand-board* being perpendicular to the plane of said sand-board, and the clevis on the small-pole L, being placed in a position at right angles to the plane of the first named clevis *i*, *e*, horizontally as regards the upper surface of said small pole L, said pair of clevises being marked M.

No. 4791. GEORGE H. PALMER, Monmouth, Ill., U. S., 5th June, 1875, for 5 years: "Improvements in Army Equipments." (Perfectionnements dans les équippements d'armées.)

Claim.—1st. The back-pad A, double-shoulder straps B,B,B,B, and metal dees or rings E *and* D, *combined*; 2nd. The combination of the back-pad A, double shoulder-straps B, B, B, B, rings or dees E and D, *with* straps H and F, and double-loop I; 3rd. The combination of back-*pad* A, *and* double-shoulder straps B, B, B, B, with straps H and F, bags or pouches L, L, and straps X; 4th Back-pad A, double-shoulder straps B, B, B, B, straps H and F, and loop I, in *combination with* rings E and D, coat-straps N, N, bags *l*, *l*, and waist belt J; 5th. The combination of straps P, P, binding straps O, O, and side or bearing straps Q, Q, with back pad A, *and* double shoulder straps B, B, B, B; 6th. Back-pad A, double-shoulder straps B, B, B, B, *combined* with carbine-*sling* R; 7th. The back-pad A, double shoulder straps B,B,B,B, straps F, *combined* with waist belt J, loops G, straps U, carbine-*sling* R, and strap S.

No. 4792. NELSON LOVERIN, Montreal, Que., 5th June, 1875, for 5 years: "Apparatus for the Teaching of History and Statistics." (Appareil pour l'enseignement de l'histoire et des statistiques.)

Claim.—The apparatus for teaching history and statistics by symbols, said apparatus consisting of the square frame A, bars between the standards *b*, *b*, divided *into compartments* as *shown* in the drawings, and adapted to receive the cubes *j*, as well as by means of small pins to hold suspended in position the larger *symbols k*, *l*, *m*, together with the symbols.

No. 4793. ADONIRAM J. SMALL, Woodstock, N. B, 5th June, 1875, for 5 years: "Barrel Lifter." (Elévateur de barils.)

Claim.—1st. The *hoop* of iron or *any* other metal A, A, *hinged* or pivoted in the middle; 2nd The handles H, H, attached to the hoop by any device or method that will set the handles off from the *hoop to* give *sufficient* leverage to grip the barrel to be lifted 3rd. The combination of the pivoted or hinged hoop A, A, with the handles H, H.

No. 4794. JOHN E. FINLEY, Memphis, Ten., U. S., 5th June, 1875, for 5 years: "Churn Dasher." (Batte-beurre.)

Claim.—The propeller-wheel P, F, the thimble T, the encircling-rim R, with holes H, H, and the air chamber R, with holes O, O.

No. 4795. JAMES J. ROBERTS, CHARLES S. PHARIS, ISAAC R. PHARIS, and EMIL LAASS, Geddes, N. Y., U. S., 5th June, 1875, for 5 years: "Method of expanding Steam-Cylinder Packing Rings." (Mode d'expansion des garnitures métalliques des cylindres à vapeur.)

Claim.—The combination with a piston-head of a wedge-plate, which is attached to the piston-hub independently of the follower, so that all of the wedges may *readily* be removed with the wedge-plate, without a removal of the follower or *cylinder-head*, 2nd. The arrangement of the wedge-plate attached to the piston-hub, independently of *the follower*, with the cylinder head provided with a cylinder-cap, so that the said wedge-*plate* can be *removed without* taking off the whole cylinder-head.

No. 4796. THOMAS S. DICKERSON, Chicago, Ill., U. S., 5th June, 1875, for 5 years: "Process and Apparatus for the Manufacture of Gas from Petroleum and other Oleaginous Substances." (Procédé et appareil pour la fabrication du gaz avec le pétrole et autres substances oléagineuses.)

Claim —1st. The process *of* producing fixed-gas by vapourizing petroleum or other oleaginous substances, *the* method *of* checking the passage of the gases and vapours through the retorts, to wit, by introducing them into the *top* of vertically arranged retorts, and discharging them at the bottom thereof. 2nd. The retorts I, I, made in sections flanged at their ends and arranged horizontally one above the other, in combination with the generator A, the vapour-pipe G, entering the upper section of the retorts, and a discharge pipe K, leaving the lower section thereof.

No. 4797. CHARLES HUTCHINGS, Kansas City, Mo., U. S., 5th June, 1875, for 5 years: "Rein Holder." (Porte-guides.)

Claim.—1st. The vertically-hinged jaw C, having a bevel'ed edge and a return upper *end*, in combination with the vertical

branch B, of the figure head *terminating* in an under lip *a*, and having a bevelled and corrugated surface *b*; 2nd. The combination with the vertical branch B, of the figure-head A, of the vertically-hinged jaw C, socket-bearings C C, finger-piece *c*, beckey-visored guards E, *f*, and the spring D.

No. 4798. EDWARD E. GOLD, New-York, U. S., (Assignee of S. F. Gold), 5th June, 1875, for 5 years: "Improvements on Hot Air Furnaces." (Perfectionnements aux calorifères.)

Claim.—1st. The combination with the shell of the furnace and cast therewith and forming part thereof of the flanges *c*, *c* and the projections *d*, *d*. 2nd. The construction of the *heating*-chamber in sections, adapted to form together a chamber for the products of combustion and having thereon flanges *c*, studded with projections *d*, whereby the capacity of the furnace may be increased or diminished by the addition or removal of internal sections; 3rd. The arrangement of the smoke pipe or aperture H, below the centre of the smoke-chamber, *in combination* with the disc I.

No. 4799. JEAN B. ROBERT, Montreal, Que., 5th June, 1875, for 5 years: "Improvements on a lime Kiln." (Perfectionnements à un four à chaux.)

Résumé.— 1o. La combinaison de plusieurs fours à chaux chauffés au charbon maigre: 2o. La combinaison ayant pour but de conserver la chaleur des fours, *tel que l'indiquent* les lettres I I.

Claim.—1st The combination of several lime kilns, heated by coke (*charbon maigre*). 2nd. The combination for the purpose of preserving heat in the kiln, as shown at I I.

No. 4800. AMBROSE J. B. BERGER, Easton, Pa., U. S., 5th June, 1875, for 5 years: "Improvements in Door Locks." (Perfectionnements aux serrures de portes.)

Claim.—1st. The tumbler *c*, constructed so that the bolt may be thrown by the key worked from the upper or lower key-hole, *also* the arm *e* and spring *d*. 2nd. The lever F, and spring *a*, in combination with the guard G, and stop *h*; 3rd The key-hole guard G, on the cylinder for spring also the *spring* K, stop *h*, pin *j*, and *spring i*; 4th. The combination of the parts *m*, and *n*, and the pin *o*; 5th. The spring *s*, and pins *t*, *u*, *v*, in combination with the latch; 6th The latch-fastener *r*, screw *x*, *pin y*, and groove *z*.

No. 4801. DANIEL B. POND, Woonsocket, HENRY A. STEARNS and LYSANDER FLAGG, Lincoln, R. I., U. S., 5th June, 1875, for 5 years: "Washing Machine." (Machine à laver.)

Claim.—1st. An open-cylinder G, formed preferably of detachable spaced cylindrical rods allowing the suds to pass between the same and secured to metal-discs N, in combination with yielding wooden-rubber or rubber lined-rollers D, secured to the segmental end-plates C; 2nd. The locking pin *p*, in combination with the continuous-shaft I, and disc N, having a diametrically notched-flanger *r*, and detachable cylindrical-rods *h*; 3rd. The open ended re tically arranged guide-plates F, and yielding and detachable pressure-rollers D D, secured in said guide-plates and the *journals f*.

No. 4802. WILLIAM ABERCROMBIE, Hamilton, Ont., (Assignee of A. Philipp and F. L. Blakely) 5th June 1875, for 5 years: "Relishing machine" (Machine d'assemblage à mi-bois.)

Claim.—1st. The cutting-head A, in combination with boring-tool C, placed at right angles to it, and the vertically and horizontally adjustable-table O.

No. 4803. FRANKLIN E. TOWN, Boston, Mass., U. S., 5th June, 1875, for 5 years: "Gang Saw Mill." (Moulin à scies multiples.)

Claim.—1st A gang saw-mill having its various parts constructed, combined and arranged as described; 2nd. The frame composed of beams A and A^1, the fender-beams B and B^1, vertical-post C and C_1, provided with guides *i*, and lugs to which bolted the steam-cylinder E, and the connecting-caps D; 3rd. The mechanism for feeding logs to the saw consisting of a pair of cone-pulleys, or their equivalents, connecting shafting and gear, and rotating screw-gearing with a worm-wheel upon the roll-shaft; 4th. The feeding-rolls O, O^1, and the worm-gear for driving the same, in combination with the sprocket-wheels R, and pitch-chain P; 5th. The slide-blocks Y, constructed as described and provided with the adjusting-screw *v*, in combination with the recessed saw-frames, 6th. The suspending-brackets I, provided with the journal-boxes c, in combination with the beams A, A^1, and crank-shaft H, H^1.

No 4804. LEMUEL BRADFORD, 2d., Plymouth, Mass., U. S., 5th June, 1875, for 5 years: "Machine for Making the Shanks of Boots and Shoes." (Machine à faire les creux des pieds de chaussures.)

Claim.—1st. The slides K, and Q, eccentric-shaft J, standard U, and springs *m*, *n*, constructed to operate in punching, cutting and moulding metallic-shank-*pieces* for boots and shoes, 2nd. The combination of the lever c, slide *e*, and cam M; 3rd. The slide Q, provided with the spring-dowel l; 4th. The frame C, provided with the ways F, F, pulley H, and cam-lever G, in combination with the slide K, guides T, T, and standard U; 5th The cam K, provided with spline 5.

No. 4805. GEORGE E. DAYTON, New-York, U. S., 5th June, 1875, for 5 years: "Improvements in metallic Sky-Lights." (Perfectionnements aux lucarnes métalliques.)

Claim.—1st. The glass support bar B, made flat on top as described to avoid the necessity of a rabbet: 2nd. The glass support bar B_3, made flat on top with *gutters b*, *b*, of a single piece of metal, 3rd. The fastening-wires applied to cap F; 4th. The ridge-bar G, constructed without a rabbet and adapted to different pitches of the roof; 5th. The flashing I, turned up on edge to form a gutter *i*, and applied to the wooden-curb *R*. 6th The opening sash-bar J, constructed and applied in connection with the glass supporting bars; 7th. The cross-bar K, constructed, arranged and applied between the bars B_2, B_3, and the two lengths of glass. 8th. Side-clasp D, covering-joint made where outer bar re-ts on curb I, necessary to do away with frame; 9th. The casing L, constructed and arranged to form the flanges.

No. 4806. JAMES B. SMITH, Amable, Ont., 5th June, 1875, for 5 years: "Car-Coupler." (Attelage de wagons.)

Claim.—The peculiarly arranged lever marked C, with its handle marked D.

No. 4807. WILLIAM RANDALL, Salem, Mass., U. S., 5th June, 1875, for 5 years: "Improvements on Injectors for Boilers." (Perfectionnements aux injecteurs des chaudières à vapeur.)

Claim.—The internal and external nozzles C, D, provided with the passages *b*, *c*, of connection with the steam induct E, in combination with the cock F, arranged in the induct and provided with the passage *a*, to engage with either or both the said passages *b*, *c*, in the larger nozzle C, open at its rear and provided with the cap or cover B, in combination with the body A, provided with the chamber G, the steam-induct E, and the water induct H, in the front-nozzle I, arranged to extend across its chamber K, and within the mouth R of the educt N.

No. 4808. WILLIAM HARDY, Ancaster, Ont., 5th June, 1875, for 5 years: "Improvements on Horse Collars." (Perfectionnements aux colliers de cheval.)

Claim —The use of the matting in making the rim A, the body C, and the cap D.

No. 4809. DUNCAN MACKINNON, Stratford, Ont., 5th June, 1875, for 5 years: "Combined Pen and Ink-Holder." (Plume-fontaine.)

Claim.—1st The writing-point E, constructed of glass, a non-corrosive metal or other suitable non-corrosive material, and consisting of the tubular portion or valve-chamber E^1, and tapering-point E^2, with ink, bore or duct *e*, in combination with the valve F, and spindle F_1; 2nd The detachable-holder C, with writing-point E and valve F, in combination with the ink-reservoir B; 3rd. The air-tube G, leading a column of air to or near the foot of the ink-reservoir B, for the purpose of assisting and regulating the flow of ink therefrom; 4th. The perforated-cap H, and rod G^2, in combination with the ink-valve F, and ink reservoir B.

No. 4810. WILLIAM BUCK, and JUDSON W. BUCK, Brantford, Ont., 5th June, 1875, for 5 years: "Improvements on Heating Stoves." (Perfectionnements aux poeles de chauffage.)

Claim.—1st. The application of cast-iron lining H, having the upper edges in close contact with lining of stove and forming the flues I, near the upper edges by which the smoke and heat pass down both sides of stove: 2nd. The application of grate-bars K, in front of damper C, to raise the wood from the bottom: 3rd. The application of damper E, in end flue to regulate the draft in stove, also circular-damper F, set in end flue to check combustion and also door G, in end flue in connection with flue I. 4th The application of diaphragm M, by which the draft is slightly checked, and the heat sent forward.

No. 4811. BENJAMIN ATWOOD, Stanstead, Que., 5th June, 1875, for 5 years: "Mowing Machine." (Faucheuse.)

Claim —1st. The combination of the lever N, suspension-bar Q, and brace-bar D, with the frame A, and driving-pitman M: 2nd. Constructing the finger-bar S, of two plates firmly bound together by bolts or rivets *d*, and holding between them the guard-plates *i*; 3rd. The mode of constructing the cutter-bar R of two plates firmly bound together by bolts or rivets *h*, and holding between them the

section-knives g; 4th. The motion of the cutter-bar R, whereby each section or knife g, shall pass across two spaces between the fingers a.

No. 4812. WILLIAM CHALLENGER, Mitchell, Ont., 5th June, 1875, for 5 years, "Trace Buckle." (Boucle de traits de harnais.)

Claim.—A lever trace buckle, the lower or main plate A^1, having the slotted sides A^4, and projecting stud or pin E, in combination with the pad or back-band D, perforated at suitable intervals by the holes d.

No. 4813. HARRIET N. COLBY, New-Port, N. H., U. S., 5th June, 1875, for 5 years: "Combined Stove Shelf and Bread Toaster. (Tablette de poele et gril pour le pain combinés.)

Claim —1st. A bracket or shelf made of wire secured to the pipe of the stove by the hinged bale or clamp; 2nd. The combination in a stove bracket or shelf of the frame A, braces B B_1, and C, cross-ties or girders D, and the wire net-work F, or its equivalent; 3rd. The removable bracket or shelf consisting of the frame A, covered with the wire net-work F, or equivalent braced, combined with the curved rear-extensions A^1, A^2, having the bale E, hinged in such manner that the whole may be readily removed from the stove-pipe and adapted for use as a bread-toaster.

No. 4814. LEONARD MALTUS, Hamilton, Ont., 5th June, 1875, for 5 years: "Street Car Fare Box. (Boîte à billets de chemins de fer urbains.)

Claim.—The combination and arrangement of the several parts' namely: The change-door C, in connection with the hinge Q, the catch W, and spring R; the hinge Q, in connection with the cam S, the bell-hammer T, lever V, the spring Y, and bell U; the rod X, in connection with the lever V, and the spring Z; the stop-table J, in connection with the tilting-table K; the lamp ventilator C, in connection with the lamp-chamber D.

No. 4815. JOHN STAUFFER, and JAMES W. CARROLL, Toronto, Ont., 5th June, 1875, for 5 years: "Sash-fastener." (Arrête-croisée.)

Claim.—1st. The face-plate A, constructed with ear-pieces a, a, and segmental-rachet b, and recessed below, for the angular sliding-plate C; 2nd. The eccentric-disc B, with arm and knob D, ratchet-bar E, and spiral-spring F; 3rd. The combination with the face-plate A, of the eccentric-disc B, with pin C^{11}, the angular plate C, with groove C^1.

No. 4816. VEN RENSSELAER TAYLOR, Syracuse, and REUBEN C. SUTHERLAND, Jr., DeWitt, N. Y., U. S., 5th June, 1875, for 5 years: "Blacksmith's Tuyere." (Tuyère de forge.)

Claim.—The chamber A, having a bevelled projecting-front, the cover a, having attached thereto the inward projecting inlet-tube b, the intermediate perforated plate c, having attached thereto the outlets n, n, valve o, and bolts e, e.

No. 4817. ASA ROBBINS, Yarmouth, N. S., 5th June, 1875, for 5 years: "Process of Tanning Hides." (Procédé de tannage des peaux.)

Claim.—The process of filling skins with oil, when partly tanned and finishing the remainder of the tanning with the skins filled with oil or tallow, thereby making the skins perfectly water-proof and very much stronger in texture and more durable to wear.

No. 4818. JACOB L. ISAACS, and RICHARD HALLIDAY, St. Louis, Mo., U. S., 5th June, 1875, for 5 years: "Improvements on Step Ladders." (Perfectionnements aux échelles à queues.)

Claim.—1st. The ladder-part A, with journal bearings a, and spring-bolts c, in combination with ladder part B, having journal bearings a; 2nd. The ladder A, with journal-bearings a, spring-bolts c, in combination with ladder B, having journal-bearings a, and catch-hooks E, constructed and arranged for purposes of an extension-ladder; 3rd. In combination with the ladder-parts A, B, the cord-attachment C, arranged to pass through staples c, and looped to side-hooks c^1; 4th. In combination with the ladder-parts A, B, the perforated strip c^2, buckle c^3, and cord C; 5th. The combination with the top of the ladder A, of a sliding-top D, carrying hooks d^1; 6th. The combination of the ladder-parts A, B, journal-bearings a, spring-bolts b, cord C, staples c, side-hooks c^1, metal-strip c^2, buckle c^3, sliding-top D, and hooks d^1.

No. 4819. HENRY FOSTER, Westerly, R. I., U. S., 5th June, 1875, for 5 years: "Railroad Snow-plough." (Charrue à neige de railroutes.)

Claim —The adjustable snow-plough B, constructed as described, when adjusted by screw D, or its equivalents.

No. 4820. BERNARD ACKERMAN, New York, U. S., 5th June, 1875, for 10 years: "Improvements in the Preparation of Fertilizers." (Perfectionnements dans la préparation des engrais.)

Claim.—The banded manure composed of excrementary matters A, and straw or litter B confined in an approximately rectangular form by the bands C, so as to present the ventilating grooves a.

No. 4821. DAVID E. ROE, Ayer, Mass., U. S., 5th June, 1875, for 5 years: "Fly-trap." (Piège à mouche.)

Claim —1st. In combination with a trap for flies, the mat E, having a radially extended edge upon which part of the bait is placed as a decoy; 2nd. The base D, cone B, with receiver A, opening therefrom, and the mat E, having a projecting edge.

No. 4822. HENRY MARTYN, Boston, Mass., U. S., 5th June, 1875, for 5 years: "Improvements in the Manufacture of Boxes and Pans." (Perfectionnements dans la fabrication des boites et ustensils métalliques.)

Claim.—A pan, box, body or cover made of sheet metal or material bent in manner described, whereby at each of its corners, the material is without seam and folded in manner upon two contiguous sides of the article as represented; the female-die having corner recesses and folders to each and a finishing-space, all constructed and arranged in manner and to operate with a male-die; the male-die, as provided with the two recesses at each corner of its perimeter, such die being for use with a female-die.

No. 4823. JAMES SCOTT, Jr., Hamilton, Ont., 5th June, 1875, for 5 years: "Composition Stamp." (Estampes en composition.)

Claim.—An improved compound for composition stamps for ornamenting with bronze, gold and silver leaf, &c., consisting of gelatine, syrup, glycerine, in combination with tannin.

No. 4824. JULIAN SALE, Jr., Toronto, Ont., 5th June, 1875, for 5 years: "Improvements on Wallets, Pocket Books or Purses." (Perfectionnements aux sacs, portefeuilles ou bourses.)

Claim.— The furnishing of wallets, pocket-books or purses, with a movable pocket A, having a strap b, or elastic-band attached thereto, and placed in the interior of the wallet, pocket-book, or purse, for the holding of bank-notes or other papers.

No. 4825. WILLIAM D. WESTMAN, Toronto, Ont., 5th June, 1875, for 5 years: "Improvements on Scroll Saw." (Perfectionnements aux scies à évider.)

Claim.—1st. The driving of the pitman or saw-shaft of a rip and scroll-saw, by means of a friction-wheel F, and pulley G; 2nd. The combination of the tightening-bar T, pivoted in the lower saw-arm L, and adjusted by means of the hinged-screw s^2, and finger-nut s^3, in the upper saw-arm M; 3rd. The saw R, tapered and in combination with the same, the steel-guides p, p^1; 4th The bracket N, when attached to the side of the machine, with arm o, in combination with the saw-arms L and M, the steel-guide p, and the adjustable-guide q; 5th. The application of the treadle B, rod C, and face-plate D, with crank-pin therein, and balance-wheel F, in combination with each other for communicating motion to a rip and scroll saw.

No. 4826. JOHN Z. WALLING, Red Wing, Min., U. S., 9th June, 1875, for 5 years: "Apparatus for Breaking Horses." (Appareil à dompter les chevaux.)

Claim.—1st. The diagonal-straps I and G, in combination with straps C and F, surcingle E, for supporting the pulley-block D, and straps or bands A, B; 2nd. The pulley-block D, and straps C, F, connecting with leg-straps A and B.

No 4827. CHARLES G. HERBERT, New York, U. S., 9th June, 1875, for 5 years: "Plumber's Joint." (Joint de plomberie.)

Claim—The right and left hand threads *b*, and *b*', with blunted or flattened-ends *c*, *c*, and intervals *d*, all inside of the collar A, in combination with the ends of the lead-pipes D, D.

No. 4828. EZRA CASWELL, Lyons, N. Y., U. S., 9th June, 1875, for 5 years: "Clamping Attachment for Vices." (Ajustage des mordaches pour l'assemblage.)

Claim.—The forked-standard A, fitting over the sliding-bar of the vice, and the clamp-head B, constructed with the plane and convex-faces *h*, *h*,, and capable of full rotation on its pivot.

No. 4829. SYLVANUS BARTLETT, Westport, N. H., U. S, 9th June, 1875, for 5 years: "Improvements on Saw Sets." (Perfectionnements aux affûts de scies.)

Claim—1st. A saw set composed of anvil with pivoted and spring acted hammer, screw-lever and gauge-pieces of which one is adjustable to the length of teeth and the second to the decree of set to be given to them; 2nd. The combination of the a. il with the sliding gauge-piece of the rest-bar and the fastening set screw of the standard-arm for securing the saw rigidly in position for the setting-action of the screw-lever; 3rd. The combination of the sliding V-shaped gauge with the recessed-standard and a clamp-screw for adjusting gauge to length of saw-teeth.

No. 4830. WILLIAM HANEY, London, Ont., 9th June, 1875, for 5 years: "Improvements on Children's Carriage." (Perfectionnements aux voitures d'enfants.)

Claim.—1st. The combination of movable-arms B, bars C, E, plates F, G, and arbour or guide-rod D; 2nd. In combination with the first claim, the jointed-bed A, and bolt *b*; 3rd. The adjustable-back I, in combination with strap H and J; 4th The adjustable foot-board K, in combination with plate M, and screw L.

No. 4831. CLARK HUTCHINSON, Tonica, Ill., U. S., 9th June, 1875, for 5 years: "Nut Lock." (Noix de sûreté.)

Claim.—The process of locking screw-nuts by dividing the bolt-thread bending the divided parts laterally and applying a wire to pass between said parts and around the bolt.

No. 4832. STEPHEN NUTTING, New-Haven, Vt., U.S., 15th June, 1875, for 5 years: "Improvements on Wheel-hubs." (Perfectionnements aux moyeux de roues.)

Claim.—A hub having the annular oblique faced abutment *a*, combined with the clamping-plates C, D, and screw-sleeves E, F.

No. 4833. WILLIAM FINGLAND, and BENJAMIN J. DRAPER, Ottawa, Ont., 15th June, 1875, for 5 years: "Saleman's Check-book." (Livret de contrôle de marchand.)

Claim.—A book, per diagram, of leaves in pairs A and C, the first leaf A, perforated, and the second leaf C, not perforated; both leaves divided into coequal sections B, B, B, B, B, and numbered consecutively in duplicate 1, 2, 3, 4, 5, and so on through the book; also the use of a piece of transfer-paper which is placed between the leaves A and C.

No. 4834. CLOVIS LALIBERTÉ, Montreal, Que., 15th June, 1875, for 5 years: "Machine for Trimming Boot and Shoe Heels." (Machine à polir les talons des chaussures.)

Résumé.—La combinaison d'un brunissoir en demi-lune *h*, posé sur un essieu *g*, et travaillant par un mouvement oscillatoire au moyen l'une bielle *f* et d'un bras *d*, mis en opération par l'intermédiaire de la poulie *i*, et de l'essieu *c*.

Claim.—The combination of a half moon burnisher *h*, placed upon an axle *g*, worked by an oscillating movement by means of a coupling rod *f*, and an arm *d*, set in motion by the intervention of the pulley *i*, and the axle *c*.

No. 4835. JOHN C. BAKER, Mechanicsburgh, Ohio, U. S., 15th June, 1875, for 5 years: "Improvements on Grain Drilling and Seeding Machines." (Perfectionnements aux semoirs-traceurs à grain.)

Claim.—1st. A frame for a grain-drilling or seeding-machine consisting of a continuous wooden-bar bent into the required form, 2nd. A frame for a grain-drill or seeder composed of a bent-bar of wood and metal corner-pieces secured thereto; 3rd. In combination with the drag-bars or beams of a grain-drill or seeder a series of levers pivoted to the frame and to each other and having the drag-bars attached to them: 4th. A hoe or drill-tooth provided on its rear side with ears having a wheel or roller secured therein; 5th. In combination with the hinged drag bars having the hoes attached, the springs arranged to bear upon the bars; 6th. In combination with the crank-shaft H, and the drag-bars F, the links M, and spiral-springs *f*; 7th. In combination with the crank-shaft H, connected with the drag-bars, the hand-lever O, mounted on the main-shaft or axle and connected by a sleeve N, the one end of shaft H; 8th. In combination with the hand-lever O, arranged to raise and lower the hoes, the arm P, connected with the gearing by which the feeding devices are driven and arranged to be operated by the hand-lever whereby the raising of the hoes serves to throw the feeding-devices out of action, and *vice-versa*; 9th. The combination of the feed-roll, the distributing-wheel, and the cup or case; 10th. In combination with the feed-roll and cup the regulating-slide provided with the opening *d*, and depending flange *f*, 11th In combination with the driving shaft and the feed-cup, the feed-roll bearing at one end only on the shaft, and held and guided at the opposite by the cup; 12th. In combination with the feed-roll and its shaft, the pin inserted through the roll into the shaft and held in place by the cup or case. 13th. In combination with the feed-regulating slide provided with the oblique-slot in its end, the hand-lever V, pivoted to the end of the grain-hopper and working at its lower end in said slot; 14th A series of independent clearer-legs suspended freely at their upper ends, arranged to enter the ground at their lower ends and remain at rest until the hoes have advanced, past them and to then rise swing forward of the hoes and enter the ground; 15th. In combination with the crank-shaft H, having the clearer-legs suspended thereon, the arm J, connected with said shaft and the eccentric k, mounted on the main-shaft or axle.

No. 4836. WILLIAM MCCAMMON, Albany, N. Y., U. S., 15th June, 1875, for 5 years: "Improvement on Piano-Fortes." (Perfectionnement des pianos-fortés.)

Claim.—1st. Operating one or more octaves of the dampers in such a manner that the tones of either the trebles or bass notes may be prolonged at the pleasure of the performer; 2nd. The devices for operating the treble and bass dampers independently of the other, in combination with the mechanism for raising all the dampers at once.

No. 4837. SAMUEL N. GUSTIN, Mexico, N. Y., U. S., 15th June, 1875, for 5 years: "Improvements on Animal Pokes." (Perfectionnements aux carcans à bétail.)

Claim—1st. The axle-bar constructed of two parts *a* and *b*, secured laterally to the stale by the clip *c* and *d*, and staple C; 2nd. The metallic-clasps D, secured adjustably to the ends of the yoke B, and engaging with the parts *a* and *b*, of the axle-bar; 3rd. The combination of the parts *a* and *b*, of the axle-bar having projections *g*, and the clasps D, having a slotted-eye K, for retaining the parts connectedly and removably at certain angles of adjustment; 4th. The press-bar F, having slotted guide-lugs *G*, the cross-head I, having slots H and bolt J; 5th. The coiled-springs K, in combination with the press-bar F, cross-head I, and teeth *h*, for retracting the press-bar after depression.

No. 4838. EDWARD A. KITZMILLER, Pittsburgh, and WILLIAM J. SMITH, Alleghany, Pa., U. S., 15th June, 1875, for 5 years: "Broom Handle Painting Machine." (Machine à peinturer les manches à balais.)

Claim.—1st. The painting-rollers J, K, receiving an imprint from the design-rollers D, F, and transferring such imprint to a broom-handle or other article to be ornamented, revolving in contact therewith; 2nd. The combination of paint distributing rollers C, E, design-rollers D, F, painting-rollers J, K, pivoted in frames I, and hollow revolving-shaft G, for receiving and rotating the broom-handle, the several parts operating conjointly with each other.

No. 4839. JACOB H. MYERS, Rochester, N. Y., U. S., 15th June, 1875, for 5 years; "Improvement on Harvester-Rakes. (Perfectionnement des râteaux de moissonneuses.)

Claim.—1st. The spring cam arm *b*, actuated by the rake-roller, for opening the switch or gate in the cam track, causing the arm to act as rake arms in combination with the weighted or spring-latch *d*, for holding the cam-arm away from the switch or gate when it is desired that the rake-heads shall act as gatherers only, 2nd. The combination with the rake-tripping devices of an index-arm or lever, controlled by the driver on the machine, for setting said tripping-devices, to cause the rake automatically to discharge the gavels at any desired regular distance apart; 3rd. The ad-

justable beaters *m*, applied to the rake arms, above and in front of the rake-heads, and set obliquely to said heads; 4th. The angular clasp or socket-piece *n*, with its spur or finger *n'*, and single through-bolt, in combination with the rake-arms and the adjustable-beaters *m*, for uniting said beaters to the rake-arms.

No. 4840. JOSIAH S. CLARK, and JOHN STANDFIELD, Westminster, Eng., 15th June, 1875, for 5 years: "Improvements on Floating Docks and Pontoons." (Perfectionnements aux bassins de radoub et aux pontons.)

Claim.—1st The construction of floating docks and pontoons with slots or comb-shaped openings Y, in the bottom for the purpose of raising and depositing vessels on to corresponding fixed stages; 2nd. The use of the aforesaid slotted docks or pontoons together with slotted or comb-shaped stages Z; 3rd. The construction of floating docks in separate portions with one or both sides A, A, removable; 4th. The combined arrangement of apparatus for blocking ships on the docks or pontoons consisting of blocks I., jibs N, O, and chain carrying-blocks P, or rollers Q; 5th. The combined arrangement of apparatus for blocking ships on the docks or pontoons, consisting of chains, carrying rollers Q, and fixed at one end to the dock or pontoon below the vessel and at their opposite ends to shores or jibs T, U; 6th. The combined arrangement of apparatus for supporting vessels, consisting of pistons R, and cylinders S, filled with sand and provided with openings S', for its removal by a jet of water.

No. 4841. ADAM A. WILSON, Montreal, Que. 15th June, 1875, for 5 years: "Improvements on Compounds for Mixing Paints." (Perfectionnements aux compositions à délayer les couleurs.)

Claim.—The new compound composed of coal-oil, or benzine, or kerosene or turpentine, or crude-naptha, with rosin and whitening.

No. 4842. JOSEPH A. EGGINTON, Montreal, Que., 15th June, 1875, for 5 years: "Coloured Glass Relief Letters." (Lettres en relief sur verre colorié.)

Claim.—A coloured glass relief letter, formed from stained or other coloured flat or sheet glass.

No. 4843. JOHN C. RAMSDEN, Halifax, Eng., 15th June, 1875, for 5 years: "Method of and Apparatus for Securing the Combustion of Fuel and for the Utilization of Gases thereof." (Méthode et appareil pour faciliter l'embrasement du combustible et en utiliser les gaz.)

Claim.—The new and improved means or method of and apparatus for securing the combustion of fuel and for the utilization of the gases therefrom consisting in the combination with the furnace of the hopper A, blast-pipe B, plate C, hydrocarbon-pipe D, steam-pipe E, exhaust-fan-pipe F, receiver H, and pipes I, and M.

No. 4844. HORATIO W. MURDOCK, and MARTIN E. SNIDER, Toronto, Ont., 15th June, 1875, for 5 years: "Pocket Door-Fastening." (Fermeporte portatif.)

Claim.—1st. The detachable-pin or stud F, either threaded or plain in combination with the enlarged-end C, of the bar D, the said enlarged-end having a hole E, (either threaded or plain) to receive the pin or stud F

No. 4845 THOMAS FOSTER, Lindsay, Ont., 15th June, 1875, for 5 years: "Hame Fastening." (Ajustage des attelles.)

Claim.—1st The chain C, and lever D, having hook E, attached to the hames A, to couple together and operate as described for tightening the hames; 2nd The eye G, secured to the hame A, and receiving a slot F, in the lever, for fastening the lever D, by a snap or pin H.

No. 4846. RICHARD TAYLOR, Guelph, Ont., and HENRY SLIKER, Buffalo, N. Y., U. S., 15th June, 1875, for 5 years: "Rail-Joint and Nut-Lock." (Joint de rails et noix de sûreté.)

Claim.—1st. The cabbard B, made in one or two pieces in combination with the rail-ends A, A, and bolts C, C; 2nd. The nut-lock D, with tongues D', D', in combination with the bolts C, C, and nuts E, E.

No. 4847. JOSEPH L. BOND, and DENNIS SHOFF, Sarnia, Ont., 15th June, 1875, for 5 years: "Pawl and Ratchet Mechanism." (Mécanisme de roue à rochet.)

Claim.—1st. The combination of the slotted-lever D, working on fulcrum C', the connecting-links F, F, pivoted at *f*, to lever D, and *movable boxes G, containing pawls H, H*, with the ratchet-wheel E, constructed and arranged to operate the ratchet-wheel in one direction; 2nd. The pawl-boxes G, constructed with grooves *g'*, in combination with the flange *e'*, on the sides of the ratchet-wheel E; 3rd. The combination of the lever D, and the two connecting-links F, with movable-boxes G, containing reversible-pawls H, to revolve the ratchet-wheel continuously in either direction.

No. 4848. WILLIAM C. BARKER, Millport, N. Y., U. S., 15th June, 1875, for 5 years: "Chain Pump Bucket." (Godet de chapelet.)

Claim.—1st An elastic-bucket of convex-exterior, hollowed or concaved at the base; 2nd. An elastic-bucket having concave convex surfaces, and provided with a leak-opening *b*, 3rd. An elastic bucket having concave and convex-surfaces, and a leak-opening *b*, in combination with a link C.

No. 4849. EDWARD J. BROOKS, New-York, U. S., 15th June, 1875, for 5 years: "Improvements on Metallic Seals." (Perfectionnements aux cachets métalliques.

Claim —1st A bow or shackle A, of wire or its equivalent, and a ball or disc B, of lead or its equivalent; the latter having one or more apertures or perforations, for the reception of one or both ends of the bow or shackle, so arranged as to cross the end or each end over the other or over an equivalent lock or anchor within the seal; 2nd. The combination of a ball or disc of soft metal, a loop or loops of hard metal encircling or bushing an orifice in the soft metal, and a wire to pass through the bush orifice: 3rd. A shackle-wire or its equivalent having a ball or disc of lead or its equivalent, cast on one end of the same, and provided with a perforation for the reception of its other end; 4th. A shackle wire having one end anchored in a ball or disc of lead or its equivalent, by means of a loop or loops thereon; 5th. The combination of a shackle wire A, having a looped-end and a soft metal-ball or disc B, cast upon the looped-end of the wire A, and pierced with an aperture extending through the loop of the wire.

No. 4850. CHARLES E. PATRIC, and JAMES S. BOGLE, Springfield, Ohio, U. S., 15th June, 1875, for 5 years: "Seeding Machine." (Machine à semer.)

Claim.—1st. The pivoted cover-plate H, in combination with the removable-pinion *b'*, on the distributor wheel shaft, for protecting the said pinion, and holding it in place on its shaft; 2nd. The divided cover H, *h*, partly fixed and partly pivoted and movable, for protecting the gearing and permitting the removal of the pinion on the distributor-wheel shaft: 3rd The ratchet-bar F, in combination with the shipping-lever E, for permitting the change of pinions and for holding said lever E, at any desired point of adjustment.

No. 4851. GEORGE B. PETERS, (Assignee of I. G. Betts), Marshall, Mich., U. S., 15th June, 1875, for 5 years: "Lubricating Compound." (Composition lubréfiante.)

Claim.—1st The process of making a base for lubricating compounds by partially saponifying alkalies, water and fats, and combining with the same, when cold a quantity of cold oil; 2nd. A lubricating-compound composed of a base made by partially saponified-alkalies, water and fats combined when cold with cold oil and asbestos, paper-pulp or other suitable material to hold the said base mechanically. 3rd A lubricating compound adapted to be used in cups wherein to a base made of alkali, water and fat partially saponified, to which a certain quantity of cold oil has been added, and a vehicle of asbestos and paper-pulp or other to take up and mechanically hold the greasy or oily substances, there is added an essential oil.

No. 4852. WILLIAM F. WHEELER, Boston, Mass., U. S., 15th June, 1875, for 5 years: "Fertilizer Holder and Distributor." "Machine à transporter et distribuer les engrais.)

Claim.—1st The improved device for attachment to a hose-pipe or other conduit, through which water is to pass the same consisting of a holder A, formed in two parts *a*, *a*, and provided with a series of internal ribs *c*; 2nd. The improved method of gradually and equably impregnating water with fertilizing and other materials to be diffused upon plants, etc. the same consisting in forming the elements or materials into a solidified or semi-solidified homogeneous mass and placing the same, so formed, into a holder or chamber connected with or arranged in a hose-pipe or other conduit through which water is forced, or caused to pass whereby the action or friction of the water, shall gradually disintegrate the compound,

No. 4853. EMMONS R. STOCKWELL, Theresa, N. Y., U. S., 15th June, 1875, for 5 years: "Improvement on Carriage Tops." (Perfectionnements des soufflets de voitures.)

Claim.—The bow-iron branches B, having sockets C, for receiving the ends of the carriage-bows.

No. 4854. JOHN F. DONOGHUE, Springfield, and GEORGE CROMPTON, Worcester, Mass., U. S., 15th June, 1875, for 5 years: "Anti-Incrustation Battery for Boilers." (Batterie à anti-incrustation pour les chaudières à vapeur.)

Claim.—A spiral of copper-wire, partially incased or embedded longitudinally in a base of zinc.

No. 4855. WILLIAM GRIFFITH, Toronto, Ont., 15th June, 1875, for 5 years: "Improvements in Locks." (Perfectionnements dans les serrures.

Claim.—1st. The plain metal-plates A, A', in combination with the shoulder-pins D, and lugs C; 2nd. The set-bolt G, in combination with the recess I, in the bolt E.

No. 4856. JAMES L. GREGORY, (assignee of W. Redheffer) St. Louis, Mo., U. S., 15th June, 1875, for 5 years: "Combined Egg-Beater, Churn and Ice-Cream Freezer." (Appareil à battre les œufs et faire la crême à la glace et baratte combinés.)

Claim.—1st. The combination with a can having a convex-bottom of a beater A, composed of hollow perforated frustums of cones A^1; 2nd. The hollow perforated frustums of cones A^1, mounted on a metal tube A^2, and united to a wooden-handle A 3rd. The combination of the tight-tub D, provided with an interior grooved ring E, having the notches *e*, with a can or receiver B, provided with radial arms F; 4th. The combination of the tight tub D, having a grooved-ring E, the can B, having the radial arms F, with the base G; 5th. The combination with the can B, with studs *h*, and beater A of a detachable base provided with clamping hooks H, for securing it to the can; 6th. The base I, composed of the wooden core J, and metal sheathing J^1, with fastening down-pieces J^2.

No. 4857. ALBIN TAPLIN, Forestville, Ct., U. S., 15th June, 1875, for 5 years: "Mode of Forming Sheet Metal Screw Threaded Collars." (Mode de fabrication des cols métalliques en vis.)

Claim.—The improvement in the art of forming threaded sheet-metal collars which consists of first threading the blank in the flat, and afterward forming said threaded portion into a collar.

No. 4858. HOLLIS W. MERRILL, and JAMES W. HOITT, Lynn, Mass., U. S., 15th June, 1875, for 5 years: "Boot and Shoe Tip." (Carre de chaussure.)

Claim.—A boot and shoe-tip, composed of prepared raw-hide, and permeated throughout with a suitable colour.

No. 4859. ANDREW TOLTON, Eramosa, O 15th June, 1875, for 5 years: "Improvements on Machines for Threshing Peas" (Perfectionnements aux machines à battre les pois.)

Claim.—1st. The combination of a fan, a cutter and a separator operating conjointly, in which the vines are cut during the operation of threshing; 2nd. In combination with a cutting box and fan, a pneumatic tube P, for conveying hay and straw during the operation of cutting.

No. 4860. DAVID LISTER, Toronto, Ont., 15th June, 1875, (Extension of Patent No. 472), for 5 years: "Improvements on the Art of Welding Iron and Steel, and for purifying the same in Smelting and Puddling Furnaces, and in a composition of matter for that purpose." (Perfectionnements dans l'art de souder le fer et l'acier et de les purifier dans les fourneaux de forge et de puddlage, et une composition pour cet objet.)

Claim.—A new and useful art or process of welding iron and steel, and purifying the same in smelting and puddling furnaces by using in such art or process equal parts of caustic-soda, and caustic-potash, united or separately as described; and also a new and useful composition of matter composed of caustic-soda and caustic-potash united in equal parts or separately, to be used in the said process of welding iron and steel, and purifying the same in smelting and puddling furnaces.

No. 4861. LOUIS BRUSH, Buffalo, N. Y., U. S., 15th June, 1875, for 5 years: "Improvements in Passage Tickets." (Perfectionnements aux billets de passage.)

Claim.—A passage-ticket extending over two or more lines of railroads or divisions thereof, consisting of a passenger strip containing a continuous list of the stations on the entire route and a series of coupons for the different roads or divisions, not good for fare but forming a voucher for each road or division, to be detached by the different conductors, while the passenger portion forms a continuous ticket and stop over check.

No. 4862. EDGAR MCMULLEN, Montreal, Que., (Assignee of D. W. De Forest), 15th June, 1875, for 5 years: "Improvements on Machines for Manufacturing Tobacco." (Perfectionnements aux machines à fabriquer le tabac.)

Claim.—1st. The combination of gears *g, m, l, k*, drum E, rolls B, C, belt A, and pivoted-frame G; 2nd. The combination of gears *g, m, l, f*, drum E, rolls B, C, frame G, and the sliding-roll D, band S, and treadle T.

No. 4863. WILLIAM N. WHITELEY, Springfield, Ohio, U. S., 15th June, 1875, for 5 years: "Mower and Reaper." (Faucheuse-moissonneuse.)

Claim.—1st. The main-frame constructed in one single piece of wrought-metal; 2nd. The main-frame of wrought-metal, constructed in such a manner that both its branches are united at the point of connection with the finger-beam; 3rd. The bracket K, attached to, the main frame, for the purpose of securely sustaining the rear inner end of the finger-beam, in its proper place, by means of the hinge-joint-attachment: 4th. The adjusting-device J, H, one part being connected with the pole B, and the other permanently to the main-frame A, so that the driver can, by means of the lever, raise and lower the rear of the main-frame, and the heel of the cutting apparatus and adjust the same to different heights, while the machine is in motion, 5th. The combination of the angle-rod R, in front of the knife-bar, with the independent plates or supports *q*, fastened to the under side of the finger-beam, in such manner that the front upper edge of said angle-rod forms a continuous narrow bearing on which the sections of the knife rest, and the independent supports (or plates) *q*, form bearings for the rear-edge of the knife back, whereby the surface-bearings of the knife upon the guards and angle rod is materially reduced, the open space thus formed between the bearings preventing gumming or clagging from dirt in the field; 6th. The combination of the plates (or supports) *q*, fastene to the finger-beam in such manner as to wedge firmly between the guards, and thereby prevent any side-motion of the guards, whereby one rivet through each guard-finger is sufficient to fasten them securely to the finger-beam. 7th. Communicating motion to the reeling and raking apparatus from the driving-wheel, by means of the cog-gearing, one wheel being connected to the master-wheel, and one held in position by the stationary master-wheel axle to communicate motion from the master-wheel to the reeling and raking apparatus 8th The combination of the rake-supporting-arch N, and spindle S^{11}, carrying the crown wheel-pinion *a*, of the rake, the rake-cam and the driving mechanism of the rake from the main-wheel and axle, 9th. The combination and arrangement of the cord or chain-mechanism connected directly to the front switch, whereby the driver can at will keep the switch closed, and by that means suspend the action of the rake from discharging the grain when the rake is set to work automatically; 10th The cam-guard constructed of two pieces jointed together at a point co-incident with the joint or hinge, upon which the finger-beam rocks or turns, for the purpose of conforming to the oscillating movements of the cutting-apparatus.

No. 4864. DANIEL J. TOPLEY, Brooklyn, N. Y., U. S., 17th June, 1875, for 5 years: "Fire Extinguisher." (Extincteur d'incendie.)

Claim.—1st The combination with the shell A, of the bolsters G, formed and arranged to serve the double purpose of pockets and of a knapsack-bearing, 2nd. The combination of the clamps D^2, and sliding band D^{11}, with the sleeve D, provided to receive the acid-cartridge, whereby the said cartridge is positively and rigidly held against the thrust of the breaking-bar G^{11}; 3rd. The sliding breaking bar G^{11}, provided with the central point or spur C, and the lateral points or spurs *c, c*, whereby the fracture of the acid cartridge is started by the former, and spread, and completed

by the latter; 4th. The combination of the lever C1, sector *b*, and rack C, with the breaking-bar C11; 5th. The foraminated-funnel J, fixed below and concentric with the inlet-opening of the cylindric shell A, and serving the double-purpose of an outlet-funnel and a strainer; 6th In combination with the mechanism for breaking the acid-cartridge of a chemical-fire-extinguisher, a wax-seal of such form and so applied as to at once indicate any movement of the devices for breaking and discharging the acid cartridge.

No. 4865. JOHN H. MORRELL, New-York, U. S., 17th June, 1875, for 15 years: "Floodway for Warehouses, &c." (Pertuis d'entrepôt, &c.)

Claim—One or more pipes A, leading continuously from the upper floor of ware-houses or other buildings to the street-sewer, said pipe or pipes having apertures on each storey opening into metallic sinks or reservoirs.

No. 4866. GEORGE H. LONGMORE, Portland, Me., U. S., 17th June, 1875, for 5 years: "Matting Roller." (Rouleau a nattes.)

Claim.—1st. A box-roller, for matting with four sides C, C, and a space through the centre *a*; 2nd. The bar *b*, *b*, when taken in connection with the roller.

No. 4867. EDWARD B. DODGE, Peterboro, N. H., U. S., 17th June, 1875, for 5 years: "Improvements in Spring Beds." (Perfectionnements aux lits à ressorts.)

Claim.—The slat holding and spring connecting devices E, F, G, and H.

No. 4868. GEORGE H. GREENOUGH, Brooklyn, N. Y., U. S., 17th June, 1875, for 5 years: "Apparatus for Producing Artificial Light." (Appareil d'éclairage.)

Claim.—1st. The employment of a tank or fountain for generating an illuminating-gas from the light products of petroleum, which shall on its interior, present a number of evaporating surfaces, 2nd. The use of the pans A, and tubes *a*; 3rd The employment and use of excelsior, or any absorbing material in connection with said pans A, or without them, 4th. The application of the syphon principle in drawing the gas from the top of the fountain or can, thus rendering it impossible for the liquid to flow or to reach the burner

No. 4869. ABRAHAM CRABTREE, Backup, Eng., 17th June, 1875, for 5 years: "Middlings Separator." (Épurateur des gruaux.)

Claim.—The reciprocating-carriage *d*, *d*, and revolving brushes *e*, *e*, actuated by an arm *e*, *e*, face-plate *f*, *f*, endless-bands *g* and *i*, and pulley *h*, (or other equivalent mechanical device producing the same motion.)

No. 4870. AUGUSTUS BEDFORD, Boston, Mass., U. S., 17th June, 1875, for 5 years: "Bell Target." (Cible à sonnerie.)

Claim—The two boards or plates A, B, the rod *b*, with its button *g*, and provided with the head *h*, and the bell *f*, and spring *d*.

No. 4871. JAMES P. SHARP, Birmingham, Eng., 17th June, 1875, for 5 years: "Improvements on the Manufacture of Steel." (Perfectionnements dans la fabrication de l'acier.)

Claim.—Employing a retort or furnace which will enable the iron to be heated as nearly as possible in vacuo, and the application of carbon in such a form and by such means as will ensure its purity and readiness of absorption.

No. 4872. ALLAN CUMMINGS, New York, U. S., 17th June, 1875, for 5 years: "Lip for Sheet Metal Measures." (Bec de mesures liquides.)

Claim.—The pouring-lip *a*, with the extension or body *b*, made from the same piece of sheet-metal, said body *b*, extending within and soldered to the inside of the measure, or forming the measure so as to dispense with a joint at the inner surface or point of junction of the lip and measure.

No. 4873. ROBERT S. VAN ZANDT, Williamsburgh, N. Y., U. S., 17th June, 1875, for 5 years: "Extension Step-ladder." (Échelle à rallonge.)

Claim.—The combination of the long slotted keepers D, the sliding-bolts E, and the long-keepers F, with the parts A, B, of the ladder.

No. 4874. ALEXANDER S. WALBRIDGE, Mystic, Que., 17th June, 1875, for 5 years. "Horse-rake." (Râteau à cheval.)

Claim.—1st. The draw-rod A, or a chain connecting directly with the angle-lever B, so as to draw above the centre-pin D, to keep the teeth loaded, and to draw below the centre-pin D, to unload, 2nd. The catch *c*, to hold the angle-lever B, and the teeth up in travelling from place to place.

No. 4875. GEORGE M. MOWBRAY, North Adams, Mass., U. S., 17th June, 1875, for 5 years: "Frictional Electric Battery." (Batterie électrique à friction.)

Claim.—1st. The arrangement of a frictional exciting-surface between two curved dielectrics, both of these curved dielectrics having on each surface respectively, metal armatures with sufficient marginal insulation to form a condenser, the inside surface of one of them so situated during excitation as to receive electricity from the rubber, while the inside surface of the other curved dielectric simultaneously receives electricity from the collector, and withal the inner surface or armature of each one being in connection with the other surface or armature; 2nd. The accumulator or Leyden-jar, of any preferred shape, built up of sheet hard rubber and metal plates, insulated from external influence by other sheets of hard rubber, and enveloped in pure sheet rubber; 3rd. An electric rubbing cushion, formed of two distinct surfaces, the one resinous to receive the amalgam, and excite electricity, the other filamentous, felted or velvety, to cleanse and polish the exciting surface with the usual oiled or varnished silk flap; 4th. The combination of an exsiccator composed of a material capable of absorbing moisture from the atmosphere packed in a permeable envelope, with a frictional electric machine in a water-tight case; 5th. The oscillating cylinder, independent of the condenser, which is stationary, composed of two discs, each having a slot cut out of its periphery for about sixty degrees, carrying two semi-cylindrical sheets of hard rubber, these being affixed to one of these, the rubbing-cushion and its conducting-knob to the other, a knob projecting through it, this oscillating cylinder admitting of a determinate limited motion from the rotation of the exciting surface, the range of oscillation being determined by the collecting-rod which is stationary and passes through the slots of the discs, serving a triple purpose, viz: first, isolating the condenser from the rubber-collector and lead wires, when it receives a thirty degree reverse-motion, second, discharging the battery through the leading and return wires, when this reverse motion is continued to sixty degrees of a circle: and third, conducting the charge from the rubber, and from the exciting surface to the condenser by a forward motion of sixty degrees; 6th. The graduated test-gauge, with sliding or movable standard and connections for terminal wires; 7th. The hard rubber shaft of a frictional electric-machine, with sunken socket for crank; 8th The electric wire-connections between the knobs moving and the fixed knobs of a frictional electric machine, for the purpose of cushioning violent movement; 9th. The combination of a rotating exciting surface, an independent oscillating frame, carrying a rubber, and connecting knob with a stationary collector and a stationary condenser, all enclosed in a water tight case or key.

No. 4876. GEORGE R. PROWSE, Montreal, Que., 17th June, 1875, (Extension of Patent No. 462), for 5 years: "Improvements on Clothes Mangles." (Perfectionnements aux calandres à linge.)

Claim.—The combination of the frame-work *a*, top-pieces *b*, slots *c*, vessel *d*, bottom *e*, top *f*, bar *g*, projections *h*, eyes *i*, side rods *k*, eyes *l*, roller *m*, cross-bar *n*, pipe *o*, flexible-pipe *p*, kettle *q*, safety-valve *r*, swivel-socket *s*, blow through cock *t*, stops *u*.

No. 4877. AMBROSE L. DAVIS, and LEVI A. DAVIS, Port Crane, N. Y., U. S., 18th June, 1875, for 5 years: "Vehicle Spring." (Ressort de voiture.)

Claim.—1st. The combination of the springs F, with the axle A, tongue-bar C, and rear-spring E; 2nd. The combination of blocks K, and clips M, with axle A, and springs.

No. 4878. FREDERICK VAN PATTEN, and EMEROUS D. CLAPP, Auburn, N. Y., U. S., 18th June, 1875, for 5 years: "Improvements on the Manufacture of Fifth Wheels

for Carriages." (Perfectionnements dans la fabrication des ronds d'avant-train de voitures.)

Claim.—The process of forming the lower-half of the fifth-wheels for carriages, by subjecting the blank to operation in the series of dies 1, 2, 3 and 4, so as to form the body and clips either in one piece, or by welding them together.

No. 4879. SIMEON DUCK, Victoria, B. C., 18th June, 1875, for 5 years: "Mortising Machine." (Machine à mortaiser.)

Claim.—1st. The bed A, held in the shaft K; 2nd. The combination of the cog-segment I, and worm-shaft H, with the rocking-shaft K, and frame M, for tilting the bed A; 3rd. The combination of the screw-shaft I_1, and cog-segment I, with the rocking-shaft K, and frame M, for adjusting the bed A, laterally; 4th. A tilting bed A, having a longitudinal sliding-frame N, and adjustable-heads B, B, for holding the material; 5th. In combination with the sliding-frame N, and tilting-bed A, the rack-bar J, and cog-wheel O, for operating the frame longitudinally; 6th. The adjustable-head provided with a rotary-chuck C, and spring-pin D, for holding the material at any desired point of rotation.

No. 4880. FREDERICK VAN PATTEN, and EMEROUS D. CLAPP, Auburn, N. Y., U. S., 18th June, 1875, for 5 years: "Improvements on the Manufacture of Fifth Wheels for Carriages." (Perfectionnements dans la fabrication des ronds d'avant-train de voitures.)

Claim.— The process of forming the upper half of fifth-wheels for carriages, by subjecting the blank to operation in the series of dies 1, 1, 2, 2, and 3, 3, so as to form the body and lug-ends either in one piece or by welding them together.

No. 4881. FREDERICK H. DATE, Niagara, Ont., and FREDERICK H. EICHBAUM, Detroit, Mich., U. S., 18th June, 1875, for 5 years: "Gas Retort." (Cornue à gaz.)

Claim.—1st. The mixing and decomposing retort K, L; 2nd. The combination of one or more retorts for distillation with a retort for mixing and decomposing gases, the last named retort being connected with the former, 3rd. The combination with the retorts A, B, K, and L, of the stand-pipes E, E, having suitable valves and the branch pipes G, H, having valves; 4th. The retorts L, in combination with the retort K, having stops *e*, and *f*; 5th. Providing the retort L, and K, with lugs *e*, *f*, and stops *g*, *h*; 6th. The chamber I; 7th. The combination of the chamber I, and the retort L; 8th. The pipe O, arranged and combined with the retort L.

No. 4882. EDWIN A. BEERS, DeKalb Centre, Ill., U. S., 18th June, 1875 for 15 years: "Gang Plough." (Cultivateur.)

Claim.—1st. In combination with the plough-beams N and N, and laterally adjustable-blocks K, and K, provided with the slots k_1, and k_1, the tongued and slotted blocks L, l, and l_1, and the clevises M, and M, 2nd. A plough-beam swivelled at its front end within a suitable attachment and locked in position therein, by means of a set-screw; 3rd. In combination with the plough-beam N, hinged at its front end, the bar W, pivoted at one end to the rear end of said beam, jointed at its longitudinal centre, and provided at its rear end with a longitudinal slot *w*, which embraces the pin X, 4th. In combination with the jointed-bars *u*, and W, the shaft Y, provided with the arms y_1, and y_1, and foot-lever y^2, and connected to or with said bars by means of the rods Z, and Z; 5th. In combination with the plough-beams N, and N, the bars A_1, and A_1, secured to or upon said beams, and provided at their inner ends with the interlocking loops a_1, and a_1; 6th. A pole attached to and made laterally adjustable upon the frame of a plough

No. 4883. NELSON E. SMITH, (Administrator for Russell Smith, deceased,) Richford, Vt., U.S., 18th June, 1875, for 5 years: "Milk-cooler." (Réfrigérant à lait.)

Claim.—1st. The milk-pan A, constructed with a rounded and inclined-bottom; 2nd. The pipes D, constructed triangularly in cross-section, and arranged with the apex downward; 3rd. The subdivision of the vertical-tube E, by the central longitudinal partitions F, for forming induction and eduction water-passages connecting with the pipes D.

No. 4884. HENRY RAGOT, Pittsburgh, Pa., U. S., 18th June. 1875, for 5 years: "Improvements on Glass Furnaces." (Perfectionnements aux fourneaux de verre.)

Claim.—1st. A gas generating-furnace having a series of air-flues between its outer and inner walls, and communicating with a chamber over the crown of said generator, whereby the air is heated and commingled with the results of combustion; 2nd. The gas generator A, having air-flues B, C, D, in combination with the gas chamber B^1, of the glass-furnace A^1, whereby heated air is commingled with the results of combustion, prior to entering the fire-chamber C^1; 3rd. The furnace A^1, having its fire-chamber C^1, surrounded with a gas-chamber B^1, communicating with a gas-generator; 4th. The exit-flues *a* and *a*, provided with valves *m*, whereby the current of heated-air through the air-flues and the flow of gas from the generator may be regulated so as to secure the desired union of heated air and gas; 5th. The furnace A^1, having a pot bench D^1, and a central fire-chamber C, communicating with a gas or heated-furnace; 6th. A gas generator or a heating-furnace, having an air chamber or chambers between its outer and inner walls for the purpose of heating air, which is subsequently commingled with the gas generated by a generator or furnace.

No. 4885. CHARLES W. HUNT, West New Brighton, N. Y., U. S., 18th June, 1875, for 5 years: "Automatic Railway." (Chemin de fer automatique.)

Claim.—1st. In combination with the rope B, car W, and track, the secondary-track d^2, wheel *d*, and weight *g*; 2nd. The weighted frame *g*, in combination with the track d^2; 3rd. The double grooved and flanged wheel *d*; 4th. The arrangement of the rope B, over the wheel *d*; 5th. The double drum *t*, *u*, rope e^1, weight g^1, and rope B; 6th. The cam *m*, in combination with the car W, rope B, and block *i*; 7th. The adjustable block *i*, arranged in advance of the cam *m*; 8th. The yoke-piece 30, attached to the axis of the wheel *d*, and having a ring in the apex for the rope B, to pass and guide the wheel in a true line with the track d^2.

No. 4886. PHILEMON WRIGHT, Ottawa, Ont., 18th June, 1875, for 5 years: "Backband for Cart Saddles." (Dossière de sellettes de travail.)

Claim.—The combination of the parts A, C, C, and the ring or dee marked B.

No. 4887. GEORGE H. REYNOLDS, New York, U.S., 18th June, 1875, for 10 years: "Improvements on Rock Drilling Machines." (Perfectionnements aux machines à forer le roc.)

Claim.—1st The combination with a stuffing-box formed on the cylinder-head, through which the drill or tool carrying portion of the piston-rod passes, of the duplicate sliding-bushings P, O, and the interposed india-rubber, or other elastic packing N, around the piston-rod: 2nd In combination with the elastic packing N, and the sliding-bushings P, Q, the follower R, applied to press against the outer bushing for the purpose of adjusting the compression of the packing, and affording facility for removal or renewal thereof; 3rd. The sets of induction and eduction passages arranged as shown in the cylinder, in combination with a recessed piston, a cushion to soften the shock when the piston strikes the cylinder end, and with means for rotating the piston and its attachments; 4th. The disc C^1, resting on the seat As, and supporting the twisted rod C, in combination with the passage a_1, admitting steam at a constant pressure thereto, and with the reciprocating-piston and drill: 5th The channeled-guides A_4, serving as reinforcing-ribs on the cylinder, and as guides for the cylinder, in combination with the longitudinal-bolts E; 6th. In combination with the bolts E, extending from the lower end, and taking hold of the flange of the cylinder, the head A_2, formed with recesses adapted to take hold of, and confine the nuts *e*, on said bolts; 7th. The frame or cradle G, made in two separate pieces, and adapted to be pinched or clamped by the legs; 8th. The bolt K, performing the double office of holding the legs I, J, J, and supporting the two sides of the cradle G; 9th. The leg I, I^1, performing a double function: first, as one of the legs of the tripod and secondly, as a support for the cheeks of the frame G: 10th The legs I, J, J, fitted rigidly upon the bolt K, in combination with a suitable supporting and guiding-frame G, and with one or more legs I, adjustable thereto; 11th. The combination of the legs J, J, and leg I, with the enclosed parts of the cradle G, and with the bolt K, and tightening-means L, the legs having conical bearings, and entering conical recesses in the faces of the cradle; 12th The duplicate points n_1, n_2, formed solid on the legs of a rock-drill support adapted to allow of reversing in position; 13th. The tripod leg *n*, *z*, in combination with the weight W, having grooves adapted to match thereon; 14th. A tripod leg, the outer-end carrying the weight, and allowing the leg to be lengthened and shortened, while the weight remains undisturbed; 15th. The rock-drill tripod with telescopic legs arranged with the tubular or female part, outermost, and provided with means for attaching steadying weights thereon.

No. 4888. LESSER MUNRO, DUNCAN MCARTHUR, WILLIAM H. CHALKER, Ottawa, and GEORGE MACGUIRE, Montreal, (Assignees of H. J. Hotchkiss), 24th June, 1875, for 5 years: "Spooler and Pin-cushion Combined." (Pelotte-porte-bobines.)

Claim.—The stand A, stack B, stars C, C, having arms D, and brackets or roses E, the spool-holders F, and vase G, in combination with a pin-cushion H.

No. 4889. JACOB E. BUERK, Boston, Mass., U. S., 24th June, 1875, for 5 years: "Watchman's Time Detector." (Indicateur de quart.)

Claim.—The combination of a series of spring-points *d*, with a stationary-index D, dial E, and clock-movement A.

No. 4890. WATSON P. WOODFIELD, Siloam, Ont., 24th June, 1875, for 5 years: "Improvements in Circular Saw Carriages." (Perfectionnements aux tables mobiles de scieries à scies rondes.)

Claim—1st. The head-block A, having an upper-movable sub-block A¹; 2nd. The dog or hook F, pivoted to the sliding-head D, in combination with the inclined plane G; 3rd. The friction pulleys I, in combination with the rail or girder H, and head-blocks A.

No. 4891. EMELINE SEAMAN, Andover, N. Y., U. S., (widow and administratrix of John Seaman, deceased), 24th June, 1875, for 5 years: "Window Blind." (Jalousie.)

Claim.—1st. The combination with the head-bearing A, slats B, and tapes C, C¹, provided with a series of openings *d*, of the hoisting cords *e*, *e*¹, and hooks *g*, whereby any desired lower portion of the blind may be closed while the remaining upper-portion is left open; 2nd. The combination with the tapes C, C¹, and connecting-band *c*, of the slats B, provided with recesses *l*; 3rd. The combination with the slats B, of the endless tapes C, C¹, and connecting-band *c*, secured together by eyelets *d d*¹.

No. 4892. JOHN S. WALLACE and EDWARD TUCKER, Belfast, Ireland, 24th June, 1875, for 5 years: "Fire Extinguisher." (Extincteur d'incendie.)

Claim.—1st. Protecting buildings, ships, iron-safes, and other places and receptacles from fire, by apparatus which on the outbreak of fire will be caused by the consequent elevation of the temperature to effect the combination of the materials named or other suitable materials, and thereby liberate or evolve carbonic acid-gas; 2nd. The employment of a connection or apparatus consisting of the parts *f*, *g*, *h*, or their equivalents, or other devices which by a slight elevation of the surrounding temperature is fused, broken, or otherwise caused to release a portion of the said apparatus, and thereby effect the liberation or evolution of the carbonic-acid-gas; 3rd. An apparatus consisting of two vessels *a*, *b*, each of which vessels contains one of the materials or ingredients required for generating the carbonic-acid-gas and one of which is suspended or supported above the other, and broken by the fall of the weight *c*, or otherwise caused to mingle its contents with those of the other vessel by the fusing or breaking of the connection *e*; 4th. The modification of the said apparatus consisting of the parts *a*, *b*, *h*, or their equivalents; 5th. The modification of the invention consisting of the parts *h*, *e*, *l*, *b*, *k*, *k*¹, or their equivalents; 6th. The apparatus of compounds consisting of charcoal or other suitable carbonaceous matter and nitrate of potash or the equivalent thereof with or without lime or sulphur formed into blocks or pieces and provided with means whereby the same will be ignited by the elevation of the temperature or otherwise; 7th. The arrangement of the apparatus or compound in combination with a string-cord or other connection which may be separated or destroyed either by a rise of temperature, or by actual contact of the fire or flame; 8th. The employment of electricity for causing the combination of combustion of the gas generating-materials; 9th. The employment of a fuse for igniting or combining the gas generating materials; 10th. The employment of springs, levers, triggers or other devices to be operated by hand for causing the combustion or ignition of the gas generating-materials; 11th. The employment of springs, levers, triggers or other devices to be operated by hand for causing the combustion or ignition of the gas-generating-materials.

No. 4893. LYMAN B. STILSON, Minneapolis, Min., U. S., 24th June, 1875, for 5 years: "Car-Truck." (Train de wagon.)

Claim.—1st. The bars G, G, having flanges K, arranged and applied to a car-truck; 2nd. The runners M, M, connecting the bars G, G; 3rd. The longitudinal-bands I, J, secured to the front and rear ends of the truck for bearing the end of the bars G, G; 4th. The slotted-standards H, bolted to the car-truck and to the bands I, J, for supporting the ends of the bars G, G; 5th. The rods O, O, bolted to the car-truck and to the bars G, G, centrally for staying the said bars; 6th. The bars N, N, bifurcated at the ends and bent around the axle, and under and between the bars G, G.

No. 4894. EDWARD F. CHAPIN, and EDWIN O. PRESBY, Boston, Mass., (Assignees of H. J. Warren) 24th June, 1875, for 5 years: "Lamp Extinguisher." (*Eteignoir de lampe.*)

Claim.—The weight B, with its vertical-rod *d*, in combination with the sleeve *c*, sliding upon the wick-tube; The weight B, with its vertical rod *d*, in combination with the lever *e*, for operating the sleeve *c*, upon the wick-tube.

No. 4895. ORESTES PAGAN, THOMAS L. RICART, and MIGUEL A. MONTEJO, Philadelphia, Pa., U. S., 24th June, 1875, for 5 years: "Improvements on Boiler Tube Expanders." (Perfectionnements aux appareils à dilater les tubes des chaudières à vapeur.)

Claim.—1st. The combination of the stock A, threaded-mandrel B, and sliding-clutch F; 2nd. The solid roller head G, having slots a_2, for the reception of the rollers H, from its inner end and for plugs to retain the same in place; 3rd. In combination with the head G, the rollers H, working in the slots a_2 therein, and the plugs *h*, for holding said rollers in place; 4th. In combination with the stock A, having the graduated grooves a^2, a_3, a_4, the band I, provided with a stud *i*, and operating to govern the exposure of the expanding-rollers; 5th. The mandrel B, of a boiler tube expander, made in two parts *b* and b_1, so as to permit the removal of the tapered part; 6th. A screw threaded mandrel of a boiler expanding tool having its smooth part connected with the threaded part by a swivel or equivalent connection so as to present an anti-friction surface to the expanding rollers; 7th. The novel combination of the stock A, mandrel B, clutch F, head G, rollers H and band I.

No. 4896. JOHN M. MUNRO, and ARTHUR P. JOHNSON, Ottawa, Ont., 26th June, 1875, for 5 years: "Improvements on Horse Hoes." (Perfectionnements aux Houes à cheval.)

Claim.—1st. The mould-boards A, secured adjustably to the *tongue C, by cross-bars B, and rods E*, 2nd. *The auxiliary-rods* G, adjustably connected to the boards A, and tongue C; 3rd. Providing the boards A, with tail-pieces I; 4th. The handles J, fixed to the draft-tongue C, for governing the machine.

No. 4897. FRANCIS ROURK, Montreal, Que., 28th June, 1875, for 5 years: "Apparatus for the Ventilation of Sewers." (Appareil de ventilation des égoûts.)

Claim.—The combination of the exhauster A, connected to the sewer B, and to the furnace C.

No. 4898. NATHAN CAMPBELL, Rochester, N. Y., U. S., 26th June, 1875, for 5 years: "Curtain Fixture." (Ajustage de rideaux.)

Claim.—1st. The bracket A, and detachable-lever B, the latter located between the foot *a*, and socket-bearing *b*, of the bracket, and provided with the loose joint connection *m*, *p*, whereby the lever retains its place against end thrust, and lateral displacement, and is made effective in its connection with the ratchet-wheel; 2nd. The bracket A, constructed with the foot *a*, and socket-bearing *b*, and the lever B, constructed with the arm *c*, pawl F, and arm K, the connection between said parts being made by the bit *m*, and key-hole *p*, located between the foot and socket-bearing of the bracket; 3rd. The bracket A, with key-hole *p*, constructed with the sharp edge-bearing *u*, and projection *w*, and with the bosses *r*, *s*, having their seats *r*, *s*¹, situated in the same plane with the face of the bracket, for the connection and proper working of the bit of the lever; 4th. The lever B, constructed with the stop *h*, on one side and curved-end *g*, with shield g^1, for protecting the ratchet on the other side; 5th. The bosses *z*, *z*, formed upon the back-side of the bracket for the purpose of preventing contact of the bit *m*, with the wood in its turning movements; 6th. The ratchet-wheel C, having its teeth constructed with the rounded-corners *e*, and flattened edges *j*.

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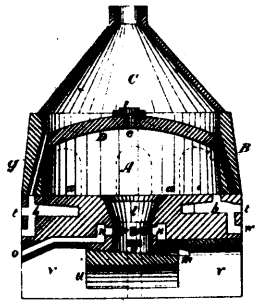

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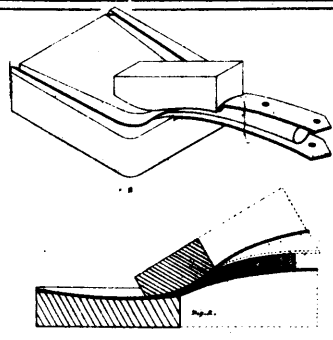

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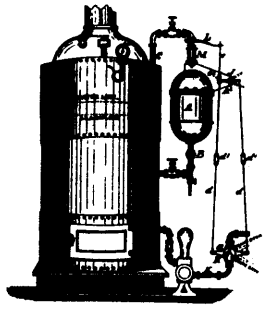

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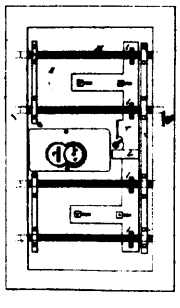

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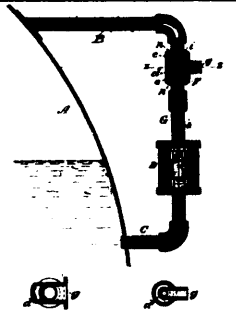

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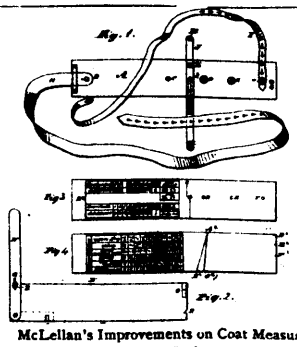

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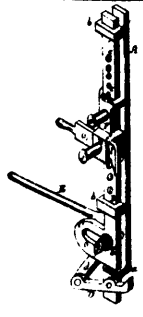

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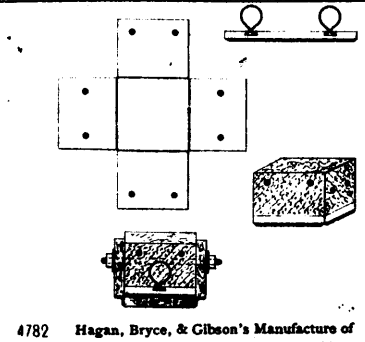

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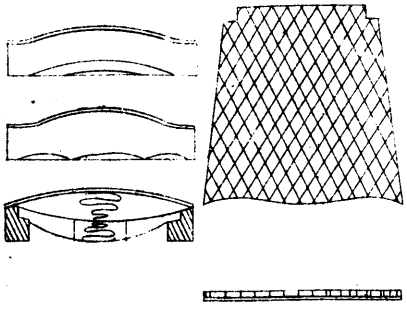

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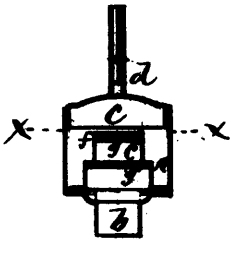

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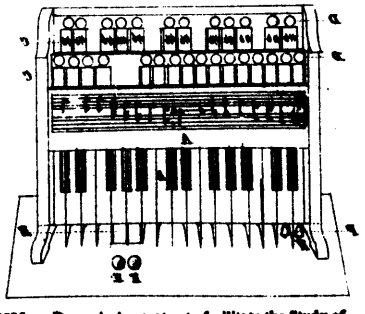

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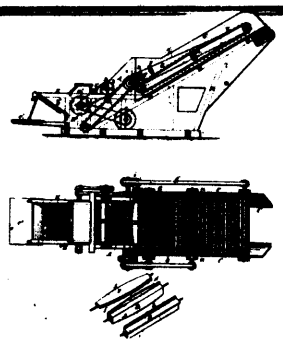

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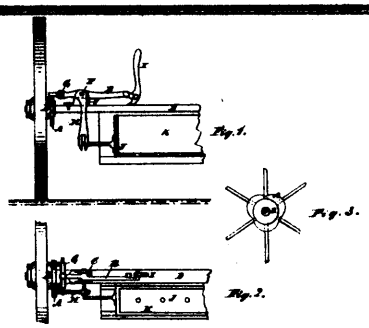

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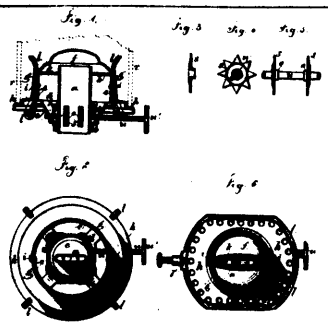

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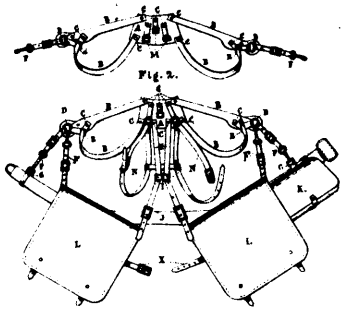

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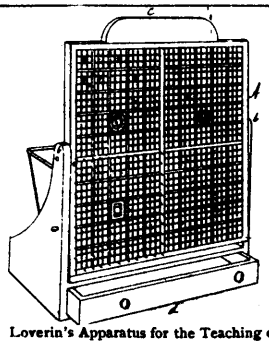

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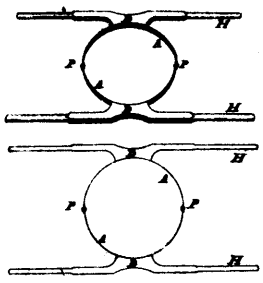

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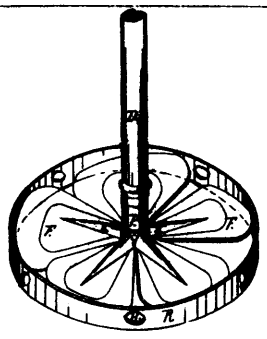

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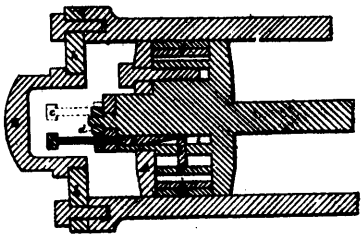

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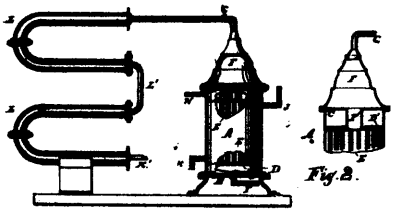

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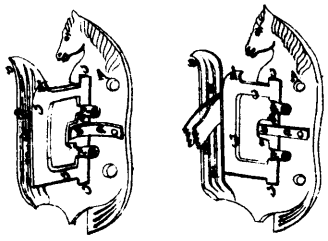

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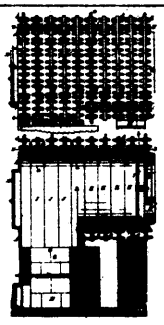

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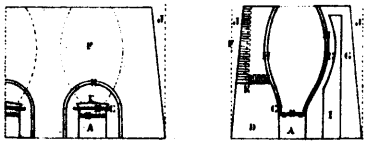

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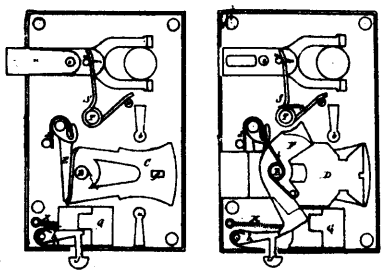

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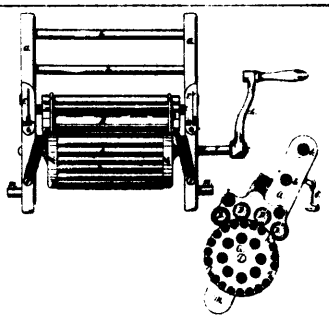

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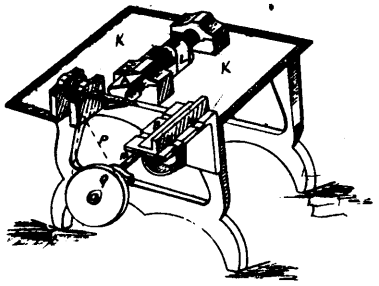

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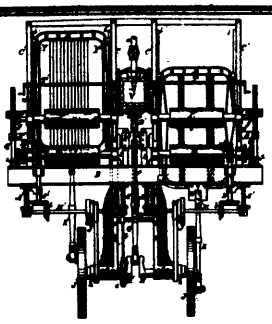

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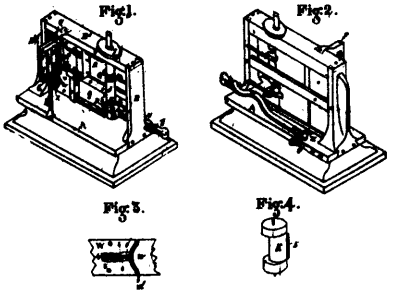

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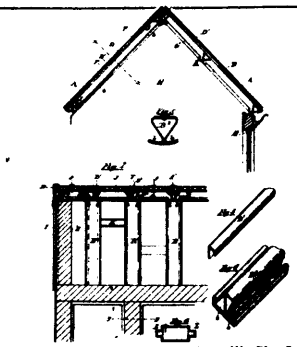

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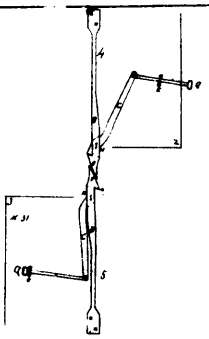

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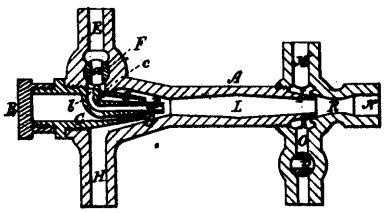

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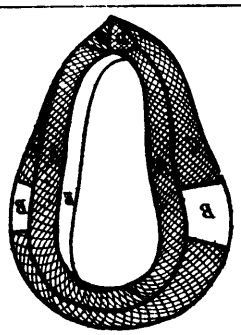
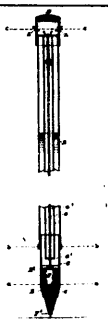
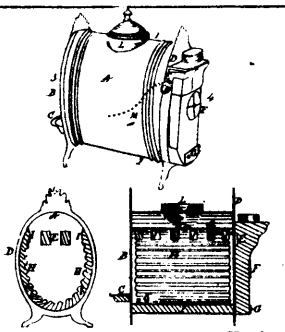


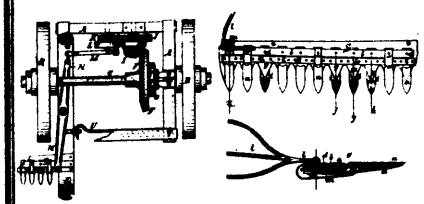
4808 Hardy's Improvements on Horse Collars.



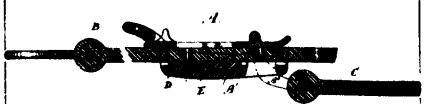
4809 MacKinnon's Combined Pen and Ink Holder.



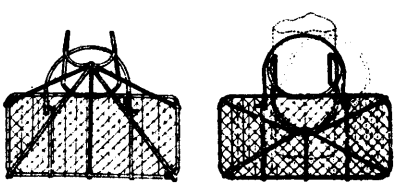
4810 Buck & Buck's Improvements on Heating Stoves.



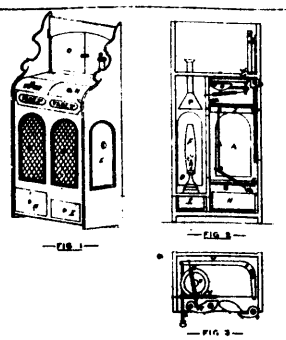
4811 Atwood's Mowing Machine.



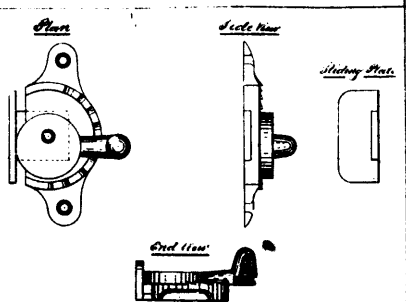
4812 Challenger's Trace Buckle.



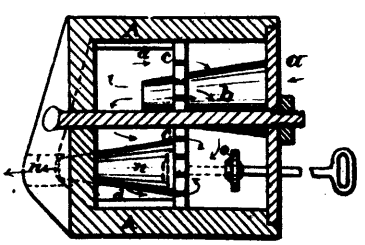
4813 Colby's Combined Stove Shelf and Bread Toaster.



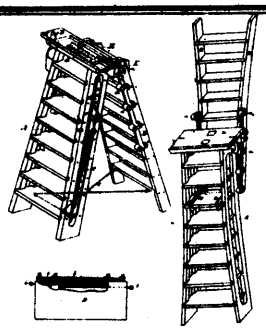
4814 Maltus' Street Car Fare Box.



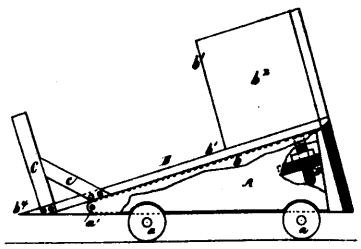
4815 Stauffer & Carroll's Sash-fastener.



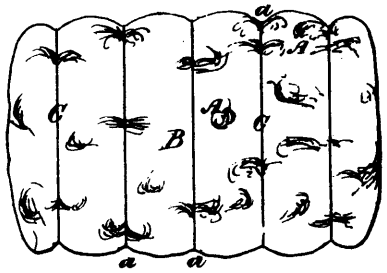
4816 Taylor & Sutherland's Blacksmith's Tuyere.



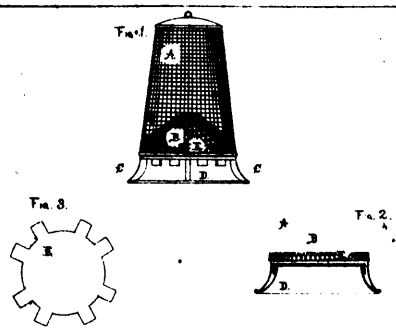
4818 Isaacs & Halliday's Improvements on Step Ladders.



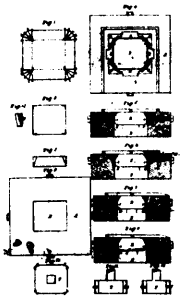
4819 Foster's Railroad Snow-plough.



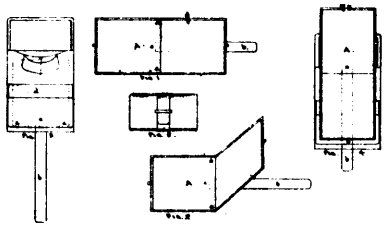
4820 Ackerman's Improvements in the Preparation of Fertilizers.



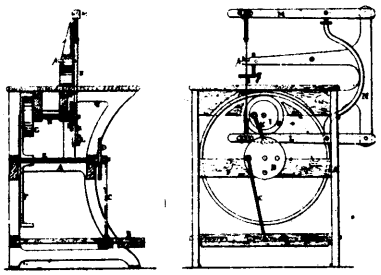
4821 Roe's Fly-Traps.



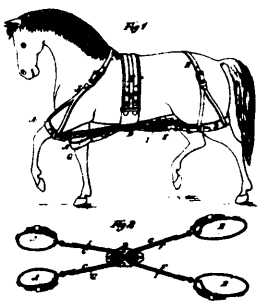
4822 Martyn's Improvements in the Manufacture of Boxes and Pans.



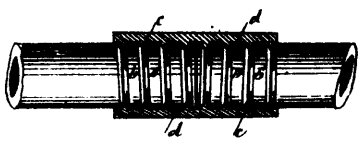
4824 Sale's Improvements on Wallets, Pocket Books or Purses.



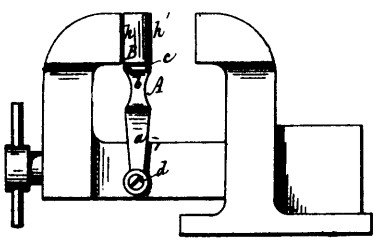
4825 Westman's Improvements on Scroll Saw.



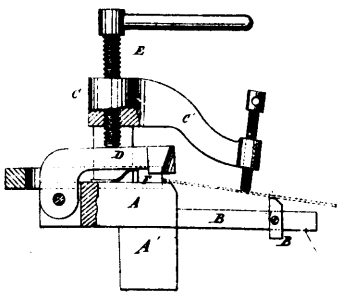
4826 Walling Apparatus for Breaking Horses.



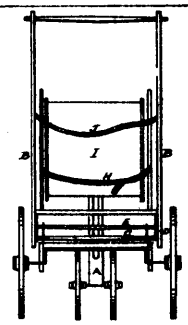
4827 Herbert's Plumber's Joint.



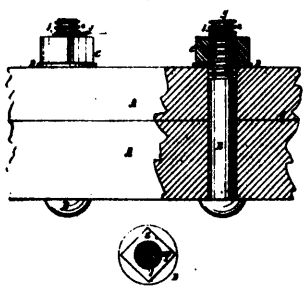
4828 Caswell's Clamping Attachment for Vices.



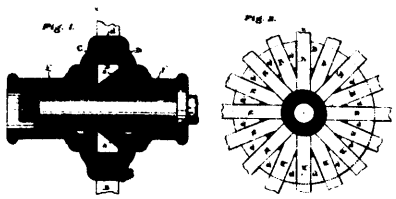
4829 Bartlett's Improvement on Saw Sets.



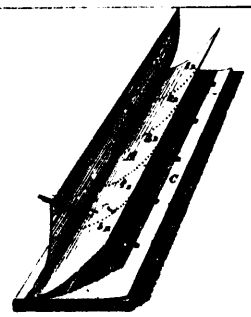
4830 Haney's Improvements on Children's Carriages.



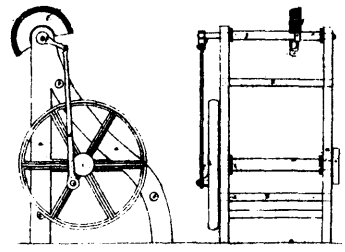
4831 Hutchinson's Nut Lock.



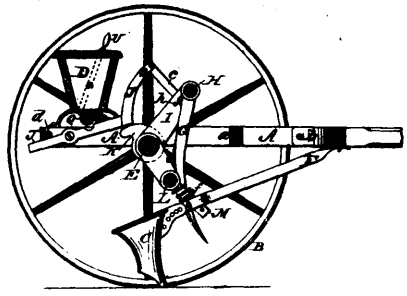
4832 Nutting's Improvements on Wheel-hubs.



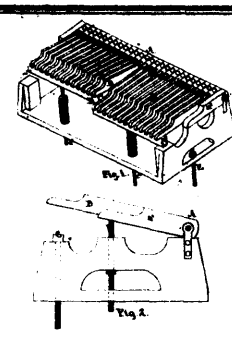
4833 Fingland & Draper's Saleman's Check-book.



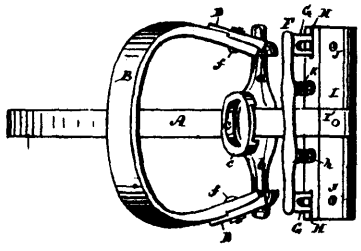
4834 Laliberté's Machine for Trimming Boot



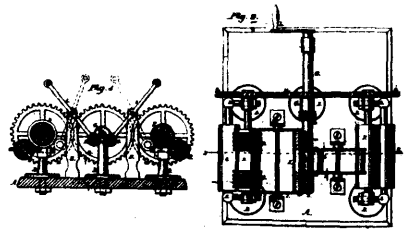
4835 Baker's Improvements on Grain Drilling and Seeding Machines.



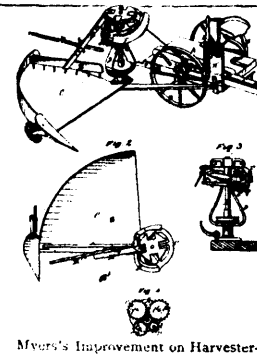
4836 McCammon's Improvement on Piano-Fortes.



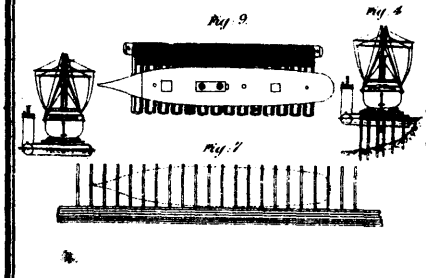
4837 Gustin's Improvements on Animal Pokes.



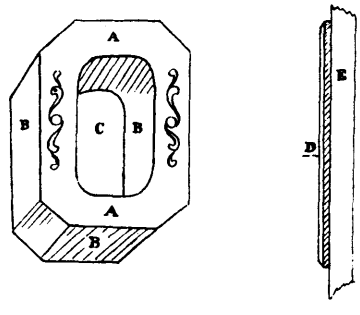
4838 Kitzmiller & Smith's Brooom Handle Painting Machine.



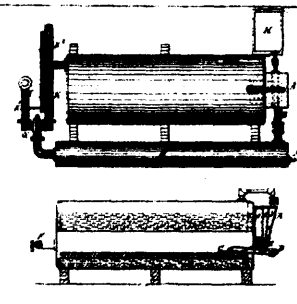
4839 Myers's Improvement on Harvester-Rakes.



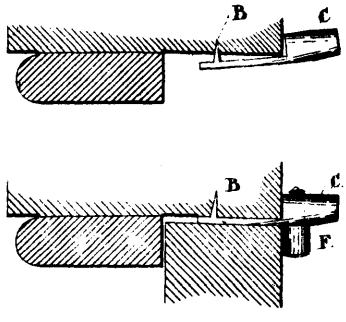
4840 Clark & Standfield's Improvements on Floating Docks and Pontoons.



4842 Eggington's Coloured Glass Relief Letters.

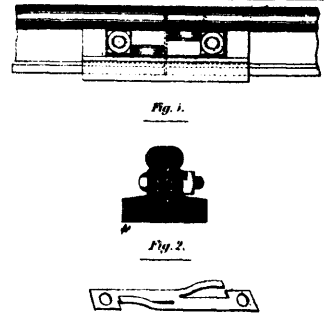


4843 Ramsden's Method of and Apparatus for Securing the Combustion of Fuel and for the Utilization of Gases thereof.

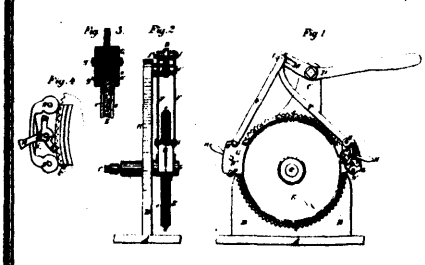


4844 Murdock's Snubber or Locket Door-Fastening.

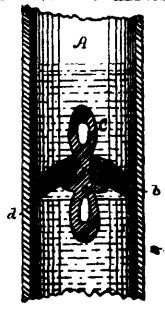
4845 Foster's Hame Fastening.



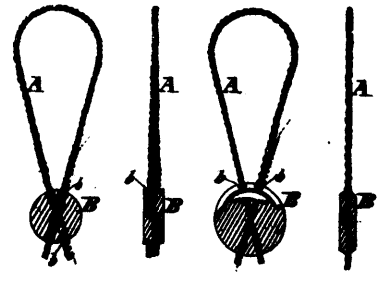
4846 Taylor & Silker's Rail-Joint and Nut-Lock.



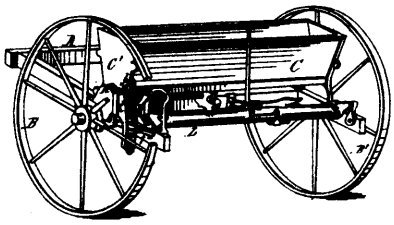
4847 Bond & Shoff's Pawl and Ratchet Mechanism.



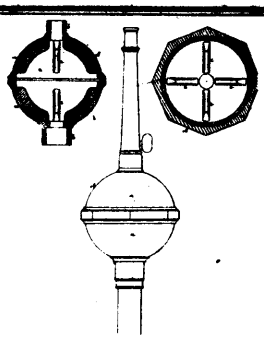
4848 Barker's Chain-Pump Bucket.



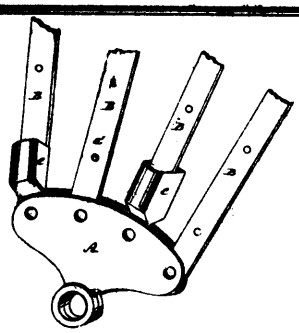
4849 Brooks's Improvements on Metallic Seals.



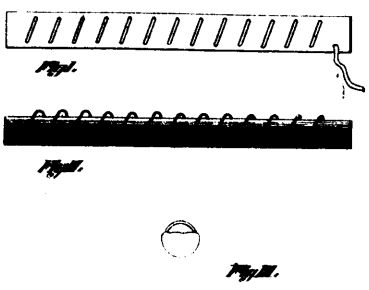
4850 Patrie & Bogle's Seeding Machine.



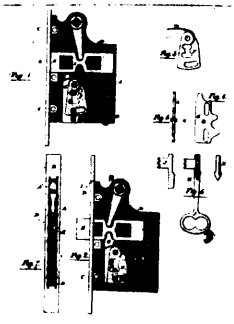
4852 Wheeler's Fertilizer Holder and Distributor.



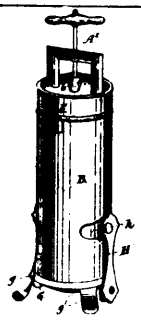
4853 Stockwell's Improvement on Carriage Tops.



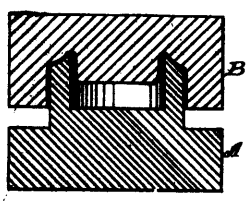
4854 Donoghue & Crompton's Anti-Incrustation Battery for Boilers.



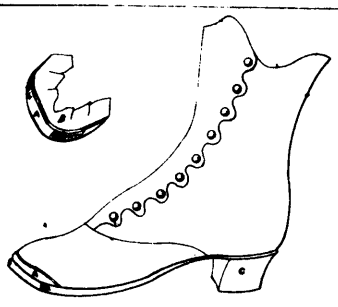
4855 Griffith's Improvements in Locks.



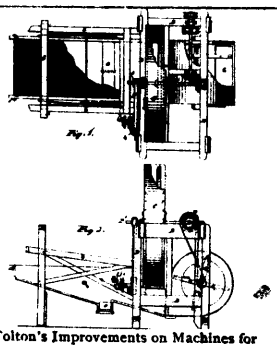
4856 Redheffer's Combined Egg-Beater, Churn and Ice-Cream Freezer.



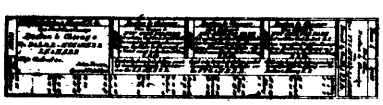
4857 Taplin's Mode of Forming Sheet Metal Screw Threaded Collars.



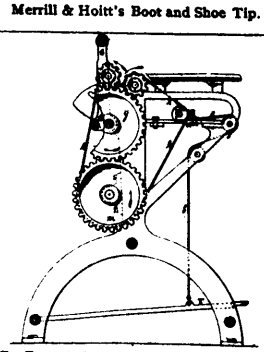
4858 Merrill & Holtt's Boot and Shoe Tip.



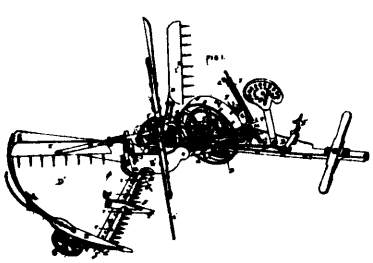
4859 Tolton's Improvements on Machines for Threshing Peas.



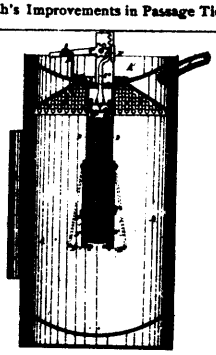
4861 Brush's Improvements in Passage Tickets.



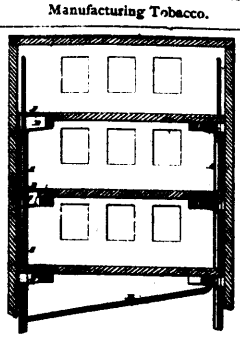
4862 De Forest's Improvements on Machines for Manufacturing Tobacco.



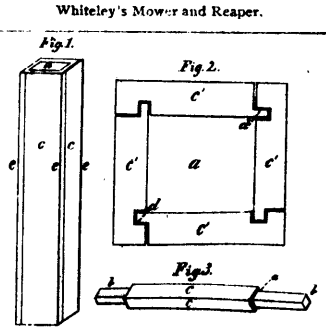
4863 Whiteley's Mower and Reaper.



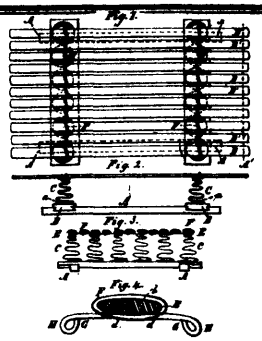
4864 Topley's Fire Extinguisher.



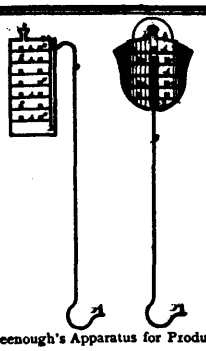
4865 Morrell's Floodway for Warehouses, &c.



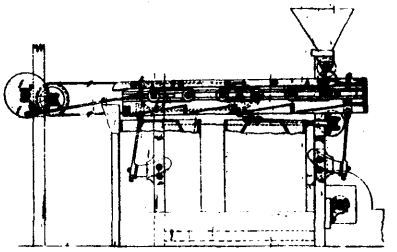
4866 Longmore's Matting Roller.



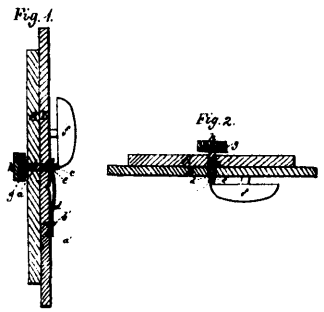
4867 Dodge's Improvements in Spring Beds.



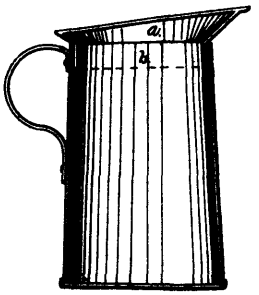
4868 Greenough's Apparatus for Producing Artificial Light.



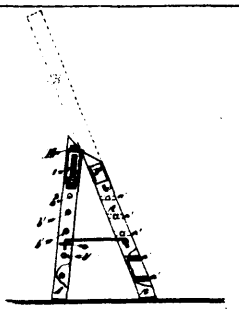
4869 Crabtree's Middlings-Separator.



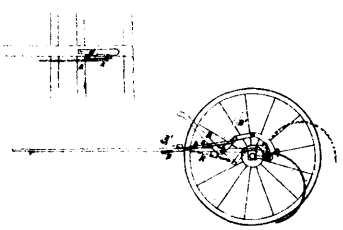
4870 Bedford's Bell Target.



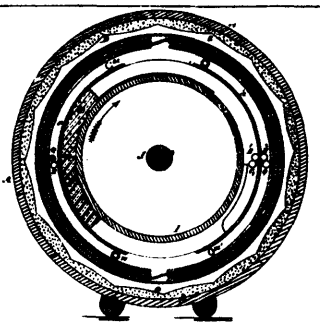
4872 Cummings's Lip for Sheet Metal Measures.



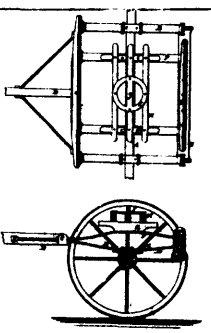
4873 Van Zandt's Extension Step-ladder.



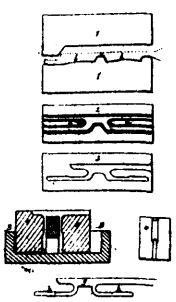
4874 Walbridge's Horse-rake.



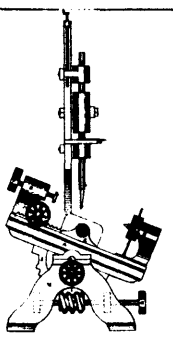
4875 Mowbray's Frictional Electric Battery.



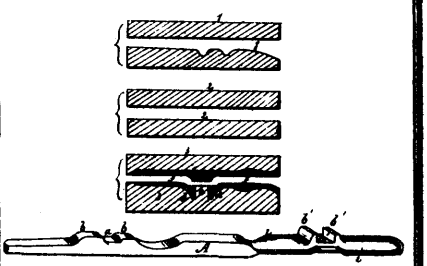
4877 Davis & Davis's Vehicle Spring.



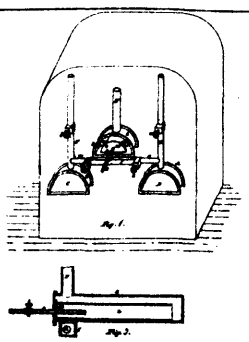
4878 Van Patten & Clapp's Improvements on the Manufacture of Fifth Wheels for Carriages.



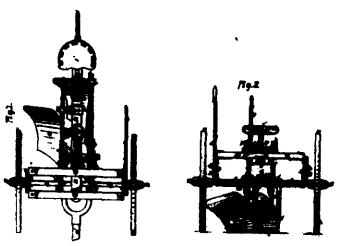
4879 Duck's Mortising Machine.



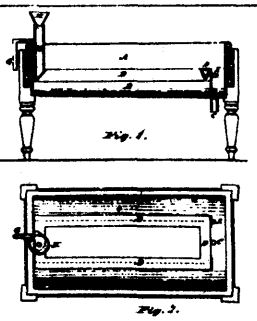
4880 Patten & Clapp's Improvements on the Manufacture of Fifth Wheels for Carriages.



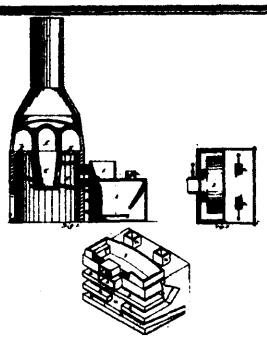
4881 Date & Eichbaum's Gas Retort.



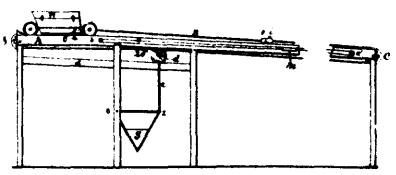
4882 Beers's Gang Plough.



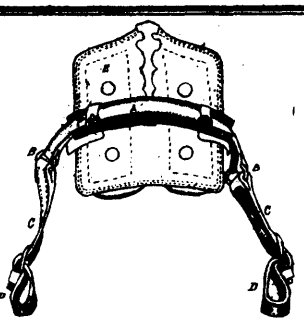
4883 Smith's Milk-cooler.



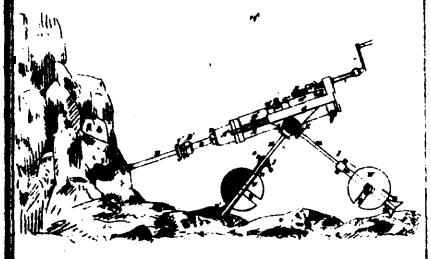
4884 Ragot's Improvements on Glass Furnaces



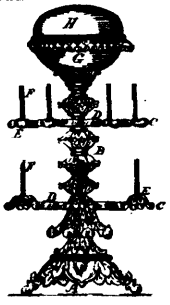
4885 Hunt's Automatic Railway.



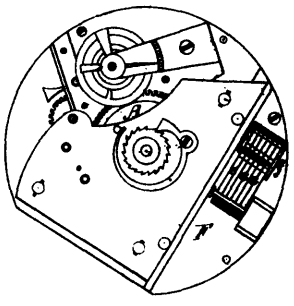
4886 Wright's Backband for Cart Saddles.



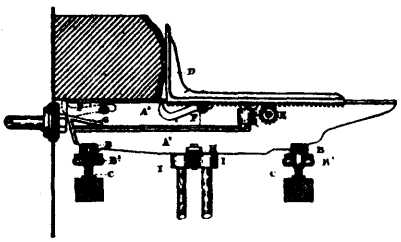
4887 Reynold's Improvements on Rock Drilling Machines.



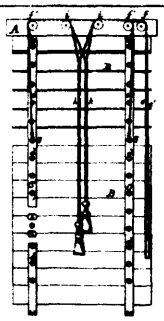
4888 Hotchkiss's Spooler and Pin-cushion Combined.



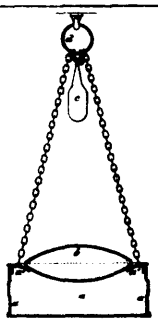
4889 Buerk's Watchman's Time Detector.



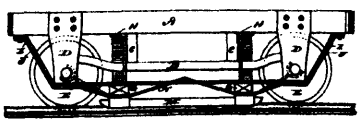
4890 Widdifield's Improvements in Circular Saw Carriages.



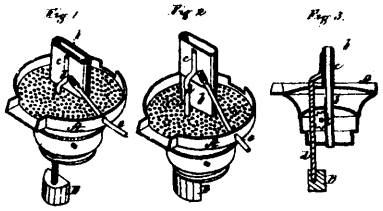
4891 S. ıman's Window Blind.



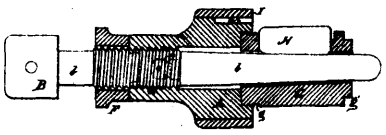
4892 Wallace & Tucker's Fire Extinguisher.



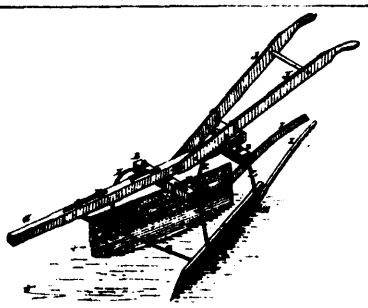
4893 Stilson's Car-Truck.



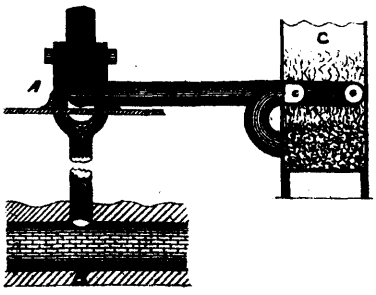
4894 Warren's Lamp Extinguisher.



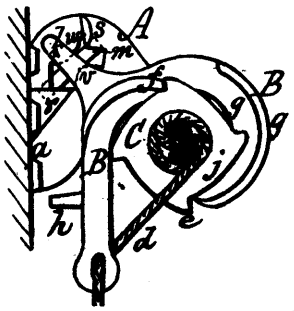
4895 Pagan, Ricart, & Montejo's Improvements on Boiler Tube Expanders.



4896 Munro & Johnson's Improvements on Horse Hoes.



4897 Rourk's Apparatus for the Ventilation of Sewers.



4898 Campbell's Curtain Fixture.