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CONTENTS.

INVENTIONS PATENTED,	51
INDEX OF INVENTIONS,	60
INDEX OF PATENTERS,	61
ILLUSTRATIONS,	63

INVENTIONS PATENTED.

No. 3558. ERASTUS H. MURRAY, St Paul, Min., U. S., 15th June, 1874, for 10 years: "Granulated Wheat. (Grauau de Blé.)"

Claim.—1st. Cracked wheat; possessing the uniform granular character as set forth. 2nd. The process of preparing the granulated wheat by first cracking and bolting, and then scouring and fanning the same, as described.

No. 3559. CHARLES C. BARNES, Sackville, N. B., 15th June 1874, for 5 years: "Rotary Pump." (Pompe Rotatoire.)

Claim.—The cylindrical casing A, having a segmental enlargement B, and inlet and outlet apertures, and the wheel D, having leaves G sliding diametrically by the axial rotation of the wheel with the casing as describe.

No. 3560. JOSEPH D. PATTON, Treverton, Pen., U. S., 15th June, 1874, for 5 years: "Apparatus for Manufacturing Gas." (Appareil de Fabrication de gaz.)

Claim.—1st. A retort or retorts for gas making purposes protected wholly or in part from the direct heat of the furnace, in combination, with one or more retorts wholly exposed to the heat, the said protected retorts being wholly or partly enclosed by the masonry, or partly by the same and partly by other retorts which are partly enclosed by the masonry, all as specified; 2nd. A retort or retorts so placed or arranged in the furnace that it may be wholly or partly imbedded in the fuel for receiving the direct heat of the same, and connected with other retort or retorts, placed above or otherwise, out of the fuel; 3rd. The retort B₂ having the rear end in combustion chamber or furnace A₃, with a second portion partly, and a third portion wholly imbedded in masonry, the oil being admitted at front as described, so that the oil will be gradually heated and finally evaporated before leaving the retort, in the manner set forth, 4th. The combination with tank F₂ of the condenser E₂ having a longitudinal partition and provided with a gas exit at the top and a liquid exit at the bottom as specified; 5th. A water heater G₂ and a gas burner J₂ in combination with the water tank of the condenser in the manner described to protect it from freezing, as specified, 6th. A cleaner for cleaning the retort when closed consisting of a rod having a disc or other suitable scraper attached and passing through a stuffing box at one end of the retort.

No. 3561. HARVEY L. LOWMAN, Birmingham, Ct., U. S., 15th June, 1874, for 15 years: "Manufacture of Scythes." (Fabrication des Faulx.)

Claim.—The blade A with the tang or tubular socket made complete from a single blank of sheet steel, as specified.

No. 3562. THOMAS STEERS, Jr., Ottawa, Ont., 15th June, 1874, for 5 years: "Curry Comb." (Une étrille.)

Claim.—The combination of the combs, A, having loops B passing through the back plate D, and receiving the prongs E in the manner set forth, for securing the combs A removably as described.

No. 3563. JOSEPH WOODHAMS, Dorr, Mich, U. S., (Assignee of C. B. Turner,) 15th June, 1874, for 15 years: "Steam Valve." (Soupape à vapeur.)

Claim.—The combination of the valve F, constructed as described, with the ports C, D, and exhaust E, as described.

No. 3564. RICHARD M. WANZER, Hamilton, Ont., (Assignee of J. F. Chamberlain,) 15th June, 1874, for 5 years: "Portable Furnace." (Fourneau portatif.)

Claim.—A portable furnace C, provided with a down draft flue I, arranged with a cylindrical fire-box D,—constructed so that the draft will enter the draft opening F and pass up through the grate bars and fire box D, and down the flue I, in combination with or without any open top cooking or heating stove.

No. 3565. THOMAS MILLER, New York, U. S., 15th June, 1874, for 5 years: "Oil Cabinet." (Buffet à huile.)

Claim.—1st. The improved oil cabinet made in two detachable parts A, B, as described, the base or part A being composed of metal and the part B of wood, having a metal sink D, a pump E, and waste receiving pipe F, the whole being combined and arranged as described; 2nd. An oil cabinet formed in two parts, as described, and provided with a sink D and tank A, and waste receiving pipe F, the vessel G, applied to the waste pipe, in the manner set forth.

No. 3566. WILLIAM J. CLOKEY, Belleville, Ont., 15th June, 1874, for 5 years: "Thrashing Machine Safety Gear." (Engrenage de sûreté de machine à battre.)

Claim.—The combination of the frame C, gear case H, and the arrangement of the bevel and internal gears G and G', as set forth.

No. 3567. DENNIS P. SHARP, Ithaca, N. Y., U. S., 15th June, 1874, for 5 years: "Horse Rake." (Râteau à cheval.)

Claim.—The flexible straps L, L, levers M M, bearings n, n, cords N N, and shaft P, with cranks u u and treadle K, for connecting the axle with the hubs of the wheels, as specified.

No. 3568. WILLIAM R. MACAULEY, Hamilton, Ont., 15th June, 1874, for 5 years: "Binding Painter's Brushes." (Liage des pinceaux.)

Claim.—A binder or belt to be fixed around the butt of the paint brush for the purpose of binding the hairs, and which belt or binder is held down in its place by means of attachments with the handle of the brush.

No. 3569. JOHN M. ALLEN, Marion, Mass., U. S., 15th June, 1874, for 5 years: "Process of making Paper." (Procédé de fabrication de papier.)

Claim.—The process of preparing pulp and paper, as described. 2nd The paper or pulp when the gallsotannic compounds are wholly or nearly removed, as described.

No. 3570. JAMES McNABB, Widder Station, Ont., 15th June 1874, for 5 years: "Automatic Car-Coupling." (Attelage automatique de wagons.)

Claim.—The combination of a draw-bar A, having a flaring buffer mouth, as described, and hooked coupler B, pivoted within its cavity or socket, and spring C, to give it a lateral movement, lever or wiper D, shaft E and arm c, all operating as set forth.

No. 3571. HENRY H. WARREN, Bridgewater, Ont., 15th June, 1874, for 5 years: "Animal Trap." (Piège.)

Claim.—The combination of the hinge D, knuckle F, and shank E, as set forth.

No. 3572. ALBERT T. NICHOLS, Williamsport, Penn., U. S., 15th June, 1874, for 10 years: "Machine for Edging Lumber." (Machine à dé-dosser le bois de sciage.)

Claim.—The combination with the moveable guide or gauge D, of the bar G, connection H, elbow-lever I, and arm J; 2nd. The combination with the moveable saw U, of the bar G, with hub b, sliding upon the counter shaft K, the connection H, and elbow-lever I; 3rd. The fork G, made in two pieces united together by means of a set-screw e, in combination with the saw U, having a circumferentially grooved hub, and the arm G; 4th. The arrangement with a saw-frame of the longitudinally grooved and end-wise-moveable saw arbour B, having adjustable saws c, c, and provided with a shoulder i, at one end, and an adjustable collar m, and set screw n at the other end.

No. 3573. WAREHAM S. WISNER, Brantford, Ont., (Assignee of C. P. Brown), 15th June, 1874, for 5 years: "Grain Drill-sower." (Semoir traceur à grain.)

Claim.—1st. The combination of hopper or receiver A, with groove C, in elevator; 2nd. The combination of bar O, hung on trunnions P, with bar Q, attached to bar O, by joint R, and working with lever S, on roller K, as set forth.

No. 3574. HENRY CARTER & DANIEL STEWART, Aylmer, Ont., 15th June, 1874, for 5 years: "Odometer." (Compte pas.)

For measuring the distance passed over by any vehicle.

Claim.—1st. The combination of two endless worm shafts E, G, arranged transversely and cruciform head T, worm-wheels H, I, and spindle J, provided with a pointer, all operating as set forth; 2nd. The combination of the notched recording wheel P, a dial pointer N, having a projection O, for operating the same in the manner set forth; 3rd. The hinged cover U, provided with a seal or bolt-blocking device for securing the dial and pointer from improper manipulation, as set forth.

No. 3575. JACOB ORTH and WILLIAM HONSBERGER, Chilton, Ont., 15th June, 1874, for 5 years: "Improvements on Threshing Machines." (Perfectionnements aux machines à battre.)

Claim.—The chaffer A, and its combination with separator threshing machines, as set forth.

No. 3576. RUFUS KLINE and ROBERT M. JACK, Pottstown, Penn., U. S., 15th June, 1874, for 10 years: "Improvement in Running Gears for Carriages." (Perfectionnement dans les trains des voitures.)

Claim.—1st. The combination with a U shaped metallic axle of a subjacent strip welded to the under side of each journal, as described; 2nd. The U shaped thin metallic perch plates J, hilling pieces K, and clips L, combined as set forth; 3rd. The U shaped plate M, and flat plate N, constructed and combined with clips as specified.

No. 3577. ISRAEL P. MAGOON and HENRY FAIRBANKS, St. Johnsbury, Vt., U. S., 15th June, 1874, for 15 years: "Locomotive Feed Water Heater." (Chauffeur de l'eau d'alimentation des locomotives.)

Claim.—1st. Supporting or staying the coil of feed water pipes within a heating chamber in the smoke stack; 2nd. In combination with a oiled feed water pipe around the smoke flue and within a chamber which receives the exhaust steam, a pipe leading from the said heating chamber to conduct the exhaust steam therefrom and discharge it into the open air or outside the smoke flue; 3rd. Constructing the smoke stack to separate near the top of the heating chamber and removably secured together at that point.

No. 3578. HENRY WATKEYS, Syracuse, N. Y., U. S., 18th June, 1874, for 5 years: "Throttle Valve." (Soupape d'admission.)

Claim.—1st. The combination of a throttle valve consisting of a main valve E, and an adjustable auxiliary or supplemental valve F, with the dry-pipe of a boiler, constructed as specified; 2nd. The combination of a toggle jointed lever with the main and auxiliary valves of a throttle-valve, when constructed and operating as described.

No. 3579. CALVIN MITCHELL, Dekalb, N. Y., U. S., 18th June, 1874, for 5 years: "Animal Poke." (Carcan de bétail.)

Claim.—1st. The plates B, and D, in outline conforming to animal's breast, hinged at their upper edges, provided with their spikes d, and springs E, and suspended upon the neck of an animal by the flexible loop A, as described; 2nd. The socket I, bolted to the plate D, to receive the arms H; 3rd. The nutted bolts J, passing edgewise through the plates B, and D, and forming a hook and eye hinge joint to connect the same for the purpose set forth.

No. 3580. CHARLES V. HOSE, Belleville, Ont., 18th June, 1874, for 5 years: "Machine for Propelling Vessels." (Machine à propulser les vaisseaux.)

Claim.—The combination of the rim C, with the wings B, as set forth.

No. 3581. BENJAMIN C. RICHARDSON, Syracuse, N. Y., U. S., 18th June, 1874, for 5 years: "Spool Case." (Porte bobine.)

Claim.—1st. The combination and arrangement of the armed spindles c, and spring washers w, constructed as specified, 2 d. The side pockets i, and cushion k, in combination with the spool case, as described.

No. 3582. FRANK BRAMER, Little Falls, N. Y., U. S., 18th June, 1874, (reissue of Patent No. 2600): "A Mowing Machine." (Une moissonneuse.)

Claim.—1st. The construction of the socket for the reception of the dividing stick, or anger A, in such manner that said stick or anger may be rolled in the socket and secured in any position desired; 2nd. The combination of the iron G, board D, and adjustable dividing stick A; 3rd. The coupling arm P, hinged to the main frame in such manner as to permit it to rock or roll on its longitudinal axis in combination with the rear brace or thrust bar J, hinged thereto to permit such rocking or rolling motion, as described; 4th. The cutting apparatus connected to the main frame by the main brace or coupling arm P, and rear hinged brace J, as described, in combination with the independent levers E, and Q, and their connecting devices for adapting said cutting apparatus to be controlled by the attendant riding on the machine, while at the same time it is left free, within certain limits, to rise and fall, and also the rock or roll on its longitudinal axis independently of said levers, as described; 5th. The eccentric A, for rocking or tilting the longer bar in the manner set forth; 6th. The block M, one end of which forms a lever for tilting the anger bar, and which forms the attachment of the main connecting bar P, and the push bar J; 7th. The combination of the eccentric A, and the block M; 8th. The combination of the block M, push bar J, and main brace P; 9th. The combination of the eccentric K, block M, push bar J, main brace P, connecting rod H, and lever E.

No. 3583. JAMES LYDIATT and EDWARD R. KENT, Hamilton, Ont., 18th June, 1874, for 5 years: "Improvements in Glass Moulds." (Perfectionnements dans les moules de verres.)

Claim.—The application of the formative surface of a glass forming mould of one or more coatings of plumbago and subsequently treating such in the manner set forth.

No. 3584. EUGÈNE VOISIN, Bourges, France, 18th June, 1874, for 5 years: "Improvements in Cupola Furnaces." (Perfectionnements aux fournaux à manche.)

Claim.—1st. The employment of a second set or row of tuyeres so placed and of such dimensions as to create a second zone of fusion; 2nd. Consuming the gases in the interior of the furnaces which have been hitherto consumed at the throat thereof, as described; 3rd. Placing a receiver at the back of the cupola furnace in communication with the crucible or hearth in such a way as to cause the metal to pass back through the heated hearth of the furnace, as described.

No. 3585. THOMAS WORSWICK, Guelph, Ont., 18th June, 1874, for 5 years: "Improvements on Force Pumps." (Perfectionnements aux pompes foulantes.)

Claim.—1st. The combination of the frame A, A, the pump cylinder B, and the plunger C, enlarged at D, with protection J, or their equivalents as set forth; 2nd. The combination with the frame A, A, cylinders B, and plunger C, of the crank plate F, the crank pin E, and the screw G, or their equivalents as set forth.

No. 3586. JOHN BROKENSHIRE, Kingston, Ont., 18th June, 1874, for 5 years: "Improvement on Capstans." (Perfectionnement des cabestans.)

Claim—1st. The cavity A. B. between the body of the capstan *f*, and the apron C, D, and the connection of the main gear up within the cavity A, B; 2nd. The covering or apron C, D, thrown over pawls c, c, for protection from ice, &c., &c., with the combination of all other parts of the capstan as described.

No. 3587. JULIUS HOCK, Vienna, Austria, 18th June, 1874, for 5 years: "Improvements on Motor Engines Worked by the Combustion of Petroleum or other Hydro-carbons." (Perfectionnements aux machines de propulsion consommant le pétrole ou autres hydro-carbures.)

Claim—1st. The combination of the supply vessel A, and its pipe E, check valve E¹, and nozzle E², with the air valve F¹, and nozzle E, whereby a stream of combustible liquid is broken into spray and mingled with air as it enters the working cylinder Z, as described; 2nd. The combination with the supply vessel A, of an adjustable plunger B, for altering the level of the combustible liquid in the vessel, so as to regulate the stream thereof supplied to the cylinder, as described; 3rd. The combination of the bellows or air pump R, with the vessel H, gasometer M, nozzles N, and J, and the aperture and valve J¹, for effecting the ignition of the combustible charge in the cylinder, as described; 4th. The combination of the governor *f*, with the valve D, through an adjustable spring, connecting rod *d*, and lever R¹, whereby the speed of the engine can be regulated by the admission of more or less air to the working cylinder, as described; 5th. The combination of a working cylinder Z, provided with the several apparatus referred to in the preceding claims with a connecting rod, crank shaft and fly wheel, constituting a petroleum motor engine, as described.

No. 3588. WILLIAM GOWEN, Wausau, Wis., U. S., 18th June, 1874, for 5 years: "Improvements on Head Blocks and Setworks for Saw-mills." (Perfectionnements aux poupées et aux mouttes de scieries.)

Claim—1st. The frame D, shaft E, friction gears F, G, and shaft H, in combination with the set rod B, and carriage A, for receding the jack head by the motion of the carriage, as described; 2nd. The lever I, pivoted to the carriage A, and receiving the shaft E, for bringing the friction wheels F, G, into contact for the purpose of set forth; 3rd. The construction of the double balance pawl J, operating as set forth for reversing the ratchet and gear wheel J¹, by the lever J²; 4th. The combination of the double balance pawl J, coiled spring K, and quadrants, each L: 5th. The frame C, bolted to the carriage A, the projecting arms supporting the set rod B, and ratchet quadrant M, bolted thereto and bearing the shaft N, hanging the lever J¹, and gear ratchet wheel J²; 6th. Providing the frame C, with lugs O, for hanging the eccentrics P, and shifting rods Q, by the axial pins; 7th. The application of eccentrics P, for operating the shifting rods Q; 8th. The shifting rods Q, and shifting frame R, for operating the sliding gears R¹; 9th. The shifting frame R, in combination with the gears R¹, and set rod B; 10th. The combination of sliding gears R¹, and set rod B, for operating one or more jack heads independently or simultaneously together at the option of the operator; 11th. The scale plates U, having a one inch scale or series of graduated scales, the figures and lines being raised or formed in the face for the purpose set forth; 12th. The scale U, 1, 2, 3, 4 and 5 inch, each graduated to allow for the thickness of kerf and side boards applied and used as set forth; 13th. The application of the indicator or pointer V, operated by the set rod U, in combination with a scale U; 14th. Constructing the jack head A¹, in two parts *a*, *b*, bolted together as set forth; 15th. The dogs B¹, having a cam movement; 16th. The cam slotted grooves C¹, and dogs B¹, constructed and operating as described; 17th. The application of the cam lever movement to the dog bar B², for operating the dogs B¹; 18th. The combination of the dog bar B², having a cam slotted rejection D¹, and cam lever E¹, having a pivotal connection with the jack head as set forth; 19th. The combination of the segment ratchet F², cam lever E¹, and pawl G¹, with the dog bar and jack head as set forth; 20th. The recess H¹, formed in the jack heads.

No. 3589. THOMAS D. JONES, Syracuse, N. Y., U. S., 26th June, 1874, for 5 years: "Wash-Board." (Planche à savonner.)

Claim—1st. The rubbing face, or board C, of an ordinary corrugated wash-board perforated with holes of any size or shape; 2nd. The combination of the perforated rubbing board C, with the movable back-board D, having channels E, cut therein and a slot in the lower rail B, as specified.

No. 3590. JOSEPH CORBETT, Hartford, Ct., U. S., 3rd July, 1874, for 5 years: "Registering Ticket Punch." (Emporte-pièce pour le contrôle des billets.)

Claim—1st. The combination with a ticket punch of the series of ratchets *n*, shifting cam *n*¹, and spring detent pawl *o*, or their equivalents; 2nd. The combination with a ticket punch of the ratchets

n, *n*¹, intermediate shifting cam *n*², reversible detent pawl *o*, and spring *p*; 3rd. The combination with the bell-hammer and handles of a registering ticket punch of the cam *h*, provided with the tooth *h*¹, and shoulder *h*², for raising the bell-hammer; 4th. The combination in a registering ticket punch of the bell hammer *h*, cam *h*¹, provided with tooth *h*², and reversible pawl *o*, having a tooth *o*¹, for returning the cam *h*, to its normal position; 5th. The combination with the cover D, D¹, provided with toothed hasps *q*, *q*¹, of the spring dog *s*, for locking the same; 6th. The combination with the spring locking dog *s*, and covers D, D¹, provided with notched hasps *q*, *q*¹, of the key *w*, key holes *w*¹, and seat *t*; 7th. The combination with the receptacle *k*, and cover of the bell or registering mechanism of the locking pin *b*, retained in place by said cover; 8th. The combination with the unit registering wheel E, and actuating pawl *p*, of the secondary registering wheel E¹, provided with the space *e*¹, formed by cutting away one of its ratchets or teeth.

No. 3591. ALBERT JEFFERY, Guelph, Ont., 6th July, 1874, for 5 years: "Improvements in Looking-Glass Holders." (Perfectionnements aux porte-miroirs.)

Claim—The holder C, with pivoted socket C¹, bar or rod B, spiral spring D, with projecting ends *d*, in combination with the looking-glass A, arranged and operating as described.

No. 3592. PIERRE TRUDEAU, Ottawa, Ont., 6th July, 1874, for 5 years: "Joiner's Bench." (Etabli de menuisier.)

Résumé—Un établi pour permettre de tailler le bois en équerre ou à fausse équerre, composés de cet *s* A, et B, de la pièce mobile D, des plans inclinés E, et F, et des supports c, tel que décrit.
A joiner's bench to allow of wood being formed square or bevelled composed of the sides A, B, of the moveable piece D, inclined planes, E, F, and supports c, as described.

No. 3593. ROYAL B. UNDERHILL, Corinth, Mis., 6th July, 1874, for 5 years: "Apparatus for Extracting Coffee." (Appareil à infuser le Café.)

Claim—The conical case A, with compartments C, D, E, and F, partition plate B, solid lids K, and L, and perforated lids N, and O, as set forth.

No. 3594. JOHN YOUNG, Goderich, Ont., 6th July, 1874, for 5 years: "Shaft Coupling for Threshing and other Machines." (Ajustage des axes des machines à battre et autres.)

Claim—1st. The connecting hooks D, D¹; 2nd. The combination of the connecting hooks D, D¹, and coupling ring A, by means of the links c, c, c, and the four staples or loops B, as set forth.

No. 3595. JOSEPH E. LANDERS, New Bedford, Mass., U. S., 6th July, 1874, for 5 years: "Improvements in Flower Pots." (Perfectionnements dans les pots à fleurs.)

Claim—The inner pot C, with holes *a*, and *b* and annular space *f*, in combination with the outer pot A, provided with stand B, as set forth.

No. 3596. JONATHAN DAVIS, St. Paul, Minn., U. S., 6th July, 1874, for 5 years: "Pipe Stem." (Tuyau de pipe.)

Claim—In combination with the outer cylindrical tube A, the stem B, having ascending spiral grooves *a*, and descending spiral grooves *b*, in its periphery as set forth.

No. 3597. MELANCTON BRYANT, Northport, N. Y., U. S., 6th July, 1874, for 5 years: "Improvements on Windlasses for Presses." (Perfectionnements aux vindas pour les presses.)

Claim—The combination of the ratchet wheel, having grooves D, in the side and the lever B, having a stud pin K, and loosely pivoted part E, of the pivoted detent pawl, made in two parts and pivoted together as specified.

No. 3598. LUCIUS B. BISHOP, Horton, N. S., 6th July, 1874, for 5 years: "Spinning Wheel." (Rouet.)

Claim—The combination and construction of the frame B, B, and the standard K, with the pulleys O, and P, and the driving wheel W, and the belt No. 1, as set forth.

No. 3599. JOHN H. STEINER, Albany, N. Y., U. S., 6th July, 1874, for 5 years: "Fire Extinguisher." (Extincteur d'incendie.)

Claim—1st. A "Fire Extinguisher" provided with separate and independent acid tubes C, and valves *f*, or their equivalents, allowing the introduction of successive charges of acid as set forth; 2nd. In combination with the extinguisher having the acid tubes

C, as set forth, the tubes or receivers D, to hold the charges of bicarbonate of soda; 3rd. A fire extinguisher having concave heads a, bearing under heads or flanges b, on the body; 4th. The plug B, having its handle or rim constructed as shown, forming means whereby to carry the machine, as set forth.

No. 3600. FRANKLIN R. SMITH, Bennington, Vt., U. S., 6th July, 1874, for 5 years: "Bed Springs." (Resorts des lits.)

Claim.—The spring A, having a seat a, for the slit to rest on, and one or more tongues d, for holding on the seat all formed of the end of the spring as set forth.

No. 3601. JOHN BROOKS, and ALEXANDER BOURASSA, Coaticook, Que., 6th July, 1874, for 5 years: "Washing Machine." (Machine à laver.)

Claim.—The combination of the handle C, socket B, B, and cross-wire D, D, with the funnel shaped body A, in the manner specified.

No. 3602. WILLIAM CLARK, Brampton, Ont., 6th July, 1874, for 5 years: "Clothes' Line, Rope and other Fastener." (Attache de lignes d'étendage et autres.)

Claim.—1st. The combination of the jaw clamps E, and D, and their utility in holding the rope as adjusted; 2nd. The combination with the jaw or clamps E, and D, and their utility in holding the rope as adjusted.

No. 3603. JAMES H. WENTWORTH, Boston, Mass., U. S., 6th July, 1874, for 10 years: "Improvements in Stoves." (Perfectionnements dans les poêles.)

Claim.—1st. The opening L, in the rear wall of the ash-pit constructed and arranged as described; 2nd. In combination with the grate K, and opening L, arranged as set forth, the ledge d, provided with one or more notches e; 3rd. In combination with the tank N, the hollow chamber or heater O, in the descending flue H, and communicating with said tank by the pipes or passages f, g, as described.

No. 3604. HARRIET R. TRACY, wife of G. C. Tracy, New York, U. S., 6th July, 1874, for 5 years: "Sewing Machine Cabinet." (Buffet de machine à coudre.)

Claim.—1st. A set or case of drawers A, pivoted at its corner or angle to a sewing machine cabinet or table in such a way that it may be swung in beneath its top, and may be swung out through three quarters of a circle to be parallel with the end of the said cabinet or table; 2nd. The combination of a hinged or pivoted bar or leg D, with a case of drawers A, pivoted at its corner or angle to a sewing machine cabinet or table; 3rd. The combination of the hinged bar E, and hinged leaf F, with the case of drawers A, pivoted at its corner or angle to a sewing machine cabinet or table, as described.

No. 3605. DANIEL ATBURY and EDWIN A. OSBORNE, Charlotte, N. C., U. S., 6th July, 1874, for 5 years: "Apparatus and Process for Bleaching, Washing, Making Extracts, &c." (Appareil et procédé de blanchiment, lavage, fabrication d'extraits, &c.)

Claim.—1st. The combination of a chamber for containing the material to be treated communicating with a water heating and steam generating chamber only by a series of pendant tubes to operate as described; 2nd. Causing the heated water to circulate through the materials to be treated first in an upward and then in a downward direction by the direct action of steam as described.

No. 3606. HENRY M. SKINNER, Rockford, and LEWIS W. DOFFY, Marengo, Ill., U. S., 6th July, 1874, for 5 years: "Riding Plough." (Charrue à siège.)

Claim.—1st. Combination of the plough G, beam E, axle arm or bar A, stub axles A', A', eccentric axle B, for preserving the parallelism of the plough, all working together in the manner described. 2nd. The combination of the tilting plough beam E, standards F F, windlass shaft L, ratchet wheel I, and spring treadle pawl J, constructed, arranged and operating as set forth; 3rd. The combination of hand lever L, with its spring bolt detent plate L', shaft L', and chain or cord K for raising purposes; 4th. The combination plough-standard G, plate G', staple g', and plough beam E; 5th. The tongue H, hinged in the rear of the front end of and to the plough beam at a point forward of the axle in combination with the guide standards on the forward end of the beam; 6th. The tilting plough beam and hinged tongue in combination with the tilting looking lever I, operating as described; 7th. The foot board J, in combination with the forward end of the tilting plough beam and the tongue looking device; 8th. The construction and arrangement of the clevis irons m and n, in combination with the plough beam for adjusting the line or point of draught; 9th. The angular stub axle plate A' made adjustable on the axle bar; 10th. The adjustable coupler standard R, in combina-

tion with the adjustable supporting plates s, provided with the knife edged bearings s', formed on them as described.

No. 3607. MARTIN WAY and FRANK WAY, Springfield, Mass., U. S., 6th July, 1874, for 5 years: "Clothes Wringing Machine." (Machine à tordre le linge.)

Claim.—1st. A bar or roll E secured in the trough or spout of a clothes wringer; 2nd. The roll E, of decreasing diameter from each end toward its middle secured in the mouth of the trough D; 3d. The box or bearing G, having the studs a and notch b or its equivalent; 4th. The box or bearing G having the lip d. 5th. The box or bearing G cast complete with the oil hole or recesses C, studs a, and notch b; 6th. The wash bench having its cross bars made of cast iron with sockets for the legs, 7th. The cast iron cross-bar H for a wash bench having sockets i, for the supporting legs and sockets l, for the wringer standards; 8th. The cast iron cross-bar T, having the soap dish, and the depending arm m, formed thereon; 9th. A cast iron cross-bar for a wash bench cast complete in one piece with sockets for the supporting legs and holes for the fastening screws; 10th. In combination with the wash bench, constructed as described, the extension slide or sholt arranged to operate as described.

No. 3608. CYRENUS WHEELER, Jr., Auburn, N. Y., U. S., 6th July, 1874, for 5 years: "Combined Reaping and Mowing Machine." (Faucheuse-Moissonneuse.)

Claim.—The outside shoe or divider in two parts N, N, the part N' being adjustable on the part N, as at r, for adapting said shoe for reaping or mowing; the lock bolt q, for locking the outer end of the platform to the outer shoe, and for unlocking it when it is to be removed; the hinged supports R, R, for the outside supporting wheel T, in combination with the adjustable slide S, for raising or lowering said wheel upon its supports; the rake stand 24 with its branched legs 25, 25, in combination with the lugs c, c, with twist studs b, b, and eye bolts 26, 26, for the purpose of easily attaching and detaching said rake stand and its attached parts, to and from the inside shoe; the pivoted shield board M, the rail 29 in combination with the rake-reels for the purpose of adjusting said rake-reels to the platform; the gag lever J, when combined with and arranged to be operated by the driver through the lever G; vibrating beam E', rocking bar d', and its crank arms e' and h', and chain and link attachment; the pendant gag z, attached to the front gear frame A, in combination with the projection v, on the rear or cutter frame to aid in raising up said rear frame; the windlass, or drum c, with its ratchet m, and chain k, for raising, lowering and holding the rear of the cutter frame, at a regulated height above the ground; the hinged coupling piece Z, for connecting the cutting apparatus to the cutter frame, when said coupling serves also as a shield for the sleeve arm e', and rock shaft d', the vibrating beam E', pivoted to a stand E, on the gear frame, in combination with the lever G, and chain connecting J, or r, the chain wheel 18 and clutch box 20 with the spring bolt 21, for attaching and detaching said chain wheel to or from the main driver; the double sets of lugs a and b on the drive wheels, the former to increase the traction of said drivers on the ground, the latter to prevent the machine from slipping laterally when working on inclined ground; the wrought iron V shaped frame W, in combination with hinged cast iron frames a, B; the hinged journal bearing Z; the sleeve B, the oil hole cover 11, with the arms 13, and teats 14, for the purpose of easy attachment to the frame, the combination of the front or gear frame A and the rear or cutter frame B, when connected to each other and to the main axle by hollow or tubular bearings, so that both may vibrate about the main axle as a centre of motion but independent of each other, and when the front frame carries the boxed gearing and the rear frame the cutting mechanism to be worked by it; the slot 15 on the front frame and the end 16 of the sleeve, projecting therein and moving up and down through said slot, so as to give lateral support to the independently moving frames in the quadrant or arc w, on the rear frame but placed over the axle C, in combination with the lever D, hinged to the rear frame below the axle; the abutment F, in combination with the seat support G and seat H, for making said seat transposable and reversible; The rod q', in combination with the lever I and arm r', in the coupling piece Z for the purpose of tipping the points of the guards or rocking the cutting apparatus about the pivotal rod or bar z, the gear cover F, and tool box cover J, separately hinged but both fastened by the same hook or hasp k, l; The clearer 23, for forcing the chain out of the groove of the chain wheel 18, should it stick therein, as it is apt to do; the yielding connection between the pitman and cutter bar; composed of the ball, socket, and hollow screw as shown in fig 10.

No. 3609 WILLIAM N. WHITELEY, Springfield, Ohio, U. S., 6th July, 1874, for 15 years. "Mowing and Reaping Machine." (Faucheuse-Moissonneuse.)

Claim.—1st. A two wheeled jointed bar reaping machine, the rake and reels mounted upon an axis oblique to the perpendicular plane of the drive wheel, in combination with the supporting arch and driving mechanism for the rake and reel; 2nd. The rake supporting arch or bridge A', constructed with a lateral offset a, and oblique top surface 3rd. The radially serrated base plate B, provided with corresponding radial serrations; 4th. The rake cam D, mounted upon the bridge A', and secured thereto by a single axial bolt d', so that by simply loosening said bolt, said rake cam may be adjusted as desired; 5th. The switch t, and the

bridge *r*, moving upon an oblique axis which if prolonged would cut the axis of the joint bolt *s*; 6th. The switch *t*, and the bridge *r*, constructed with a hinge joint and mounted upon a single stud *7*. The rake head *G*, provided with pendent arm *s*, and roller *1*, combined with and attached directly to the rake beater *H*, 8th. The roller upon the arm holder moving upon an axis perpendicular to the joint bolt *s*, so that said roller will always track smoothly in its path; 9th. The bell crank latch *Y*, combined with the switch *t*; 10th. In combination with the base plate *B*, cam *D*, and revolving carrier *F*, the sleeve journal *E*, cap *e*, and bolt *d'*; 11th. The rake bridge *A*, constructed with a lateral offset *e*, and attached at its front end to the lug *b*, and at its rear end to the arm *T*; 12th. The rake cam *D*, rake carrier *F*, spindle *q*, base plate *B*, and bridge *A*, all combined for joint operation as described; 13th. The shoe *P*, constructed with the tubular bearing *Q* for the attachment of the drag bar *C*; 14th. The shoe *P* constructed with the outer rim or flange *e*; 15th. In combination with the shoe *P*, and shield *Z*, as described; 16th. In combination with the shoe *P*, the bracket *V*, bolted directly thereto and the divider *W*, bolted only to said bracket; 17th. The *L* shaped clutch lever *J*, combined with the clutch sleeve *a*, and cam faced box *O*; 18th. The seat spring *11*, composed of a single piece of metal in the form and manner set forth, 19th. The rock shaft *L*, combined with the latch lever *R*, and notched segment *f*, at one end and the crank and link *i*, at the other to actuate and control the front end of the drag bar *C*; 20th. The rectangular frame composed of four bars *A*, the rear bar bent upward as at *g*, for the purpose of supporting the pivot of the lifting lever *D*, of the cutting apparatus, 21st. In combination with the main frame *A*, and main axle *F*, the brace *M*, extending from the end of the front cross bar of said frame to the inner end of said axle as set forth.

No. 3610. JAMES W. CUTHBERTSON, Brantford, Ont., 8th July, 1874, for 5 years: "Improvements on scrubbing Mops." (Perfectionnements aux balais à laver.)

Claim.—1st. The sleeve *D*, stop and attachment *M*, with holes *N*, in handle, also latch *O*, 2nd. The head *E*, with boss *I*, operated on by screw *G*, and thumb nut *H* at the lower end of sleeve *G*.

No. 3611. ABNER BUREANK and HENRY E. SHAFFER, Rochester, N. Y., U. S., 8th July 1874, for 5 years: "Improvement on Lamps." (Perfectionnement des lampes.)

Claim.—1st. The combination with a lamp *A*, and an induction air pipe *D*, of a side tube *E*, which extends around outside the lamp and convey the air in an independent jet from the induction pipe beyond the lamp to a closed chamber beneath the blaze so that said jet does not come in contact with the oil before reaching the blaze; 2nd. The combination with a side tube *E* which extends around the lamp and with a closed chamber beneath the blaze of a nozzle *F*, which fits in a socket in such a manner that the said tube may be connected with or disconnected from the lamp; 3rd. The nozzle *F*, with one or more side openings or spaces *g*, and a supplementary nozzle *A*, when employed in a lamp for the purpose of forcing a current of the outside air with the impelled current to the blaze as described.

No. 3612. JOSEPH HUGHES, Bloomington, Ill., U. S., 8th July, 1874, for 5 years: "Machine for Repairing Boiler Flues." (Machine à réparer les carneaux des chaudières.)

Claim.—1st. The combination of the mandrel *O*, with its standards *S*, the die *K*, and hammer *CJ*, constructed to operate as set forth. 2nd. The combination of the hammer *C*, *J*, spring *A*, trip-wheel *F*, and die *K*, 3rd. The mechanism described, as applied to welding boiler flues, as specified.

No. 3613. FRANCIS PATERSON, Kingston, Ont., 8th July, 1874, for 5 years: "Portable Apparatus for Loading and Unloading Vessels." (Appareil portatif pour charger et décharger les vaisseaux.)

Claim.—1st. The side *e*, provided with pulleys *q*, *q*, and eyes *g* and *m*, in combination with boom *k* and guy bar *n*; 2nd. The side *e*, having gaugways *f*, in combination with boom *k*, guy-bar *n*, and pulleys *q*, *q* and tackle *r*, all working together as set forth.

No. 3614. FRANCIS PATERSON, Kingston, Ont., 8th July, 1874, for 10 years: Improvements on Steamboats." (Perfectionnements aux bateaux à vapeur.)

A new form of vessel, more particularly adapted to shallow water, such as river navigation, for carrying light weights, such as passengers, express freight and mails.

Claim.—1st. The frame work *a*, *b*, disc *c*, band of vessels *f*, all working in combination as set forth; 2nd. The vessel *g*, forming a continuous band of vessels with discs or drums *c*, *d*, actuated by power with or without friction wheels *k*, as set forth.

No. 3615. ROBERT M. CAFFALL, Alton, Eng., 8th July, 1874, for 5 years: "Improvements on Appliances for and Means of Automatically Preventing the Back Rush of Gas from Gas-

ometers, for Purifying the Gas and for Improving the Brilliancy of the Light." (Perfectionnements aux appareils pour empêcher automatiquement le retour soudain du Gaz des gazomètres, purifier le gaz et en améliorer l'éclat de la lumière.)

Claim.—An apparatus having an automatic opening and closing device between the exhauster and gasometer or between gasometers of gas works, consisting of the box *A*, containing a sealing or purifying or carburating fluid, lead, *J*, outlet *h*, bonnet *C*, rock lever *G* and counterpoise *H*, arranged to operate as set forth to automatically resist the back pressure of gas and for purifying and enriching the gas, with the provision of a syphon *D* and pipe *E* or other equivalent devices, for regulating the liquid therein and for supply thereto as described.

No. 3616. JACOB SCOTT and ALBERT SCOTT, Richmond, Que., 8th July, 1874, for 5 years: "Improvements on Force Pumps." (Perfectionnements aux pompes foulantes.)

Claim.—The cylinder *a*, made in one, with delivery chamber *b*, with bottom *c*, gasket *d*, bolts *f* and *d*, all working together as set forth.

No. 3617. ROBERT M. CAFFALL and ALFRED THOMAS, London, Eng., 8th July, 1874, for 5 years: "Apparatus for Moveably Sealing Dip-Pipes, in Gas Hydraulic Mains." (Appareil à emboîture mobile des tuyaux d'inclinaison aux barillets à gaz.)

Claim.—1st. A moveable extension piece of pipe on or in connection with the bottom end of a dip-pipe in a hydraulic main in gas works which when out of contact with the dip-pipe gives freedom for passage of gas from retorts and which when in contact permits a column or body of liquid to rise up the dip-pipe and form a liquid seal, as set forth; 2nd. The operating moveable dip-pipe extension pieces of hydraulic mains of gas works as described and shown especially the two methods represented in figures 1 and 4 of the drawings.

No. 3618. JOHN S. PERRY and ANDREW DICKEY, Albany, N. Y., U. S., 8th July, 1874, for 5 years: "Improvements on Heating Stoves." (Perfectionnements aux poeles de chauffage.)

Claim.—1st. The combination of ascending and descending flues, placed in the rear of a stove, illuminating windows or doors in the draught chamber base section, and the free open space *R*, between the top surface of the grate or fire bed and the base of the fire pot or combustion chamber proper; 2nd. The check draught passage regulated by the register *n*, or its equivalent, whereby a draught circulation may be established from the draught chamber base section into the ascending flue *h* as described; 3rd. The grate frame constructed with legs, supported upon and in combination with a flange or projection upon the side wall of the draught chamber base section.

No. 3619. GEORGE M. HINKLEY, Milwaukee, Wis., U. S., 8th July, 1874, for 15 years: "Improvements on Saw-guides." (Perfectionnement aux guides-scies.)

Claim.—1st. A saw-guide having its arms pivoted or hinged in such manner that they may be turned back from the saw as described; 2nd. A saw guide consisting of two arms adjustable in relation to each other, and so connected that they may be adjusted laterally together without changing the distance between them when constructed as described; 3rd. The saw guide consisting of the arm *A*, having the groove *h*, and threaded Shank *a*, the arm *B*, having the Shank *b*, the screw *1*, and the bed-plate *C*, containing the nut *E*, when constructed and arranged as shown. 4th. In combination with the arms *A*, *B*, having the shanks *a*, *b* constructed and arranged as shown, the support *C*, nut *E* and spring *i* arranged as shown; 5th. A saw-guide having two separate arms connected by an adjusting screw *1* as shown.

No. 3620. THOMAS ROBERTSON, Toronto, Ont., 8th July, 1874, for 5 years: "Lozenge Machine." (Machine à losange.)

Claim.—1st. The printing head or block *K*₂, with adjustable dies *K*₁, attached standard *K*₃, working in guides *K*₄, in the frame *A*, girder *K*₄, in combination with the hinged lever, *K*₃, and connections, arranged and operating as described; 2nd. The bevel gear *K*₈ operated by the handle *K*₅, and toothed wheels *K*₃, in combination with the toothed rack *K*₄ sunk in the lower face of cutting boards *L*, arranged and operating as described; 3rd. The spring haul *K*₇, operated by the lifting lever *K*₂, in combination with the stop holes *K*₃ sunk at intervals in the lower side of the cutting boards *L*, arranged and operating as described; 4th. The driving shaft *B*, driving pulley *B*₁, fly wheel *B*₂, toothed wheels *B*₃, and *B*₄, shaft *C*, and wheels *D* with eccentric channels *d*, sunk in their faces in combination with the friction rollers *d*, standards

E and cutter head F, the said standards E working in guides B, fastened to the frame A, and having adjustable boxes E₂ to which the roller d is attached, the top of the said standards also being hinged and slotted to fit over the ends of the head F, and held in place by screws e₂, all arranged and operating as described; 5th. The cutter head F, with dies N, attached to which a reciprocating up and down motion is given in the manner described but held stationary during the time that the pushers p, are operating as described; 6th. The hollow cutters or dies N, constructed as shown with the base a, side stems n₁, and open at the front and rear above the base attached to the head F, to which a reciprocating up and down motion is given, arranged and operating as described; 7th. The pivoted levers D₁, connected to and worked from the eccentric channel d, in the wheels D, by the friction rollers d₂, the reciprocating sliding frames G, having attached the litters H, with inflected channels A₁, bar H₁, with end bearings A₂, having connected the rod and spiral spring A, in combination with the cutters F, arranged and operating as described; 8th. The pivoted levers D₂, connected to and worked from the eccentric channels d, in the wheels D, by the friction rollers d₂, the reciprocating sliding frames G, having attached the adjustable pusher p, in combination with the cutters F, arranged and operating as described; 9th. The cams m, attached to the outside of the wheels D, in combination with the system of levers M, and bar M₁, arranged and operating as described; 10th. The eccentric c fastened to the revolving shaft C, pivoted lever C₁, with spring haul C₂, in combination with the tooth rack C, sunk in the lower side of the cutting boards L, arranged and operating as described; 11th. The pivoted toothed quadrant D₃, with leg d₃, connected to and operated from the revolving wheel D, by the connecting rod d₃, the toothed wheels D₃, and D₄, in combination with the toothed rack D₃, having the cross-head I, and working on the curved guides J, arranged and operating as described; 12th. The cross head I, attached to the sliding rack D₃, rod i, and shelf i₁, in combination with the pushers p, arranged and operating as described; 13th. The independent carriage I, having the hinged guard i₁, attached and operating by the horns i₂, in combination with the shelf i₁, arranged and operating as described; 14th. The hinged latch i₂, attached to I, in combination with the shelf i₁, arranged and operating as described; 15th. The pivoted lever K attached to the frame A, at r, links Q, cross-pieces O, cross-bar Q, standards O₂, sliding in boxes A₂, attached to frame A, cross-bars O₁, cross-head P₁, attached thereto adjustable moulding pieces P, with holes p, sunk in its under face in combination with the stationary head P₂, having holes p₂ sunk in its upper surface to correspond with the upper moveable head arranged and operating as described; 16th. The endless rubber bands O, and O₁, passing around the rollers O₂, in combination with the holes p, sunk in the adjustable moulding pieces P and P₂, arranged and operating as described; 17th. The frame U, sliding on the guide-s U₂, hinged bar U, with fingers U₁, attached and handles u, in combination with the top W, arranged and operating as described; 18th. The starch board S, under board S₁, sliding on the guides s₂, with the toothed rack s, sunk in the under side in combination with the spring haul Q₁, operated by the lever R, arranged as described; 19th. The starch box T, having its lower side closed with bolting cloth in combination with the rubber band O, arranged and operating as described.

No. 3621. STEPHEN P. M. TASKER, Philadelphia, Penn., U. S., 8th July, 1874, for 15 years: "Metallurgical Furnace." (Fourneau Métallurgique)

Claim.—The central chamber A, in combination with the side flues B, B, which have an open communication therewith at the top of the walls C, C, the said walls being with or without the ports b.

No. 3622. HIRAM STRAIT, Troy, N. Y., U. S., 8th July, 1874, for 5 years: "Potato Digger and Gatherer." (Extracteur-ramasseur à patates.)

Claim.—1st. The combination of the triangular frame C, C, inclined teeth T, T, and double mould board plough P; 2nd. The combination with the digger of a gatherer consisting of the frame D, and teeth E, E; 3rd. The combination with the gatherer D, and its teeth E, E, of the draw-teeth F, F.

No. 3623. ALEXANDER STRANGE and KENNETH H. CORNISH, London, Eng., 8th July, 1874, for 5 years: "Spinning Apparatus." (Appareil à filer.)

Claim.—1st. The driving of spindles by frictional contact between the lower surfaces of spindle discs and the peripheries of wheels carried on a shaft or shafts movable longitudinally in such a manner that contact may be made between the discs and wheels at any required distance from the centres of the said lower surfaces; 2nd. The raising of any single spindle separately or any row of spindles simultaneously or all the spindles in a frame simultaneously out of contact with the driving wheel or wheels by levers and inclined and adjustable planes or cams; 3rd. The employment of springs separately or in combination with weights to keep the spindle discs from flying upward out of biting contact with their driving wheels as described; 4th. The combination of discs or wheels on movable shafts with levers a rod inclined and adjustable planes or cams for biting any of or any row of or all the spindles out of contact with the driving wheel or wheels and with springs with or without weights to keep the spindle discs in biting contact with the said driving wheel or wheels.

No. 3624. THOMAS BARNES and ROBERT A. HUDGIN, Harwich, Ont., 8th July, 1874, for 15 years: "Improvements on Gates." (Perfectionnements aux barrières.)

Claim.—1st. The combination of the slotted standards M, M, hooks N, N, wires and chains R, R; 2nd. The latch bars E, E, vertical lever S, S; 3rd. The hinged bars H, and the pinful bar K, together with the suspension bars C, with dove-tailed shoulders or their equivalent and the bevelled middle uprights S.

No. 3625. JAMES H. WENTWORTH, (Assignee of R Simpson), Boston, Mass., U. S., 8th July, 1874, for 10 years: "Improvements in Stoves." (Perfectionnements aux poeles.)

Claim.—1st. The top plate G secured to the body of the stove by the short screws d, d, in combination with the long bolts b, b, and the lugs a, a, for securing the bottom and vertical wall plates together as described; 2nd. The bar or rail D, arranged to be adjusted to different positions as described.

No. 3626. BENJAMIN SCOTT, New Brighton, Penn., U. S., 8th July, 1874, for 5 years: "Rail Joint for Railways." (Joint de rails de railoutes.)

Claim.—1st. The truss joint described consisting of the clamp bars B, B₁, B₂, constructed and operating as set forth; 2nd. The combination of the clamp bars B, B₁, B₂, and wooden block E; 3rd. The combination of the locking washers G, with the nuts F, block E, clamp bars B, B₁, and bolts D.

No. 3627. HENRY SWEITZER, (Administrator of the Estate of W. Sweitzer), St. Stephen, Ont., 9th July, 1874, for 5 years: "Fanning Mill." (Tarare.)

Claim.—1st. The moveable trough H, attached to the shaker A, in combination with the rolling screen I; 2nd. The arrangement of the elevator E, in combination with the box B.

No. 3628. JAMES HEDGES, West Wareham, Mass., U. S., 9th July, 1874, for 5 years: "Hose Repairer." (Ravauteur de boyau.)

Réclame.—1o. La combinaison d'un carré A, de cuir ou de caoutchouc ou de gutta-percha ayant des lames B, B₁, de métal rivées à ses rebords; 2o. La combinaison du trantonot K pour arrêter le loquet D, et la combinaison du piston J, pour empêcher la main G, de jouer folle; 3o. La combinaison d'un loquet D, recouvert en équerre E, avec la main G, et sa pince H, trouées et le piston C, fixé à la lame B, pour la fermer, tel que décrit.

No. 3629. HARLOW M. WELCH, Cowansville, Que., 13th July, 1874, for 5 years: "Steam Cooking Apparatus." (Appareil de cuisine à vapeur.)

Claim.—The steaming vessel A, furnished with a close fitting concave-convex cover C and having a series of perforated dishes fitting therein; provided with legs E, to stand on the rim of the next lowest dish as set forth.

No. 3630. THOMAS H. PRICE, Lafayette, Ind., U. S., 13th July, 1874, for 5 years: "Heating Apparatus for Sleighs and Carriages." (Chaufferette de voitures d'hiver et d'été.)

Claim.—The case A, having a hinged top and perforated sides and the air heat box B, having perforated cover I, and concave bottom traversed by the bar K, said parts being combined and applied to the sleigh bottom, as described.

No. 3631. GEORGE WALKEY, Toronto, Ont., 13th July, 1874, for 5 years: "Refrigerator." (Refrigerant.)

Claim.—An ice chamber A, having an air tight lid or cover B, suspended within a refrigerator in combination with the compartments D, and E, separated by the partition c, as specified.

No. 3632. LEVI SUTTON, Ottawa, Ohio, U. S., 16th July, 1874, for 5 years: "Automatic Car-coupling." (Attelage de wagon automatique.)

Claim.—1st. The combination of the bolt C, the swivelled rod D, the tubular keeper E, having an incline e₁, turned upon the upper end, the pin F, the lever G, and the coiled spring H, with the draw-head A, as described; 2nd. The combination of the lever I, with the projection C₁, formed upon the side of the bolt C, as described.

No. 3633. JOHN NOYES, Barnston, Que., (Assignee of H. A. Cooke), 16th July, 1874, for 5 years: "Artificial Stone." (Pierre factice.)

Claim.—1st. The combination of cement, sand or other suitable mineral substances or material and an aqueous solution of gum copal to form a compound for making artificial stone and concrete or for other purposes; 2nd. In the manufacture of artificial stone, concrete or similar material the use of an aqueous solution of gum copal for the purpose set forth; 3rd. The process described of

manufacturing or producing an aqueous solution of gum copal by boiling gum copal in soft water and adding thereto sub or caustic soda or other alkaline substance as set forth.

No. 3634. JOHN J. LAPPIN, Toronto, Ont., 16th July, 1874, for 5 years: "Self-acting Car-coupler." (Attelage de wagon automatique.)

Claim.—1st. The enlargement of the crown of the draw-head A, and hinges inside of the same the mechanism comprising pendulous automatic trip B, as described; 2d. The pendulous automatic trip B, as shown in figures 1, 2, 3, 4, of the drawings; 3rd. The automatic trip B, as shown in figures 7, 8, and 9 of the drawings and comprising the vertical arm a, the journals b, b, the arms or counter-weights D, D, as specified.

No. 3335. SAMUEL VIVIAN, London, Ont (Assignee of C. Luxton,) 16th July, 1874, for 5 years: "Peat Machine." (Machine à tourbe.)

Claim.—1st. The combination of shaft B, knives D, fingers F, spiral wing P, spiral wing K, and stone roller Q; 2d. The combination with filtering and compressing tubes T, piston K, discharging nozzle S, and discharging tube V; 3rd. The combination of the perforated iron tubes, as shown in detail figure 4, perforated iron tube C, middle covering b, and outside covering a.

No. 3636. ALEXANDER WALKER, Mornington, Ont., 16th July, 1874, for 5 years: "Broad Cast Seed Sower." (Semoir à grain à la volée.)

Claim.—1st. The cylinder A, attachable to the arm of the operator or by a strap and provided with a handle C, to be seized by the fingers of the operator when seeding in the manner set forth; 2d. The cylinder A, having a perforated cap D, and wire gauze cone E; 3rd. The discs F, pivoted to the cap D, and held adjustably by the clamp G, and screws H, as set forth.

No. 3637. ISAAC M. HOUSE, Orillia, Ont., 16th July, 1874, for 5 years: "Shingle Machine." (Machine à bardeaux.)

Claim.—1st. The vertical frame A, having diagonal race-ways C, for guiding the knife traces D; 2d. The horizontal race-ways H, attached to the obliquely sliding gate B, in combination with the vertical sliding panel G, for actuating the lathes in the manner set forth.

No. 3638. HORACE THORNE, Toronto, Ont., 16th July, 1874, (Assignee of F. Oakley, Extension of Patent No. 8,) for 5 years: "Lock Washer." (Rondelle de sûreté.)

Claim.—The addition to an ordinary washer of the inside lug or projection A, in Fig. 2, or a similar device as in Fig. 3, for rendering the washer from turning, the said washer being thicker than the thread of the screw, with the projecting points or tails B, B, B, in combination with a grooved or flattened screw shown in Fig. A, and an ordinary vent.

No. 3639. JAMES LOTT, Liverpool, Eng., 16th July, 1874, for 5 years: "Apparatus for Trimming the Edges of Straps." (Appareil à parer les lisières des courroies.)

Claim.—1st. The novel combination of the pron frame a, and the moveable jaws b, and the pin or bar c, the screw d, cutter f, and the handle g, together forming an apparatus for trimming the edges of straps, bands, traces and other similar articles; 2d. The particular construction of the jaws b, and their mode of adjustment in both directions; 3rd. The particular construction of the cutters f, when applied to apparatus constructed as set forth and the mode of holding and fixing same.

No. 3640. JAMES G. SCOTT, St. Thomas, Que., 16th July, 1874, for 5 years: "Brake for Railway and other Carriages." (Train de voiture de railroute et autres.)

Claim.—1st. A brake composed of shaft a, provided with screw threads b, b, working into boxes c, c, in combination with arms d, d, and cross-pieces e, e, acting on friction rollers f, f, said shaft being provided with coupling apparatus m, to connect together several lengths thereof, as described; 2d. The combination with the shaft a, a, the bins-cogged-wheel h, and rod k, provided with hand wheel n, as set forth.

No. 3641. HOSEA HENIKA, MEYRON F. CARDER and OSCAR M. ALLEN, Kalamazoo, Mich., U. S., 16th July, 1874, for 5 years: "Burial Casket." (Cercueil.)

Claim.—A casket provided with a top or cover made in two sections C, D, pivoted to the ends and upper portion of the case and adapted to be independently raised and lowered with or without supporting catches a, a, as described.

No. 3642. GEORGE F. SIMONDS and JAMES A. FERSON, Fitchburg, Mass., U. S., 16th July, 1874, for 5 years: "Process for Tempering and Forming Articles of Steel." (Procédé pour adoucir l'acier et en fabriquer différents objets.)

Claim.—1st. The process described for tempering and bringing hardened articles of steel, or steel combined with iron, to any required form by clamping them between plates or forms, and treating to that uniform temperature which is consistent with the requisite temper and keeping them at that heat for the length of time required for the articles to take permanently the form of the clamping surface; 2d. A tempering, or tempering and forming oven A, an intervening plate or perforated plate C, between the fire and the clamps or dies D, for the purpose of securing an evenness of heat in the clamps; 3rd. A tempering, or a tempering and turning oven A, constructed with a perforated top a, c, for the admission and even distribution of heat around the articles to be treated; 4th. A tempering, or a tempering and forming oven A, constructed as described, in combination with passages e, not air chamber F, and tile E, when arranged to operate as set forth.

No. 3643. JOSEPH E. LANDERS, New-Bedford, Mass., U. S., 16th July, 1874, for 5 years: "Flower Pot." (Pot à fleurs.)

Claim.—The pot F, with a curved top J, and projections g, and flanges h, h, in combination with pot A, with circular hole G, and opening d, d, as set forth.

No. 3644. WILLIAM DUCHEMIN, Boston, Mass., U. S., 16th July, 1874, for 5 years: "Improvement on Turned Shoes." (Perfectionnement des souliers retournés.)

Claim.—1st. A turned shoe, having its sole channelled on the lower or grained side, the over lapping surface of its lip being directed towards the centre of the sole; 2d. The mode of sewing turned shoes consisting in uniting the sole, upper, and welt, together, by stitches passing through angularly to the surface of the sole; 3rd. A new article of manufacture, in a turned shoe having its sole channelled on the lower or grained side and sewed angularly and composed of the sole A, upper B, and welt C, as specified.

No. 3645. AUSTIN D. CABLE, Montreal, Que., 16th July, 1874, for 5 years: "Improvements on Faucets." (Perfectionnements aux robinets.)

Claim.—1st. The shell a, having double valve-seat d, and valves m, and i, in combination with spindle e, and "bit" h, all working together as set forth; 2d. The shell a, with pipe at, opening b, double valve seat d, valves i, and m, all working together as set forth.

No. 3646. JOHN PRINCE, and NORRIS D. MARTIN, North Troy, Vt., U. S., 16th July, 1874, for 5 years: "Milk Pan." (Boite à lait.)

Claim.—Subdividing the water chamber, formed by the double bottom, by transverse partitions L, having connecting apertures diagonally opposite, to cause a serpentine direction of flow and to admit of hydraulic pressure to be exerted within the chambers, as set forth.

No. 3647. CHARLES ROBINSON, Cambridge, Mass., U. S., 16th July, 1874, for 5 years: "Combined Washer and Wringer." (Laveuse-tordeuse combinées.)

Claim.—1st. The novel combination of the large fluted inelastic roller A, the small inelastic roller C, and the large elastic roller D, arranged in the standards e, e, of the frame of the machine, thereby producing a convertible washing and wringing machine; 2d. The combination of a small inelastic roller C, with a large inelastic fluted roller A, for washing clothes; 3rd. The combination of a small inelastic roller C with a large elastic roller D; 4th. The combination of the elastic loops or cords b, b, with the small roller C; 5th. The combination of the pressure levers G, G, with the small roller C, and large roller D; 6th. The combination of the adjusting notches or rat-bet teeth g, g, with the pressure levers G, G.

No. 3648. RICHARD M. WANZER, (Assignee of J. H. McCune, Hamilton, Ont.,) 16th July, 1874, for 5 years: "Improvement in Sewing Machines." (Perfectionnement des machines à coudre.)

Claim.—Reversing the feed of sewing machines by expanding and contracting the space between the sliding blocks equal distances from the centre for adjusting the pin *i*, by the arrangement and combination of the following parts or their equivalents, viz: the moveable sliding block *e*, *e*, pin *i*, or lever *D*, disc lever *C*, scroll slots *c*, *c*, screws *b*, *b*, bracket *B*, with slots *a*, *a*, all combined for the purpose specified.

No. 3649. LUKE HARRINGTON, Brooklyn, N. Y., U. S., 16th July, 1874, for 5 years: "Manufacture of Artificial Butter." (Fabrication du beurre artificiel.)

Claim.—1st. The process of making butter from and by the composition of beef-suet or beef-fats, hog's leaf-turd and vegetable or fixed oils, combined or their respective equivalents, as specified; 2nd. The use or employment of a jacketed kettle or kettle for the purpose of separating oil, or oil, from the scrap for making butter; 3rd. The separation of oil or oil from the scrap or membranous substances contained in the fats wit out steam or hot water coming in direct contact with the fats, or the use of any chemical or other injurious substances, as specified.

No. 3650. DAVID N. B. COFFIN, Jr., Newton, Mass., U. S., 16th July, 1874, for 5 years: "Improvements on Screws for Imparting Motion to Machinery." (Perfectionnements aux vis de transmission de mouvement.)

Claim.—1st. The complex or toothed-screw *a*, *b*; 2nd. The toothed screw *a*, *b*, in combination with *t*, *e* impelling gear-wheel *c*; 3rd. The combination of the toothed-screw *a*, *b*, with the internal or external nut-wheel or worm-gear or rack *f*, 4th. The combination of the toothed-screw *a*, *b*, with the rack-nut *d*; 5th. The construction of the screw-thread *b*, in connection with the internally toothed nut wheel *c*; 6th. The construction of the internally toothed nut-wheel *c*, in relation to the described screw-thread *b*; 7th. The combination of screw or worm *a*, *b*, worm-gear or nut-wheel *c*, having the axis of the worm arranged wholly within the planes between which said nut revolves, as shown in figures 1 and 5.

No. 3651. AMOS ANSTED, Gananoque, and REUBEN CROSS, Lansdowne, Ont., 16th July, 1874, for 5 years: "Holder for Grinding of Reaper and Mower Knives." (Porte-couteaux de faucheuses-moissonneuses pour les aiguiser.)

Claim.—1st. The use of the adjustable frame as shown in figure 1; 2nd. The use of the jaws *c*, *c*, as set forth.

No. 3652. SAMUEL W. SHOREY, Boston, Mass., U. S., 16th July, 1874, for 5 years: "Cutting and Trimming Attachment for Sewing Machines." (Dispositions des machines à coudre pour tailler et parer.)

Claim.—1st. In combination with the stitch forming mechanism of a sewing machine a rotary cutter, having a part or parts of its edge eccentric to its cutting edge, 2nd. In combination with the stitch forming mechanism of a sewing machine, a rotary cutter so arranged that it may be raised above the work, thus allowing the same to be stitched without being cut or trimmed when desired.

No. 3653. APPLETON GOULD, Bangor, Me., U. S., 16th July, 1874, for 5 years: "Leather Cutting and Embossing Machine." (Machine à tailler et à gaufrer le cuir.)

Claim.—1st. The depressible shaft *e*, provided with a cutting or embossing cylinder *k*, in combination with a drum carrying shaft *n*, revolving simultaneously therewith; 2nd. In combination with said depressible shaft *e*, cylinder *k*, and shaft *n*, the supplemental bed or table *r*; 3rd. In combination with said shaft *e*, cylinder *k*, and shaft *n*, the adjustable bed or clamp *r*, for embossing box loops; 4th. A cutting cylinder made in two parts *5*, *6*, or *9*, *10*, each provided with knives *7*, *7*, and adjustable to different widths of straps by washers or adjusting screws between said parts, as shown at *7*, *8*, *11*, *12*.

No. 3654. DE VOLSON WOOD, Hoboken, N. J., U. S., 16th July, 1874, for 5 years: "Steam-Hammer." (Marteau à vapeur.)

Claim.—1st. Operating the main valve *H*, by means of the supplementary valve *G*, in combination with the stem *F*, and slope *b*, *61*, *c*; 2nd. The device for governing the movement of the main piston *B*, consisting of the adjusting piece *p*, groove *q*, *h*, and valve *G*, in combination as described; 3rd. The device for automatically stopping the machine when the piston is moved too far forward, consisting of the reverse slope *61*, *c*, in combination with the valve devices

described; 4. *b*. The poppet valve *s*, when in combination with the false head *N*, it is used to confine the steam within the space *r*, for the purpose specified; 5th. The combination of the journal blocks *6*, *6*, and elastic packing *9*, with the click *k*; 6th. The arrangement of the rotation device between the cylinder heads *M*, *O*, and between the piston and piston-rod bearings; 7th. The stop-click *e*, operating upon a ratchet or stop-sleeve *23*, upon a feed screw *T*, in combination with the rod *4*, and regulating click *5*, operated as described; 8th. The automatic feeding device consisting of the reciprocating plunger *19*, and pawl *14*, in combination with the ratchet *p*, stops *23*, and feed screw *T*, operated as described; 9th. The rods *F*, in combination with the cylinder heads *M*, *O*; 10th. The double clamps *29*, *30*, in combination with the stud *28*, upon the ways or bed of a steam hammer as set forth; 11th. The clamps *25*, *26*, and set screw *38*, in combination with the sliding legs *21*, of a portable steam-hammer as described.

No. 3655. WILLIAM HAMILTON, Erie, Penn., U. S., 16th July, 1874, for 5 years: "Improvements on Lubricators." (Perfectionnements aux graisseurs.)

Claim.—1st. The chamber or cup *A*, and the hollow or tubular bolt *B*, each constructed as shown and cast in one piece in combination with the spindle *D*, formed as stated, the whole being arranged to operate as described; 2nd. In combination with the chamber *A*, and a hollow bolt *B*, the supply-cock consisting of the cap *F*, and tube *F*, supply channels *f*, *f*, air passages *g*, *g*, and the valve plug *H*, the whole being constructed and arranged to operate as described; 3rd. The sediment-cock, consisting of the tube *K*, having a channel *K2*, with a flaring mouth or valve seat, and the valve plug *L*, having a cone shaped point *L1*, and the central T-shaped channel *l*, the whole being combined and arranged to operate as described.

No. 3656. JONATHAN NEWHALL, Hunterstown, Que., 16th July, 1874, for 5 years: "Attachment for Wash Boilers." (Disposition des chaudières de buanderie.)

Claim.—1st. The false bottom *A*, having the water pipe *C*, arranged at one side and provided with a series of holes *E*, near the opposite side furnished with valve *G*, and guard *F*; 2nd. The false bottom *A*, constructed as set forth having the longitudinal joint *B*; 3rd. The slide valve *J*, in the hot water pipe *C*, to regulate the flow of water as set forth.

No. 3657. THOMAS D. HODGENS, London, Ont., 16th July, 1874, for 5 years: "Gas Generator." (Générateur à gaz.)

Claim.—1st. The combination of the heating box *B*, feed pipes *C*, retorts *E* and pipes *F*, damper *H*; 2nd. The combination of retorts *E*, pipes *F*, generator *N*, condenser *C*, cocks *K*, and *L*.

No. 3658. DAVID M. KING, Mantua Station, Ohio, U. S., 16th July, 1874, for 5 years: "Potato Digger." (Extracteur à patates.)

Claim.—1st. The shovels *H*, *H*, consisting of one entire piece each, and having a curved cutting edge *B1*, and so arranged in relation to the standards *F*, *F*, that their rear edge *C1*, shall be transverse therewith and parallel to the heads or shafts *I*, of the sifters; 2nd. The sifters *N*, *N1*, having their prongs or teeth *k*, inserted in the heads or shafts *I*, so that they shall be at right angle therewith, and secured therein by pins *e*, one half of which is in the tenon of the prong and the other half in the head *I*; 3rd. The transverse arrangement of the sifters *N*, *N1*, in the standards *F*, *F*, so that they shall be parallel in their relation to, and in combination with the edge *C1*, of the shovels *H*, *H*; 4th. The spring catch *g* in combination with the door *f*, and standards *F*, *F*; 5th. The hollow standards *F*, *F*, when constructed with a curving edge *A1*, and projecting end *E1*, in combination with the flanges (*t*) of the frame *A*; 6th. The combination of the sifters *N*, *N1*, arms *M*, *M*, pumans *L*, *L*, and crank wheels *D*, *D*; 7th. The combination of the shovels *H*, *H*, consisting of one entire piece each, and having a curved cutting edge *B1*, standards *F*, *F*, having curved cutting edges *A1*, and sifters *N*, *N1*; 8th. The standards *F*, *F*, constructed with curved edges *A1*, and projecting ends *E1*, extending forward of the axial line of the crank shaft *C*, in combination with the frame *B*, and crank shaft *C* and off-sets *G*.

No. 3659. LOUIS DANZE, Montreal, Que., 16th July, 1874, for 5 years: "Improvements on Cooking Stoves." (Perfectionnements aux poeles de cuisine.)

Claim.—1st. The doors *a1* hinged at their bottom to turn from the vertical to the horizontal in combination with arms *61*, and weight *c1*; 2nd. A fire pot *d* with two grates *g* and *h*; 3rd. The diaphragms *e* and *f* either or both in combination with the plates *k1*.

No. 3660. DANIEL ZEIGLER, Lewiston, Penn., U. S., 16th July, 1874, for 5 years: "Improvement in Mechanical Movements." (Perfectionnements aux mouvements mécaniques.)

Claim.—The shaft B, with eccentric E, with sleeve F, and cogs *f*, in combination with the wheel C, with cogs *a*, shaft H, and cylinder I, as set forth.

No. 3661. WILLIAM G. DUNN, Greensburgh, Ind., U. S., 16th July, 1874, for 5 years: "Improvements on Joint of Railway Rails." (Perfectionnements aux joints des rails de railroutes.)

Claim.—1st. The combination in a railway chair of the wedge E, key *e*, and bolt G; 2nd. The combination with the rails A, of the flanged and slotted chair B, the key *e*, one or more short-rails D, wedge E, and bolts G, all constructed as set forth.

No. 3662. EDWIN E. BEAN, Boston, Mass., U. S., 16th July, 1874, for 5 years: "Electric Lighting Apparatus." (Appareil électrique pour allumer le gaz.)

Claim.—1st. On an apparatus by lighting lamps by electricity, a mechanism for making and breaking the current of electricity in the jet thereby lighting the gas as described; 2nd. The combination with an apparatus in which compressed and rarefied air is used for the turning of the gas coils, of an electric apparatus so arranged that it will automatically transmit the current of electricity to the next lamps in succession for the purpose set forth; 3rd. In combination with the diaphragm *g* and rod *f* of the rocking lever *v*, spring wire *x*, the metallic snapping wire *h* and the metallic pole *n*, as described; 4th. The electro-magnets *m*, *p*, and the arm *t* of the catch or recess *z*, lever *v*, insulated wedge *z*, spring *r*, *t*, and their insulated posts *q*, *s*, and the wires *k*, *h*, *h*, *k*, *h*, *k*, *h*, *k*, *h*, *k*, as described.

No. 3663. JOHN C. TODD, Toronto Ont., 16th July, 1874, for 5 years: "Toy Gun." (Fusil-Jouet.)

Claim.—The "Toy Gun" or catapult produced of a disc-shaped body with grooved circumference, diametrical guide perforation and segmental recess, having an elastic band attached edge-wise for throwing the dart placed in the guide perforation as specified.

No. 3664. WILLIAM BRIGGS, Montreal, and LEWIS SENECAI, Côteau St. Augustin, Que., 20th July, 1874, for 5 years: "Improvements on Manure and Hay Forks." (Perfectionnement des fourches à fumier et à foin.)

Claim.—1st. The combination of a socket A, united to the arms B, B, bored to receive the prongs C, D, E, fig 1; 2nd. The prong C riveted to the arm B; 3rd. The prong D, secured to the arm B, by the screwed nut K; 4th. The prongs E, secured to the arm B B, by means of a screwed split nut F; 5th. The arms H, H, having screwed sockets *c*, fig. 3; 6th. The combination of the screwed sockets *c*, forming part of the arm H, with the flat headed prongs J, J, secured to the socket *c*, by means of the screwed couplings I.

No. 3665. EDWARD A. C. PEW, Welland, Ont., 20th July, 1874, for 5 years: "Improvements on Peat Machine." (Perfectionnements aux machines à tourbe.)

Claim.—1st. The barrels B, and C, having peripheral spiral grooves Q, and arranged laterally within a shell or casing A; 2nd. The barrels B, and C, each having peripheral spiral cutting edges H, intercepting each other parallel to and centrally in the spiral grooves Q; 3rd. The casing or shell A, receiving the rotating barrels B, and C, having internally formed ribs I, and fixed longitudinal cutter K, as set forth.

No. 3666. GEORGE STACY, Montreal, Que., 20th July, 1874 for 5 years: "Improvements on Chisel Pointed Cut Nails and Machine for Making the Same." (Perfectionnements au clou coupé biseauté et aux machines pour le fabriquer.)

Claim.—1st. An upset headed chisel pointed cut nail; 2nd. A cutting head *d*, header *k*, gripping lever *m*, and nipper *o*, in combination with dies *p* and *q*, as set forth.

No. 3667. IRA W. SHALER, Brooklyn, N. Y., U. S., 20th July, 1874, for 5 years: "Signal Lantern." (Lampe de signaux.)

Claim.—1st. The combination of the reservoir provided with pump barrel *h* and valve *a*, and suction and delivery tubes with a lamp set forth *g* arranged and operating for the purpose of forcing a vacuum; *g*, gas into contact with the flame of the lamp by applying a blast at the outer end of *g* a hollow piston; 2nd. The combination with the lamp burner of one or more tubes arranged in such relation to the lamp burner that when volatile oil or gas is forced through said tube or tubes from an independent reservoir it will be ignited by the flame as set forth; 3rd. The combination of the lamp of a signal lantern with the apparatus as described, for forcing gas or volatile oil from a source independent of the lamp reservoir into the immediate proximity of the flame, for the purpose of producing a flash-light signal.

No. 3668. WILLIAM BAXTER, Jr., Newark, N. J., U. S., 20th July, 1874, for 5 years: "Improvements on Compound Engines." (Perfectionnements aux machines mixtes.)

Claim.—1st. A triple cylinder compound engine having its several pistons C, C, D, controlled by a single valve L, and organized for operation as specified; 2nd. The combination of the air pump J, and feed pump I, with the rods *a* of the high pressure pistons C, C, the intermediate low pressure piston D, with its rod *b*, the cross-head E, and the cylinders A, A, B, as described.

No. 3669. WILLIAM E. KELLY, New Brunswick, N. J., U. S., 20th July, 1874, for 5 years: "Improvements on Steam Generators." (Perfectionnements aux générateurs à vapeur.)

Claim.—1st. The combination of the pockets E, extending across the chamber A, the partition plates I, and the tubes B; 2nd. The partition plates B, having turned up forward ends *e* in combination with the shouldered clamps, bars or plates F, the pockets E, and the tubes B, as described.

No. 3670. GEORGE FORSYTH, Seaford, Ont., 20th July, 1874, for 5 years: "Wire Fence." (Palissade en fil métallique.)

Claim.—The arrangement of the posts A, the pickets B, C, and the wires connecting them, and the mode of setting up the fence, as set forth.

No. 3671. ROBERT DUNLOP, St. Thomas, Ont., 20th July, 1874, for 5 years: "Steam and Gas-fitting Wrench." (Clé pour l'ajustage des tuyaux de gaz et de vapeur.)

Claim.—The combination of upper jaw B, lower jaw C, lever A and bolt D, as set forth.

No. 3672. JESSE E. HARRIMAN, Bangor, Me., U. S., (Assignee of M. L. NORTON,) 20th July, 1874, for 15 years: "Lath Machine." (Machine à latte.)

Claim.—1st. The shaft or arbour Z, attached by the screw *a* or pin *l*, to the shaft or arbour Q, of the saw D, thereby extending the arbour Q so as to carry the saw C and D on the same line of shafting; 2nd. A machine for sawing small dimensions, the two bolting saws C, D, running on the same line of shafting and arranged in the relative positions described; 3rd. The rolls H and I, arranged in connection with a circular saw to carry back the bolts or slabs; 4th. In a circular sawing machine, the gang of saws E, running on the upright adjustable arbour S, and at right angle to the bolting saw D, and so arranged in connection with D that as the bolt passes through the machine it shall be sawed to one dimension by the saw D and to the opposite dimension by the saws E, thus sawing either laths, pickets, spool stuff, or any short lumber complete from the bolt, at one operation; 5th. The double adjustable bar T, consisting of the two boxes *w* and *p*, connected together by the spine V, so hung on the rod U as to allow of sliding and swinging upon V, and held in position by the set-screw *k* and adjustable at *p* by the stable *h* and set-screws *j*; 6th. The combination of the bolting saws C, D with the gang saws E, double adjustable box T, rolls H, I, and gauges F and Y, to form a machine for sawing short dimension lumber complete to the desired dimensions at one operation.

No. 3673. HENRY PALMER, Westminster, Ont., 20th July, 1874, for 5 years: "Machine for destroying potato bugs." (Machine à détruire les pucerons à patates.)

Claim.—1st. The arrangement of the rollers FF, with the endless canvases GG, in combination with the fans HH; 2nd. The arrangement of the outer rollers F₁ F₂, in combination with the adjustable holders K, the cords LL and pulley M.

No. 3674. CHARLES E. PATRIC, Springfield, Ohio, U. S., 20th July, 1874, for 5 years: "Broad Cast Sowing Machine." (Semoir à grain à la volée.)

Claim.—1st. The vertical distributing wheel with a flange or flanges for conveying and discharging the grain in combination with the scatterers O, for preading the grain broad-cast; 2nd. The vertical distributing wheel B, discharging the grain laterally or from its side in combination with the scattering tube d'; 3rd. The casing funnels b', provided with the horizontal slots in combination with the pins or spurs on the inner face of the mouth of the tubes d. and retaining lips d'; 4th. The combination of the vertical distributing wheels, the adjustable scattering tubes and the broad cast scatterers; 5th. The scatterer O, made in the double shovel or semi conical form and applied to the adjustable tube d'; 6th. The lifting-roller L in combination with the eccentric pivoted arms M; 7th. The eccentric pivoted arm M, to which the lifting roller is attached provided with pin or spur m, in combination with the cam hook rack and lever, or their equivalent, for throwing the feed mechanism into or out of action when the hoes are raised or lowered; 8th. The hoe standards G, pivoted to the drag bars F, in combination with the sustaining links h, locking blocks or links h' and spring k, arranged and operating as described.

No. 3675. RICHARD BENNER, Hamilton, Ont., 20th July, 1874, for 5 years: "Process of veneering." (Procédé de placage.)

Claim. A water proof veneering of cloth or other woven material when applied in the manner described.

No. 3676. ALEXANDER McCONNEL, Caledon, Ont., 20th July, 1874, for 5 years: "Self-Opening gate for Railway Crossings." (Barrière automatique pour les passagers des railroutes.)

Claim.—1st. The bars B, pivoted as described and connected together by the T-shaped pieces C, in combination with the levers D, curved lever E, rods G, and gate H; 2nd. The post K, with the ball L, in combination with the wire rope M, crank rod O, and flat spring N, arranged and operating as described; 3rd. The bars B, in combination with the springs J, arranged and operating as described.

No. 3677. LEWIS O. CANTIN, Montreal, Que., 20th July, 1874, for 5 years: "Photograph Burnisher." (Brunissoir de cartes photographiques.)

Claim.—1st. The concave form of heater e; 2nd. The guard plates g, n, of any suitable metal inserted between the burnisher and roller; 3rd. The adjusting screws f, f, under each projecting end of the heater, as set forth.

No. 3678. JOHN ROURK, Kingston, Ont., 20th July, 1874, for 5 years: "Automatic Atmospheric Engine." (Machine atmosphérique automatique.)

Claim.—1st. The combination of the cylinder C, tube G, and valve carrier H, with the piston D, crank N, and beam A; 2nd. The combination of the carrier H, and valves O, and P; 3rd. The use of atmospheric air, compressed air, water or steam as a propelling power, in connection with machinery, or as an auxiliary power in connection with boats, cars or other moving apparatus.

No. 3679. JOHN F. STAIRS, Halifax, N. S., 20th July, 1874, for 5 years: "Oakum." (Etoupe.)

Claim.—The caulking material made from the new stock of staple hemp, flax or similar fibre, in the manner described.

No. 3680. THOMAS J. BLAKE, Pittsburgh, Penn., U. S., 20th July, 1874, for 15 years: "Smooth Back Shovel." (Bêche à dos poli.)

Claim.—1st. The method described of producing shovel blanks, namely: by securing a strap of soft steel or wrought iron in a suitable mould, and casting the steel ingot into the end of the strap, so that the strap and ingot will weld or unite at the time of casting; 2nd. A shovel blank, having a soft metal strap or straps united or welded to the cast steel ingot at the time of casting; 3rd. A shovel, scoop or spade, consisting of a blade and shank with socket and strap for attachment to handles, the whole complete in a single piece of metal composed of steels differing in temper, or composed in part of steel and in part of iron, so formed that in either case the said components shall exist in union independent of the use of welding under pressure, or the use of a rivet or other separate fastening, as specified.

INDEX OF INVENTIONS.

Bed springs, F. R. Smith.....	3600
Bleaching, washing, &c., apparatus and process for, D. Atbury and E. A. Osborne.....	3605
Boiler flues, machine for repairing, J. Hughes.....	3612
Brake, for railway and other carriages, James G. Scott.....	3610
Brushes, painters', binding, W. R. Macaulay.....	3568
Burial casket, H. Henika, M. F. Carder & O. M. Allen.....	3641
Butter, artificial, L. Harrington.....	3649
Capstans, J. Brokenshire.....	3586
Car-coupler, self-acting, J. J. Lapplin.....	3634
" " automatic, L. Sutton.....	3632
" " " J. McNabb.....	3570
Carriages, running gear for, R. Kline and R. M. Jack.....	3576
Clothe-line, &c., fastener, W. Clark.....	3602
Clothes wringing machine, M. Way and F. Way.....	3607
Coffee, apparatus for extracting, R. B. Underhill.....	3593
Cooking apparatus, steam, H. M. Welch.....	3629
Curry comb, T. Steers, Jr.....	3562
Electric gaslighting apparatus, E. E. Bean.....	3662
Engine, atmospheric, automatic, J. Rourk.....	3678
Engines, compound, W. Baxter, Jr.....	3668
Engines, worked by combustion of petroleum or other hydro-carbons, J. Hock.....	3587
Fanning mill, H. Sweltzer.....	3627
Faucets, A. D. Cable.....	3645
Fence, wire, G. Forsyth.....	3670
Fire extinguisher, J. H. Stelner.....	3599
Flower pots, J. E. Landers.....	3595
" J. E. Landers.....	3643
Forks, manure and hay, W. Briggs and L. Senecal.....	3664
Furnaces, cupola, E. Voisin.....	3584
Furnace, metallurgical, S. P. M. Tasker.....	3621
Furnace, portable, R. M. Wanzer.....	3564
Gas, apparatus for manufacturing, J. D. Patton.....	3560
Gas generator, T. D. Hodgson.....	3657
Gas hydraulic mains, apparatus for moveably sealing dip-pipes in, R. M. Caffall and A. Thomas.....	3617
Gas, preventing the back rush of, from gasometers, purifying gas and improving brilliancy of the light, R. M. Caffall.....	3615
Gates, T. Barnes and R. H. Hudgin.....	3624
Gate-self-opening for railway crossing, A. McConnell.....	3676
Glass moulds, J. Lytiatt and E. R. Kent.....	3583
Grain drill sower, W. S. Wisner.....	3573
Heating apparatus for sleighs, &c., T. H. Price.....	3630
Horse rake, D. P. Sharp.....	3567
Hose-repairer, J. Hedges.....	3628
Joiner's bench, P. Trudeau.....	3592
Lamps, A. Burbank and H. E. Shaffer.....	3611
Lantern, signal, J. W. Shaler.....	3667
Lath machine, Jesse E. Harriman.....	3672
Leather cutting and embossing machine, A. Gould.....	3653
Lock washer, H. Thorne.....	3638
Locomotive feed water heater, I. P. Magoon and H. Fairbanks.....	3577
Looking glass holders, Albert Jeffery.....	3591
Lozong machine, T. Robertson.....	3620
Lubricators, W. Hamilton.....	3655
Lumber, machine for edging, A. T. Nichols.....	3572
Mechanical movements, D. Zelgler.....	3660
Milkpan, J. Price and N. D. Martin.....	3646
Mops, scrubbing, J. W. Cuthbertson.....	3610
Mowing machine, F. Bramer.....	3582
Mowing and reaping machine, C. Wheeler, Jr.....	3608
" " " W. N. Whiteley.....	3609
Nails, cut, chisel pointed and machine for making, G. Stacey.....	3666

Hughes, Joseph, machine for repairing boiler flues.....	3612	Senecal, Louis and W. Briggs, manure and hay forks.....	3604
Jack, Robert M., and R. Kline, running gear for carriages.....	3576	Shaffer, Henry E., and A. Burbank, lamps.....	3611
Jellery, Albert, looking glass holders.....	3591	Shaler, Ira W., signal lantern.....	3607
Jones, Thomas D., wash board.....	3589	Sharp, Dennis P., horse rake.....	3567
Kelly, William E., steam generators.....	3609	Shorey, Samuel W., cutting and trimming attachment for sewing machines.....	3652
Kent, Edward R., and J. Lydlatt, glass moulds.....	3583	Simonds, George T., and T. A. Ferson, process for tempering and forming articles of steel.....	3642
King, David M., potato digger.....	3658	Skinner, Henry M., and L. W. Doty, riding plough.....	3606
Kline, Rufus, and R. M. Jack, improvement on running gear for carriages.....	3576	Smith, Franklin B., bed springs.....	3600
Landers, Joseph E., flower pots.....	3595	Stacey, George, chisel pointed cut nails, and machine for making.....	3666
Landers, Joseph E., flower pot.....	3643	Stairs, John F., oakum.....	3679
Laplin, John J., self-acting car coupler.....	3634	Steers, Thomas, Jr., curry comb.....	3562
Lott, James, apparatus for trimming the edges of straps...	3639	Stelner, John H., fire extinguisher.....	3599
Lowman, Harvey L., manufacture of scythes.....	3561	Stewart, Daniel, and H. Carter, odometer.....	3574
Lydlatt, James, and E. R. Kent, glass moulds.....	3583	Strait, Hiram, potato digger and gatherer.....	3622
McConnell, Alexander, self opening gate for railway crossings.....	3676	Strange, Alexander, and K. H. Cornish, spinning apparatus	3623
McNabb, James, automatic car coupling.....	3570	Sutton, Levi, automatic car coupling.....	3632
McCauley, William R., binding painters' brushes.....	3568	Sweizer, Henry, faning mill.....	3627
Magoon, Israel P., and H. Fairbanks, locomotive feed water heater.....	3577	Tasker, Stephen P. M., metallurgical furnace.....	3621
Martin, Morris D., and J. Prince, milk pan.....	3646	Thomas, Alfred, and R. M. Caspell, apparatus for movably sealing dip-pipes in gas hydraulic mains.....	3617
Miller, Thomas, oil cabinet.....	3565	Thorne, Horace, (assignee), lock washer.....	3638
Mitchell, Calvin, animal poke.....	3679	Todd, John C., toy gun.....	3663
Murray, Erastus H., granulated wheat.....	3558	Tracy, Harriet R., sewing machine cabinet.....	3604
Newball, Jonathan, attachment for wash boilers.....	3658	Trudeau, Pierre, joiners' bench.....	3592
Nichols, Albert T., machine for edging lumber.....	3572	Trudhill, Royal B., apparatus for extracting coffee.....	3593
Noyes, John, artificial stone.....	3633	Vivian, Samuel, peat machine.....	3625
Orth, Jacob, and W. Honsberger, threshing machines.....	3575	Voisin, Eugène, cupola furnaces.....	3584
Osborne, Edwin A., and D. Atbury, apparatus and process for bleaching, washing, &c.....	3605	Walker, Alexander, broad cast seed sower.....	3636
Palmer, Harry, machine for destroying potato bugs.....	3673	Walkey, George, refrigerator.....	3631
Paterson, Francis, portable apparatus for loading and unloading.....	3613	Wanzer, Richard M., portable furnace.....	3564
Paterson, Francis, steamboats.....	3614	" " sewing machines.....	3648
Patric, Charles E., broad cast sowing machine.....	3674	Warren, Henry H., animal trap.....	3571
Patton, Joseph D., apparatus for manufacturing gas.....	3560	Watkeys, Henry, throttle valve.....	3578
Perry, John S., and A. Dickey, heating stoves.....	3618	Way, Martin, and Frank, clothes wringing machine.....	3607
Pew, Edward A. C., peat machines.....	3665	Welch, H. M., steam cooking apparatus.....	3629
Price, Thomas H., heating apparatus for sleighs, &c.....	3630	Wentworth, James H., stoves.....	3603
Prince, John, and N. D. Martin, milk pan.....	3646	" " (assignee), stoves.....	3625
Richardson, Benjamin C., spool case.....	3581	Wheeler, Cyrenus, Jr., reaping and mowing machine.....	3608
Robertson, Thomas, lozenge machine.....	3620	Whiteley, William N., mowing and reaping machine.....	3609
Robinson, Charles, combined washer and wringer.....	3647	Wisner, Wareham, S., grain drill sower.....	3573
Rourke, John, automatic atmospheric engine.....	3678	Wood, De Volson, steam hammer.....	3654
Scott, Benjamin, rail joint for railways.....	3626	Woodhams, Joseph, steam valve.....	3563
Scott, Jacob and Albert Scott, force pumps.....	3616	Worswick, Thomas, force pumps.....	3585
Scott, James G., brake for railway and other carriages.....	3640	Young, John, shaft coupling for threshing and other machines.....	3594
		Zeigler, Daniel, mechanical movements.....	3660

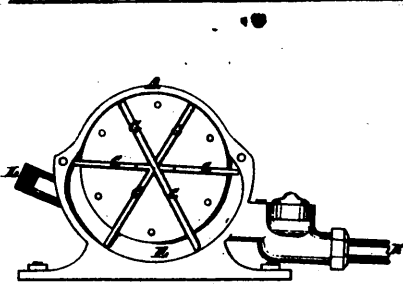
CANADIAN PATENT OFFICE RECORD

ILLUSTRATIONS.

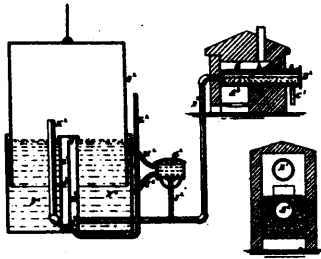
Vol. II.

JULY, 1874.

No. 4.



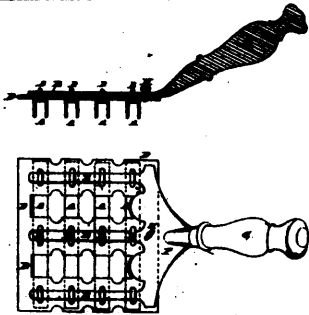
3559 Barnes' Rotary Pump.



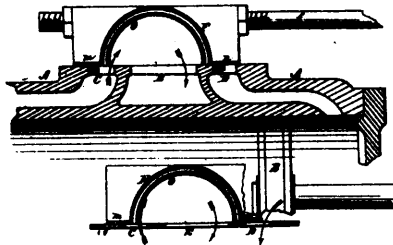
3580 Patton's Apparatus for Manufacturing Gas.



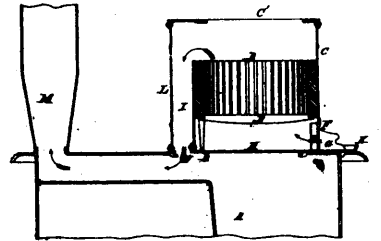
3581 Lowman's Manufacture of Scythes.



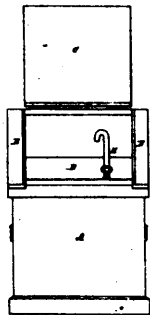
3582 Steers' Curry Comb.



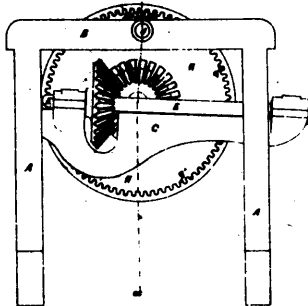
3583 Turners' Steam Valve.



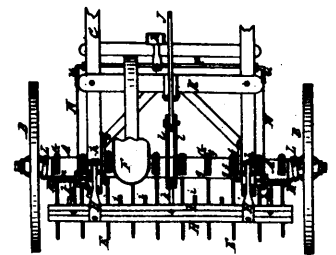
3584 Chamberlain's Portable Furnace.



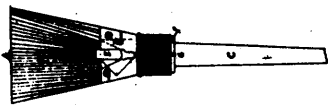
3585 Miller's Oil Cabinet.



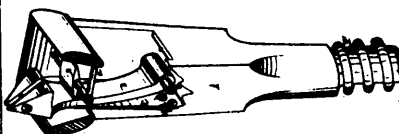
3586 Clokey's Threshing Machine Safety Gear.



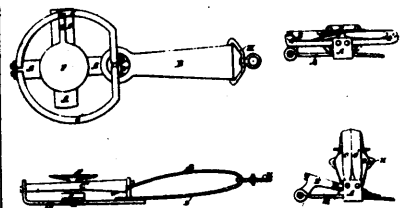
3587 Sharp's Horse Rake.



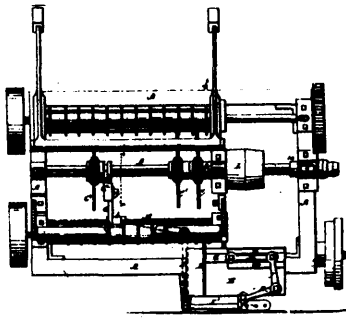
3588 Macauloy's Binding Painters' Brushes.



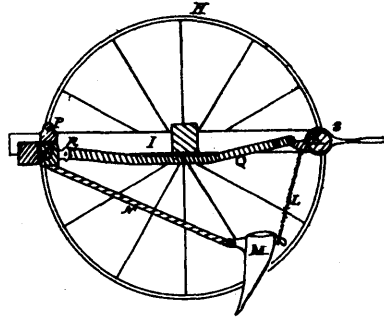
3570 McNabb's Automatic Car Coupling.



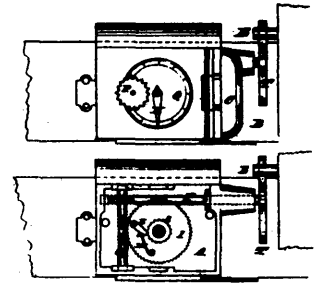
3571 Warren's Animal Trap.



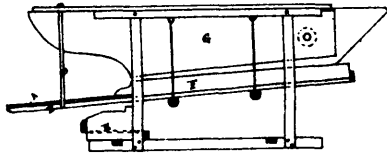
3572 Nichols' Machine for Edging Lumber.



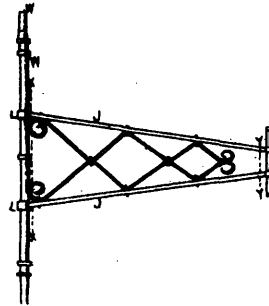
3573 Brown's Grain Drill-sower.



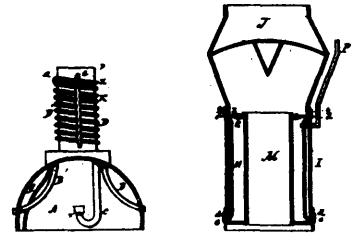
3574 Carter & Stewart's Odometer.



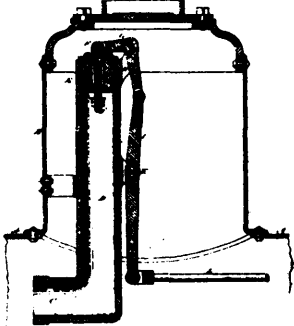
3575 Orth & Honsberger's Improvements on Threshing Machines.



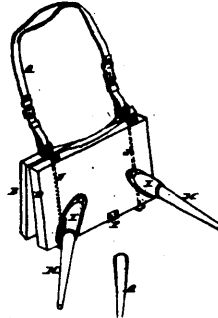
3576 Kline & Jack's Improvements in Running Gears for Carriages.



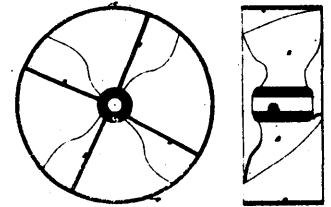
3577 Magoon & Fairbanks' Locomotive Feed Water Heater.



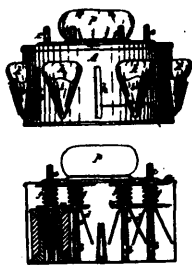
3578 Watkeys' Throttle Valve.



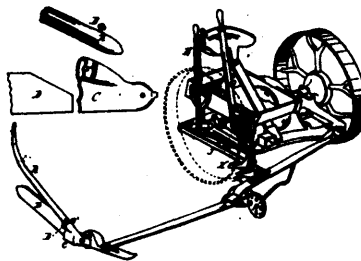
3579 Mitchell's Animal Foke.



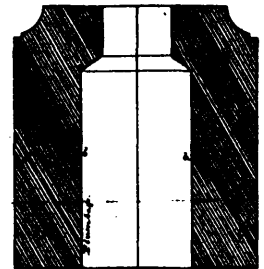
3580 Hose's Machine for Propelling Vessels.



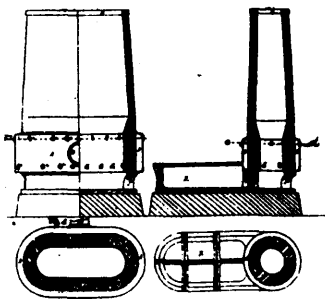
3581 Richardson's Spool Case.



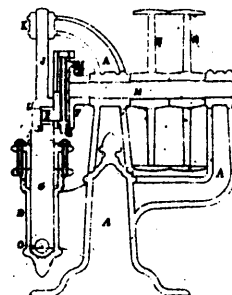
3582 Bramer's Mowing Machine.



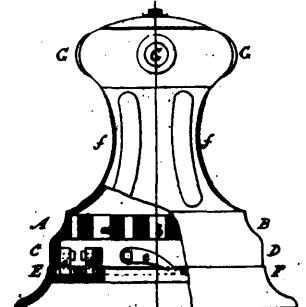
3583 Lydiatt & Kent's Improvements in Glass Moulds.



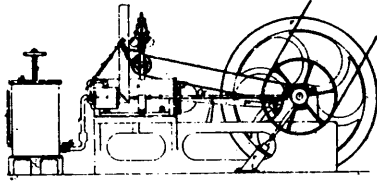
3584 Voisin's Improvements in Cupola Furnaces.



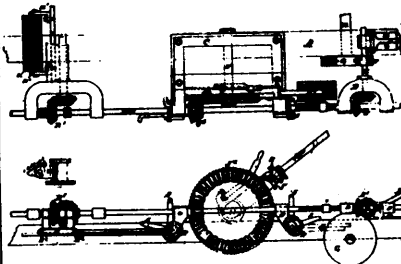
3585 Worwick's Improvements on Force Pumps.



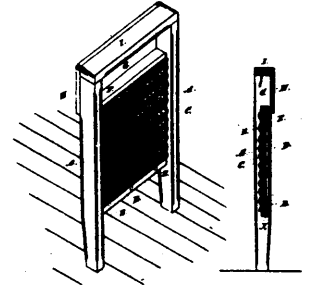
3586 Brokenshire's Improvement on Capstans.



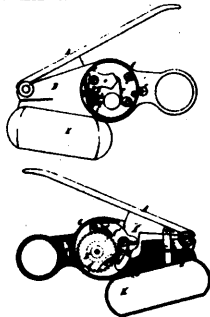
3587 Hock's Improvements on Motor Engines Worked by the Combustion of Petroleum or other Liquid Hydro-carbons.



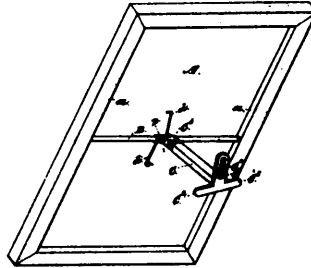
3588 Gowen's Improvements on Head Blocks and Setworks for Saw-mills.



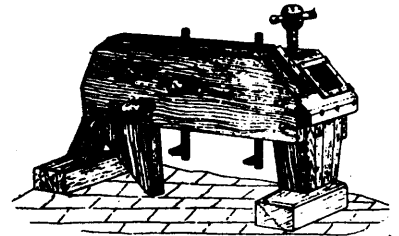
3589 Jones' Wash-board.



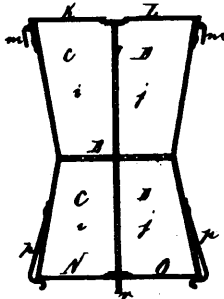
3590 Corbett's Registering Ticket Punch.



3591 Jefferys' Improvements in Looking-glass Holders.



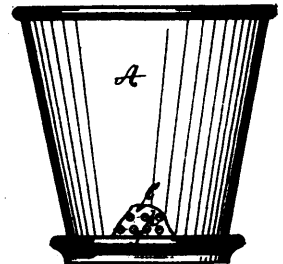
3592 Trudeau's Joiner's Bench.



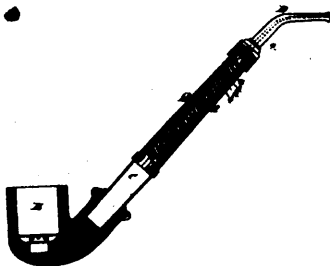
3593 Underhill's Apparatus for Extracting Coffee.



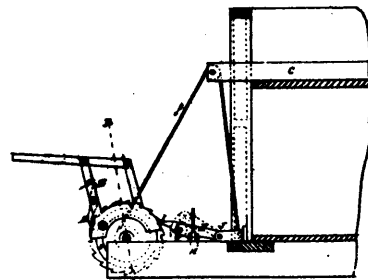
3594 Young's Shaft Coupling for Threshing and other Machines.



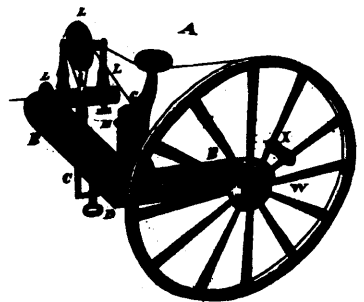
3595 Landers' Improvements in Flower Pots.



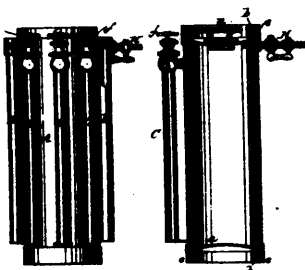
3596 Davis' Pipe Stem.



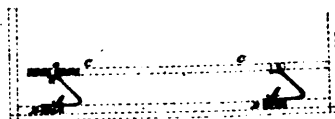
3597 Bryant's Improvements on Windlasses for Presses.



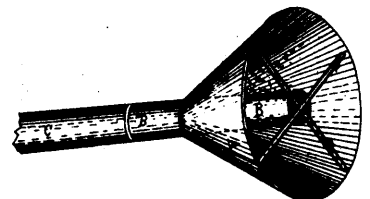
3598 Bishop's Spinning Wheel.



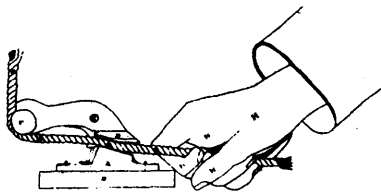
3599 Steiner's Fire Extinguisher.



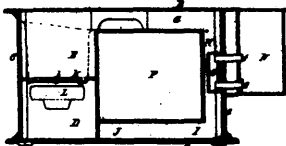
3600 Smith's Bed Springs.



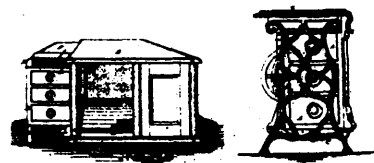
3601 Brooks & Bourassa's Washing Machine.



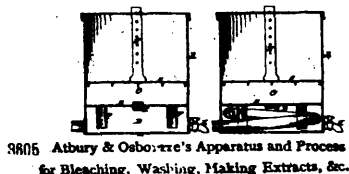
3802 Clark's Clothes Line, Rope and other Fastener.



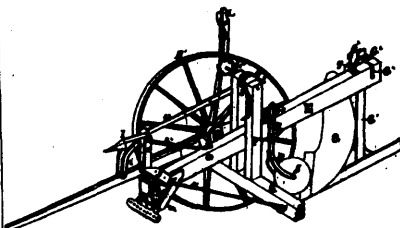
3803 Wentworth's Improvements in Stoves.



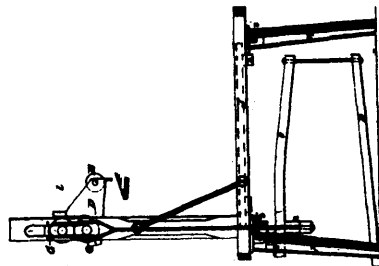
3804 Tracy's Sewing Machine Cabinet.



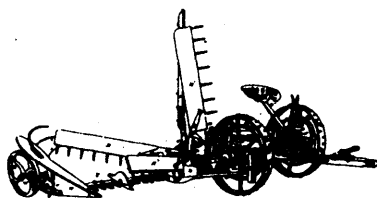
3805 Atbury & Osborne's Apparatus and Process for Bleaching, Washing, Making Extracts, &c.



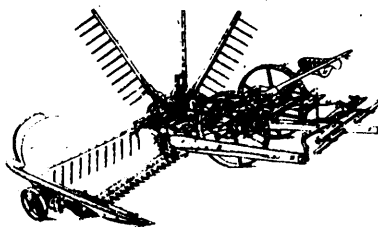
3806 Skinner & Doty's Riding Plough.



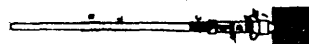
3807 Way's Clothes Wringing Machine.



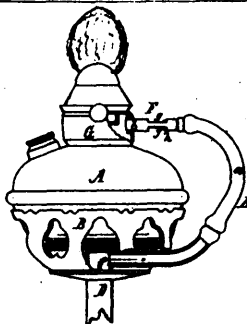
3808 Wheeler's Combined Reaping and Mowing Machine.



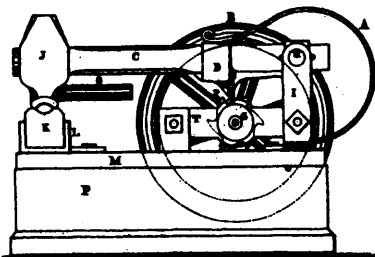
3809 Whitley's Mowing and Reaping Machine.



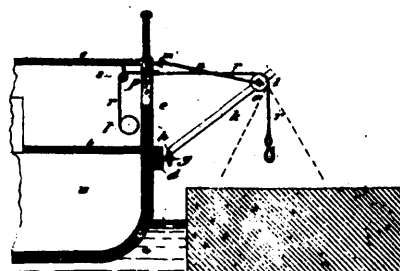
3810 Cathbertson's Improvements on Scrubbing Mops.



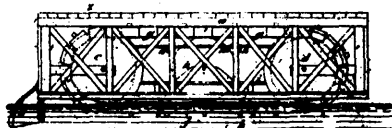
3811 Burbank & Shaffer's Improvement on Lamps.



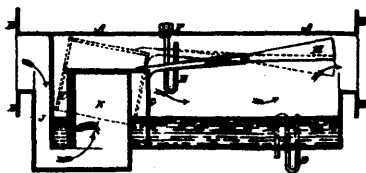
3812 Hughes' Machine for Repairing Boiler Flues.



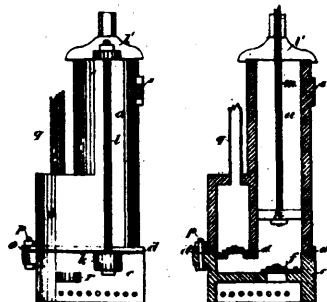
3813 Paterson's Portable Apparatus for Loading and Unloading Vessels.



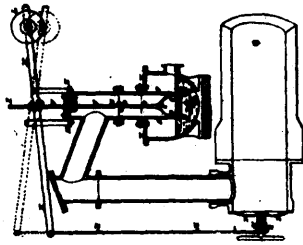
3814 Paterson's Improvements on Steamboats.



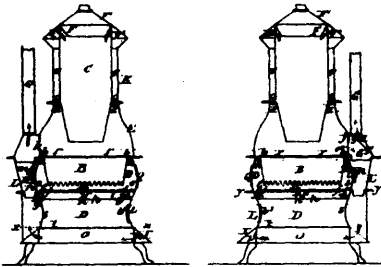
3815 Casfall's Improvements on Appliances for and Means of Automatically Preventing the Back Rush of Gas from Gasometers, for Purifying the Gas and for Improving the Brilliance of the Light.



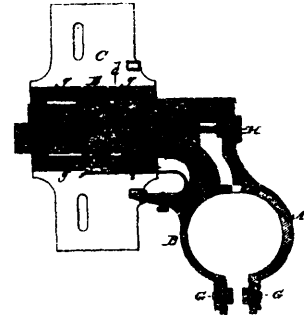
3816 Scott's Improvements on Force Pumps.



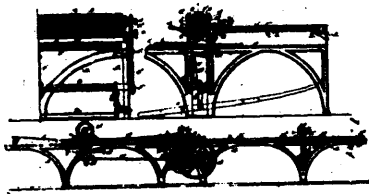
3617 Caffall & Thomas' Apparatus for Moveably Sealing Dip-pipes in Gas Hydraulic Mains.



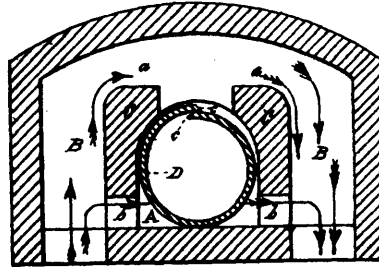
3618 Perry & Dickey's Improvement on Heating Stoves.



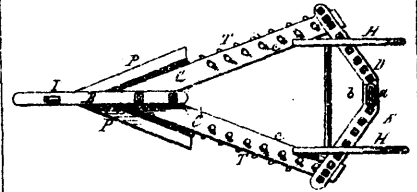
3619 Hinkley's Improvements on Saw-guides.



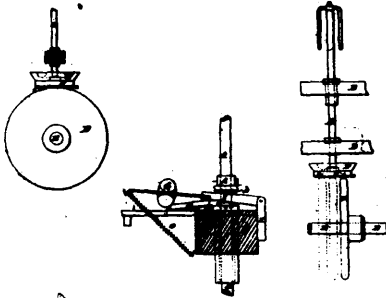
3620 Robertson's Losenge Machine.



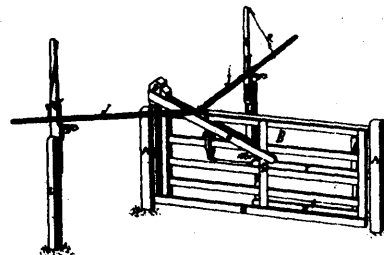
3621 Tasker's Metallurgical Furnace.



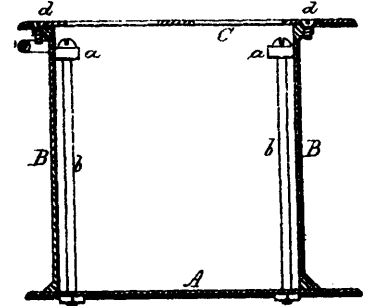
3622 Stralt's Potato Digger and Gatherer.



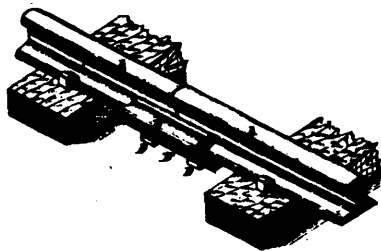
3623 Strange & Cornish's Spinning Apparatus.



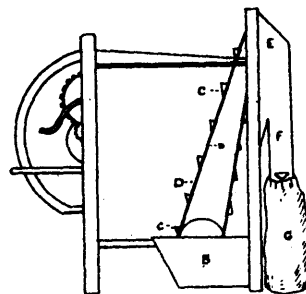
3624 Barnes & Hudgin's Improvements on Gates.



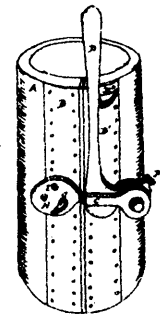
3625 Simpson's Improvements in Stoves.



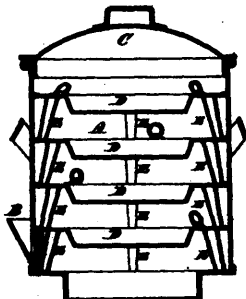
3626 Scott's Rail Joint for Railways.



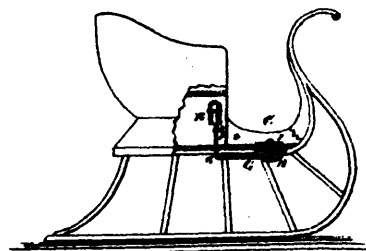
3627 Sweltzer's Fanning Mill.



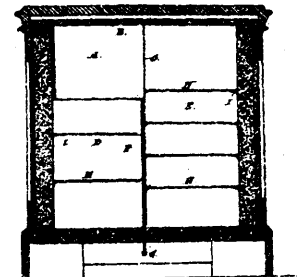
3628 Hedges' Hose Repairer.



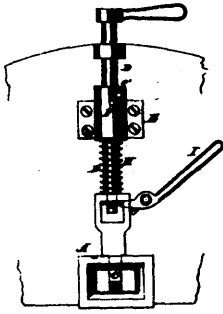
3629 Welch's Steam Cooking Apparatus.



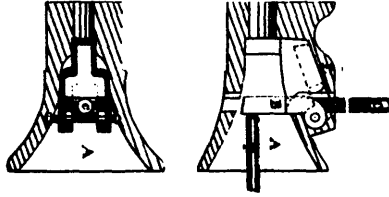
3630 Price's Heating Apparatus for Sleighs and Carriages.



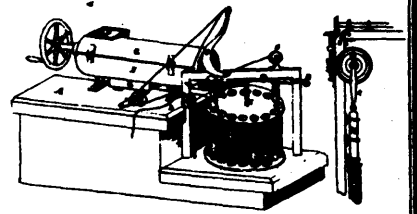
3631 Walkey's Refrigerator.



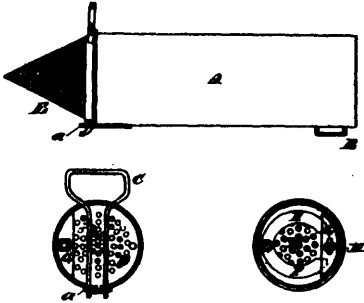
3632 Sutton's Automatic Car-coupling.



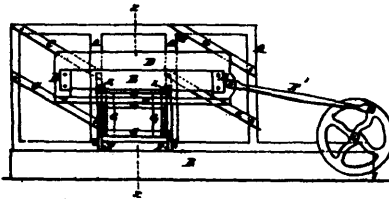
3634 Lappin's Self-acting Car Coupler.



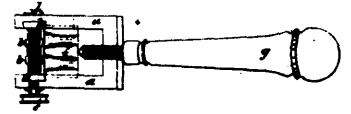
3635 Vivian's Post Machine.



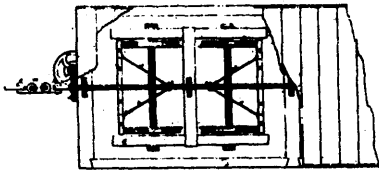
3636 Walker's Broad Cast Seed Sower.



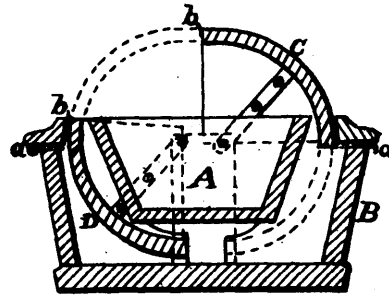
3637 House's Shingle Machine.



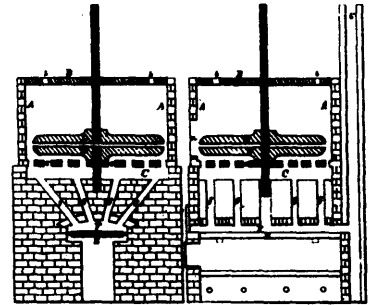
3638 Lott's Apparatus for Trimming the Edges of Straps.



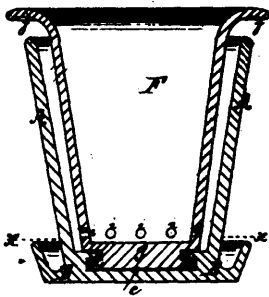
3640 Scott's Brake for Railway and other Carriages.



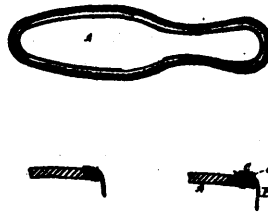
3641 Henika, Carder & Allen's Burial Casket.



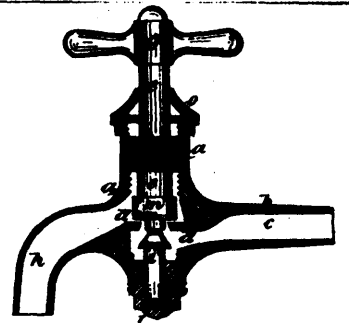
3642 Simonds & Ferson's Process for Tempering and Forming Articles of Steel.



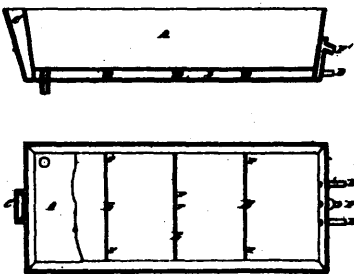
3643 Landers' Flower Pot.



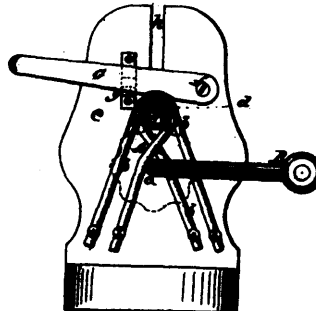
3644 Duchemin's Improvement on Turned Shoes.



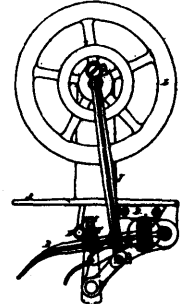
3645 Cable's Improvements on Faucets.



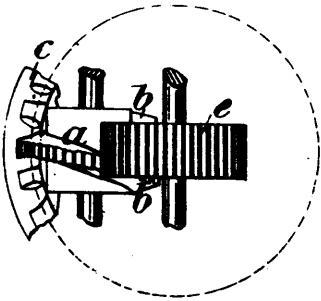
3646 Frisce & Martin's Milk Pan.



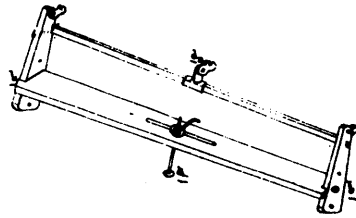
3647 Robison's Combined Washer and Wringer.



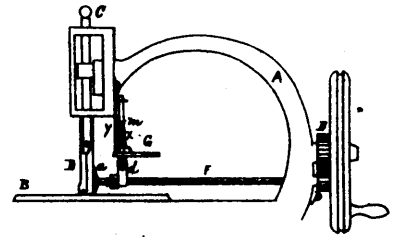
3648 McCune's Improvement in Sewing Machines.



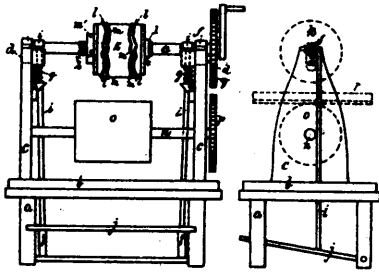
3650 Coffin's Improvements on Screws for Imparting Motion to Machinery.



3651 Ansted & Cross' Holder for Grinding of Reaper and Mower Knives.



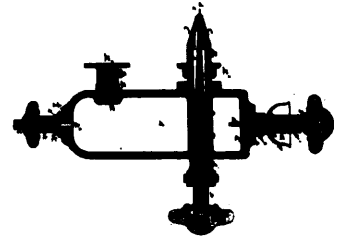
3652 Shorey's Cutting and Trimming Attachment for Sewing Machines.



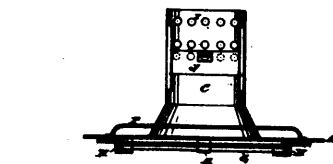
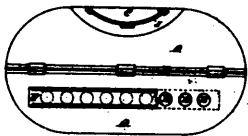
3653 Gould's Leather Cutting and Embossing Machine.



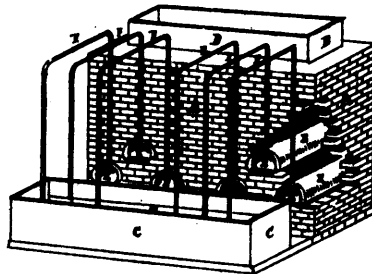
3654 Wood's Steam-hammer.



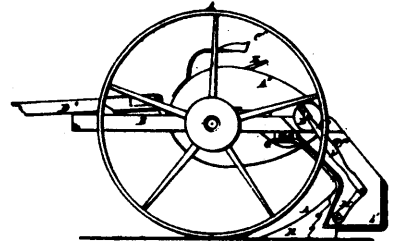
3655 Hamilton's Improvements on Lubricators.



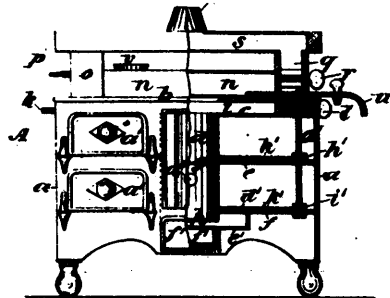
3656 Newhall's Attachment for Wash Boilers.



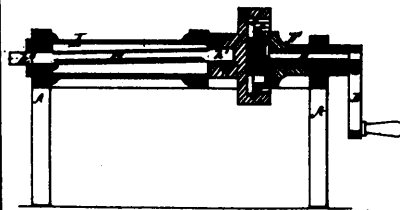
3657 Hodgess' Gas Generator.



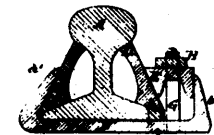
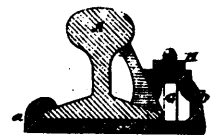
3658 King's Potato Digger.



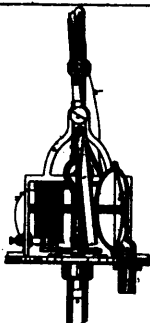
3659 Dana's Improvements on Cooking Stoves.



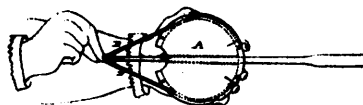
3660 Zeigler's Improvements in Mechanical Movements.



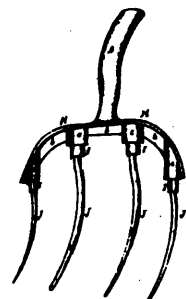
3661 Dunn's Improvements on Joint of Railway Rails.



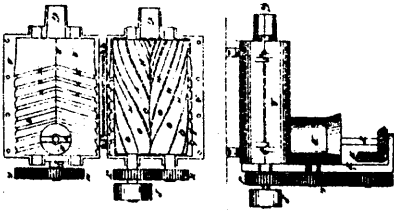
3662 Bean's Electric Gas-lighting Apparatus.



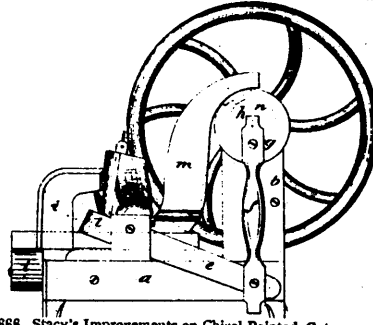
3663 Todd's Toy Gun.



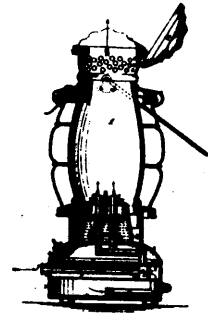
3664 Briggs & Senecal's Improvements on Manure and Hay Forks.



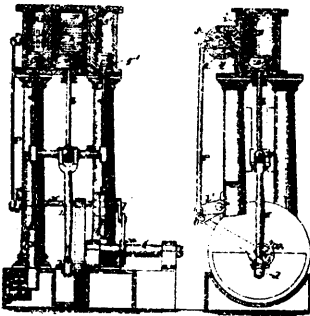
3665 Pew's Improvements on Peat Machine.



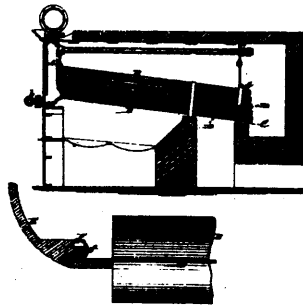
3666 Stacy's Improvements on Chisel Pointed Cut Nails and Machine for Making the same.



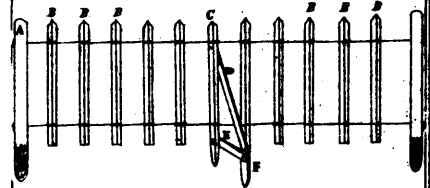
3667 Shaler's Signal Lantern.



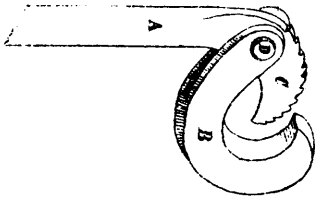
3668 Baxter's Improvements on Compound Engines.



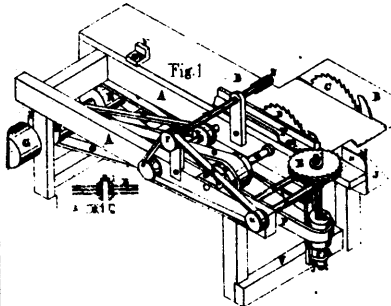
3669 Kelly's Improvements on Steam Generators.



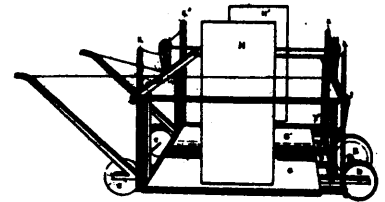
3670 Forsyth's Wire Fence.



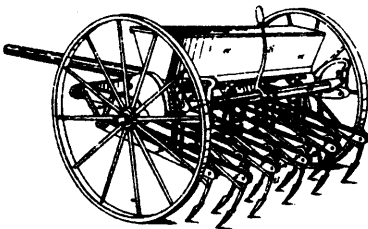
3671 Dunlop's Steam and Gas-fitting Wrench.



3672 Norton's Lath Machine.



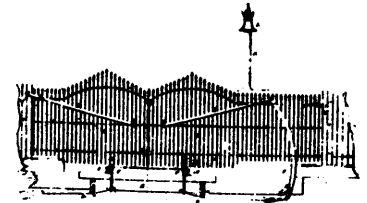
3673 Palmer's Machine for Destroying Potato Bugs.



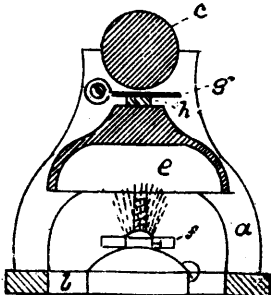
3674 Patric's Broad Cast Sowing Machine.



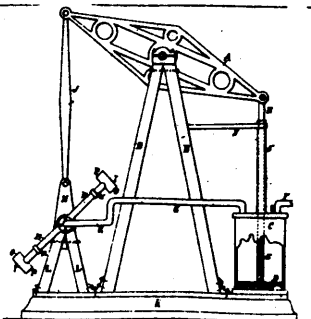
3675 Benner's Process of Veneering.



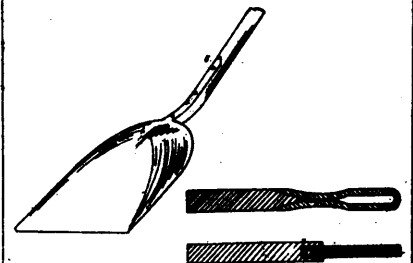
3676 McConnell's Self-opening Gate for Railway Crossings.



3677 Cantin's Photograph Burnisher.



3678 Rourke's Automatic Atmospheric Engine.



3680 Blake's Smooth Back Shovel.