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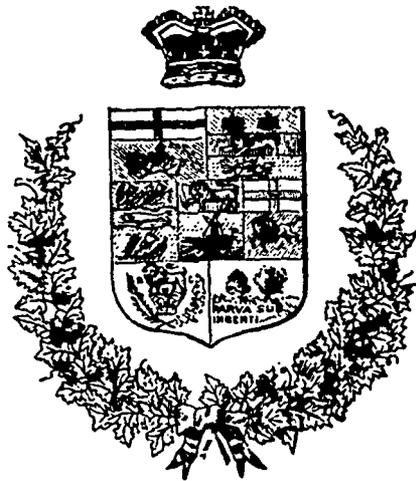
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“ James and Frederick A., fruit picker.....	5100	“ “ “ shoes.....	4578
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“ Joseph, flour scoop.....	4271	Blackman, Albert L., wheel.....	4969
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“ William D., heater furnace.....	5303	“ chines.....	1541
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Beatley, Joseph W., process and apparatus for the manu-		Breneman, Abraham N., boot holder.....	5395
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Bellamy, John, bag holder and truck.....	4919	“ “ heeling machine.....	5359
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“ “ “ horse power.....	5249	“ “ heels.....	5360
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“ Frank S., and G. F. Alexander, thill loop.....	5007	“ “ L., and J. B. McCormack, turbine water	
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Bullington, Edwin E., J. W. Johnson, C. M. Manville, S. W. Alvard, L. B. Rodgers, E. R. Myer, I. Vosburg, C. F. Nichols and C. M. Dunlop, fanning mill	5182	Codd, George S., and H. M. Converse, apparatus for blinds, scenes, &c.	4432
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Byrns, James O., advertising indices	5349	" Joshua, bag tie and fastener	4505
Cahuc, Raymond, mining powder	4995	Colvin, Verplank, portable boat	5210
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Caldwell, George W., and C. L. Holland, laundry polish	5003	Commins, John, fire kindler	5169
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" Nathan, curtain fixture	4898	Conrad, Jacob, and J. H. Fabringer, elevating building materials	4326
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" James W., and J. Stauffer, sash fastener	4815	Copeland, George W., boots and shoes	5238
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Casgrain, Henri E., gas machine	5076	" " boot and shoe lasting machine	5385
" and George Drolet, illuminating gas machine	4455	Copp, William J., cooking stoves	4731
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" " railway carriage draw bars and springs	5241	Cowman, John, and S. B. Barber, artificial marble and stone	4626
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" Titus S., E. B. Flint and G. W. Gregory, method of cleansing furniture, &c.	4960	Crosby, Addison, machine for cleaning flues	5335
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" " and G. W. Caldwell, laundry polish.....	5003	Kaiser, Jacob, grain or corn crusher and splice mill	4111
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" Edward H., and G. W. Cook, car truck.....	5203	" James M., and O. F. Gue, railway train brake	4360
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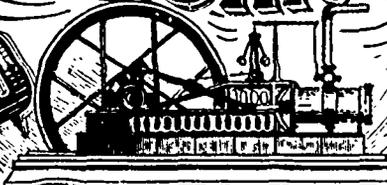
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INVENTIONS PATENTED.

No. 4130. DAVID RENSHAW, Boston, Mass., U. S., 3rd December, 1874, for 5 years: "Improvements on Superheaters." (Perfectionnements aux surchauffeurs.)

Claim.—1st. A superheater E, an induction pipe D, arranged partly above and partly below the grate C; 2nd. In combination with supply pipes G, of a superheater E, an induction pipe D, of greater diameter than said supply pipe; 3rd. In combination with an inner induction pipe D, a superheater E, receiving steam from the former; 4th. The induction pipe D, constructed as described with perforations in combination with the superheater E, within which it is arranged; 5th. The superheater globe E, provided with an inlet e, and outlet extension e', as described, the latter being of less capacity than the former.

No. 4131. ORFANDO V. FLORA, and JOHN B. ROSS, Madison, Ind., U. S., 3rd December, 1874, for 10 years: "Saddle Tree." (Fût de selle.)

Claim.—1st. The body and cantle A, which are made of one piece of wood, steamed bent and set in proper shape, and provided with a wooden bleat C; 2nd. In combination with the bent body and cantle A, the bent wood-crook B, secured thereto by letting partially into the same, as specified.

No. 4132. HENRY S. PARMELEE, New-Haven, Ct., U. S., 3rd December, 1874, for 5 years: "Automatic Fire Extinguisher." (Extincteur automatique d'incendie.)

Claim.—1st. In combination with the sprinkler E, valve F, spring I, and fusible supports, the cap H, extending down around the said supports; 2nd. In combination with the sprinkler E, valve F, spring I, and fusible supports, the adjustable screws N, and non-conducting material a; 3rd. The combination of the sprinkler E, valve F, spring I, fusible supports and the drip cup d; 4th. In combination with the supply pipe A, and distributing pipes, the valve B, between the supply and distributing pipes, the tube T, communicating from the supply pipe below the valve to the distributing pipe above and to the piston R, the said piston provided with a spring U; 5th. In combination with the distributor B, the cup C, attached thereto by a fusible material; 6th. In combination with the valve E, and its seat F, the projection L, on the valve through the water seat; 7th. In combination with an alarm and a valve through the movement of which the alarm is operated, a passage through or around the valve to permit the flow of sufficient water, or whatever it may be, above the valve as described.

No. 4133. WILLIAM H. FOYE, Portland, Me., U. S., 3rd December, 1874, for 5 years: "Bill Holder and Paper Fyle." (Groupe-notes et serre-papiers.)

Claim.—1st. The combination of the base b, and piece e, hinged strip f, spring j, having the edge i, flap a, flap c, and end piece g;

2nd. The combination of the base b, end piece e, strip f, spring j, having the edge i, flap a, flap c, catch l, and piece g, and side pieces d; 3rd. The combination of the back piece a', provided with the bands or wires e', upon which are held the folded index sheets b', each pair of said sheets having the series of successive folds d', as described.

No. 4134. BERNHARD LEVY, New York, U. S., 3rd December, 1874, for 10 years: "Combined Overcoat and Carriage Robc." (Par-dessus et robe de voiture combinés.)

Claim.—A robe having a top portion B, hood C, D, sleeves E, and pockets H, constructed and arranged as described, so that the sleeves are outside when the article is used as a coat, but may be turned into the pockets when it is used as a robe; the combination with hood C, having top D, of the robe having button N, as described, so that the piece C, D, may be used as a hood or collar.

No. 4135. WILLIAM INGLIS, Bolton, Eng., and JAMES INGLIS, Montreal, Que., 3rd December, 1874, for 15 years: "Improvements on the Construction of Vessels Used for Floating Elevators and on the Arrangement of the Screw Propellers Used in the same." (Perfectionnements dans la construction des vaisseaux employés pour tenir à flot les élévateurs, et dans l'ajustage des propulseurs à hélice pour cet objet.)

Claim.—1st. The arrangement of propeller B, situated as described, with inclined shaft D; 2nd. The arrangement of the engine and the cross shaft G, with the gearing and sliding crank or disc K, for connecting the engine to drive the screw propeller, as set forth.

No. 4136. SAMUEL D. KEENE, Providence, R. I., U. S., 3rd December, 1874, for 5 years: "Cotton Cleaning Machine." (Machine à nettoyer le coton.)

Claim.—1st. The combination of a scratcher or beater and drawing rolls with an adjustable mote board all arranged to operate together, as described; 2nd. The combination of the condensing rolls K, K', and the drawing rolls B', B'', with the grill M, all operating together as described.

No. 4137. JOSEPH DELWORTH, and JOHN C. HODGINS, Toronto, Ont., 5th December, 1874, (Extension of Patent No. 171), for 5 years: "Apparatus for High Pressure Steam Engines." (Appareil pour les machines à vapeur à haute pression.)

Claim.—1st. The perforated plate F, in the chamber A; 2nd. The mud cocks at G, G, at the chamber A, and at E, E, at the bottom of the apparatus; 3rd. The flanged joint H, of the top tube below; 4th. The V-shaped vulcanized rubber packing in the recess, in combination with the flanged joint H, for readily detaching the tubes from the apparatus; 5th. The recess for receiving the packing; 6th. The combination of the several parts constructed, arranged and operated substantially as described.

No. 4138. JAMES B. BALDWIN, Toronto, Ont., 9th December, 1874, for 5 years: "Hot Water Reservoir for Stoves." (Reservoir à eau chaude pour les calorifères.)

Claim.—A reservoir A, with a downwardly projecting tube C, in combination with a fire pot D, or its equivalent, as specified.

No. 4139. IRA P. MERWIN, Syracuse, N. Y., U. S., 10th December, 1874, for 5 years: "Improvements in Drain-pipe Moulding Machines" (Perfectionnements aux machines à mouler les tuyaux de drainage.)

Claim.—1st. In combination with the core standard having head H, and base E, the crotchet wedge bar F, arranged to slide in suitable supports or on the underside of the platform A, as described. 2nd. The combination with the flask of the core L, having the base lugs M, the core standard having lugs K, the same being thus adapted for connection and disconnection as specified.

No. 4140. DANIEL MORTIMER, Ottawa, Ont., 10th December, 1874, for 5 years: "Art of Ruling Paper." (Art de régler le papier.)

Claim.—A pattern sheet, Fig. 2, laid upon the sheet to be ruled when passing through the ruling machine, having openings C, to allow the pens of the ruling machine to strike upon the underlying sheet to be ruled, the pattern sheet receiving the continuation of the lines from "stop" to "strike" in the manner set forth.

No. 4141. ERASTUS W. EVANS, Boston, Mass., U. S., 10th December, 1874, for 5 years: "Car Washer." (Laveuse de wagons.)

Claim.—A car washer or sash brush, composed of the united parts, and of the combination of the parts A, and A', having bristles or other suitable material fastened in A, the said parts A, and A', being provided with a furrow C, with an india rubber band D, secured in the furrow in the manner described.

No. 4142. WHITNEY E. CALHOUN, St. Johns, N. B., 10th December, 1874, for 5 years: "Corn-sheller." (Egreoir à blé-d'inde.)

Claim.—1st. The combination of the revolving disc D, with the sheller bars S, S'; 2nd. The combination of the hollow cylinder C, with the revolving disc D, tongue t, and groove g; 3rd. The combination of the revolving sheller bars S, S', with the knives or spurs t, t'; 4th. The combination of the sheller bars S, S', with the pivots i, i', and springs u, u'; 5th. The revolving sheller arms S, S', set spirally to feed the ear as it is shelled; 6th. The concave and fluted guide L; 7th. The combination of the fluted guide L, and the dated and revolving cylinder U; 8th. The combination of the guide J, the spring M, and the adjusting screw S, and arm N; 9th. The combination of the spring u, with the posts e, and sheller bars S, so arranged that the spring can be removed as described; 10th. The combination of the main frame A, arms B, B', cylinders C, driving gears I, H, G, and F, revolving disc D, sheller arms S, S', springs u, u', feeder O, guide L, and spring m, all arranged and operating together as described.

No. 4143. CARLOS SKINNER, Waterloo, Que., 10th December, 1874, for 5 years: "Drum Heater." [Poêle sourd.]

Claim.—The drum A, constructed with inlet and outlet smoke apertures E, F, having internally a series of longitudinal air tubes B, and open ended cap C, forming a cold air distributing chamber for connection with a cold air duct D, as set forth.

No. 4144. JACOB KAISER, York, Ont., 10th December, 1874, for 5 years: "Grain or Corn Crusher and Spice Mill." (Mouture pour blé-d'inde et pour les épices.)

Claim.—1st. The frame A, shaft B, pulley B', handle B'', and bevel wheel B''', the upright spindle C, level pinion C', and tared disc C'', with under grinder C'', the concave cylinder D, with springs d', d'', and upper grinder D', hopper H, shoe S, and bracket L, as set forth; 2nd. The dress upon the face of the grinders D', and C'', in the mill, and also the various other kinds of dress, as shown in the drawings marked Figs. 8, 11 and 14, and illustrated by models marked Nos. 8, 11 and 14, which accompany the model of the machine.

No. 4145. OREN S. OSMER, Boston, Mass., U. S., 10th December, 1874, for 5 years: "Darning Machine." (Machine à repriser.)

Claim.—1st. The combination of a series of needles supported by a sliding carriage and operating to lay a series of yarns in parallel directions with a suitable clamp for changing the positions of these yarns and presenting them at right angles to the axes of the needles and into such a position that the next series of yarns laid shall interlace with them; 2nd. The combination with a series of needles mounted and operated as explained of a pair of upright guides or cases for supporting or clamping the work while being operated upon, and a plunger sliding within each guide under such an arrangement that when the first series of yarns is laid the faces of the plungers are detached and when the second course of yarns is laid the plungers meet and compel the second to interlace the first at right angles as stated; 3rd. The combination of the guide J, plunger C, cam block e, and sloping abutment; 4th. A sliding carriage and a series of needles in combination with devices for shifting the positions of the yarn; 5th. The combination with a machine for darning various objects or effecting analogous results organized as shown of a tension device essentially as stated; 6th. The combination with a machine for darning various objects or effecting analogous results organized as explained of a device for cutting the refuse ends of the yarn essentially as stated; 7th. A needle having one boundary of its eye reduced to a sharp edge for cutting the yarns; 8th. Placing the guide plate through which the needles pass at an angle to or obliquely with the path of movement of the needles in order to sever but one yarn at a time, or the series of yarns in succession; 9th. The combination with one of the guide cylinders or plungers of a device for locking the latter in position and preventing breaking of the needles; 10th. In combination with the stem of the plunger of the notched disc m, and bolt k, or their equivalents as stated; 11th. The arrangement of the teeth of the plungers as described, whereby the yarns are caused to travel or be laid in a path similar to the teeth saws; 12th. The combination with one of the plungers and guide cylinders preferably the upper of a means of adjusting the relative height of such plunger with respect to its mate; 13th. The employment of the tubular sleeve I, as a means of adjusting the height of the plunger as stated.

No. 4146. JOB JOHNSON, Brooklyn, N. Y., U. S., 10th December, 1874, for 5 years: "Improvements on Ball Castors." (Perfectionnements aux roulettes de meubles sphériques.)

Claim.—1st. The cylindrical socket a, open at both ends, and containing the ball b, in combination with the plate c, resting at its edges against a bearing within and around the ball-socket and the anti-friction bearing d, secured into a recess in the said bearing plate as set forth; 2nd. The separate bearing plate c, provided with a recess and a hardened anti-friction bearing, in combination with the cylindrical socket and ball of the castor as specified.

No. 4147. HENRY B. STOCKWELL and EDWARD L. MCGILL, Brooklyn, N. Y., U. S., 10th December, 1874, for 5 years: "Self-lighting Gas Burners." (Bees à gaz à allumage automatique.)

Claim.—1st. The combination of the magazine G, guide J, and r, swinging hammer D, spring d, cam E, cock B, and the burner of its tip C, as specified; 2nd. One or more feeding wheels k, in combination with the gas-cock B, and ribbon magazine G; 3rd. The shield or shields t, on the hammer D; 4th. The percussion or priming ribbon I, having its fulminate m, composed of the described ingredients or their equivalents, in or about the proportions named and for the purpose specified.

No. 4148. GABRIEL DESGEORGES, Montreal, Que., 10th December, 1874, for 5 years: "Apparatus for the Storage and Transportation of Petroleum." (Appareil pour l'emmagasinage et la transportation du pétrole.)

Claim.—An apparatus for the storage and transportation of petroleum, &c., composed of an outer chamber A, provided with discharge cock G, and inner chamber B, with opening C and plug D, discharge cock E and gauge F, as described.

No. 4149. THOMAS GALBRAITH, Port-Hope, Ont., 10th December, 1874, for 5 years: "Lock-Nut Bolt." (Boulon à noix de sûreté.)

Claim.—A slit or parting A in the point of a bolt B, so that the said point can be expanded as specified.

No. 4150. WILLIAM HAARMANN, Berlin, Prussia, 10th December, 1874, for 5 years: "Manufacture of Vanilline." (Fabrication de la Vanilline.)

Claim.—The production of artificial Vanilline by treating conifer or the cambial juice of conifer or coniferin, or a watery extract of conifer or any substance containing coniferin by either of the two processes as set forth.

No. 4151. JOHN J. HIGGINS, New York, U. S., 10th December, 1874, for 5 years: "Automatic Umbrella Runner." (Douille automatique de parapluie.)

Claim.—In combination with the stick C and springs c, c', of an umbrella, the runner composed of the inner tube A and outer tube B, all constructed and arranged to operate as set forth.

No. 4152. WILLIAM STAFFORD, Montreal, Que., 10th December, 1874, for 5 years: "Harrow and Cultivator." (Herse-cultivateur.)

Claim.—1st. The frame a, a'; 2nd. The mode in which the teeth d, d' are secured to the frame a, a'; 3rd. The mode of attaching each section to master-tree h, regulat'g or draught holes k, k', in frames a, a'; 4th. Regulat'g or draught holes in centre of master tree h.

No. 4153. FRANKLIN MARSH, Northampton, Mass., U. S., 11th December, 1874, for 5 years: "Rotary Steam Engine." (Machine à vapeur rotatoire.)

Claim.—1st. The combination of the slide valves D and D', the steam passages or ports h, h', h₂ and h₃, and the piston B, said combination and arrangement giving to the engine the feature of a double cut off, as described; 2nd. In combination with the piston B, the reverse valves a₁, a₂, a₃, and a₄, the slide valves D and D', and the passages h, h₂, h₃, and h₄, as set forth; 3rd. In combination with the piston B, the passages h, h₂, h₃, and h₄, the reverse valves a₁, a₂, a₃, and a₄, the slide valves D and D', and the exhaust passage n as set forth; 4th. In combination with the passages h, h₂, h₃, and h₄, the reverse valves a₁, a₂, a₃, and a₄, the lever l and the connecting rods e, whereby a reverse rotary movement is given to the piston B, by moving all said reverse valves at once through the medium of said lever and rods as described; 5th. The arrangement of the passages h, h₂, h₃, h₄ and the steam chambers c, extending and beyond said passages in combination with the valves D and D', whereby said valves are moved inward by the force of the steam entirely and operate at their rear ends, to cut off the steam from entering said passages when the valves are at their extreme outward position, as set forth.

No. 4154. GEORGE BARCLAY and JAMES KENNEDY, Oshawa, Ont., 11th December, 1874, for 5 years: "Improvements on Horse Rakes." (Perfectionnements aux râteliers à cheval.)

Claim.—1st. The combination of the spring shooting bar D, having pins e, d, slotted hollow axle C, and collar B, having radial grooves f with the wheel hub A, to operate as described; 2nd. The draw-bracket I, secured to the draw bar and sleeved on the axle, having a cam projection j, for automatically disengaging the pin e, from the radial grooves f, in the process of dumping; 3rd. Providing the rake with a foot bracket G, hinged centrally to its pivotal connection and having a lever e, as described; 4th. The tooth holders K, bolted separately to the axle and formed with a slotted vertical projection L, and having a slot h' in the base to hold the tooth in position as set forth.

No. 4155. JOHN TESSEYMAN and PRESERVED SMITH, Dayton, Ohio, U. S., 11th December, 1874, for 5 years: "Valve Gear." (Appareil de Soupape.)

Claim.—1st. The combination of valve moving lever C, c, actuated directly by the piston rod A, reciprocating plunger E, c, and spring G, connected and operating in the manner specified; 2nd. The combination of cam D, h, lever c', c, plunger E, c, and spring G; 3rd. In combination with plunger E, c, and fixed support F, the adjustable head f, adjustable nut I, and spring G, operating as specified.

No. 4156. NORMAN W. WHEELER, New York, U. S., 11th December, 1874, for 15 years: "Process and Apparatus for the Reducing of Iron

and other Ores." (Procédé et appareil de réduction des minerais de fer et autres.)

Claim.—1st. The process of reducing metals from the ores thereof described, that is to say by showering granulated ore downwards through a double atmosphere composed of a column of flame over a column of reducing gases. 2nd. In combination with means for reducing metals, by showering the ore down through a double atmosphere, consisting of a rising column of flame, over a rising column of reducing gases, the process described of transferring it from the foot of the shaft A, to the hearth of the oven B, connected therewith and there exposing it to the action of flame produced and controlled in the manner set forth. 3rd. The process described of making carbon steel, that is to say, by showering iron ore down through a double atmosphere consisting of a rising column of flame over a column of reducing gases, into a bath of carbonized iron, maintained in a state of fusion as described. 4th. The process of making chrome steel described, that is to say, by showering the ores of chromium and iron, in measured relative quantities, down through a reducing shaft containing a rising column of flame over a rising column of reducing gases, into a bath of molten metal. 5th. The feeding apparatus consisting of the cylinder m, hopper k, and suitable means for guiding the ore; 6th. The combination of the feeding apparatus with the reducing shaft A; 7th. The combination of both ore and flux feeding apparatus with the reducing shaft A; 8th. The combination of the gas conduit a, leading from a gas producer and a reducing shaft A, having the full combustion air holes g, g, and feeding holes t, t'. 9th. The combination in a reducing shaft A of the full combustion air holes g, g, ore feeding holes t, t', and flux feed holes c. 10th. The combination of a reducing shaft, as A, having full combustion air holes g, g with the furnace or oven B, gas conduit a, air conduit b, and door i, as described.

No. 4157. THOMAS HEAD, Copetown, Ont., 11th December, 1874, for 5 years: "Potato-Digger." (Extracteur à patates.)

Claim.—1st. The combination of moveable or shaking grated mould board B, to plough or digger; 2nd. The combination of rod C, crank D, shaft F, for communicating motion to grated mould board B, and the use of moving or other machine as prime mover to shaft F, as set forth.

No. 4158. ELMER A. SMALLEY, Hyde Park, Vt., U. S., (Assignee of N. F. Reed and T. O. Andrus, 11th December, 1874, for 5 years: "Rein-Holder." (Accroche guides.)

Claim.—1st. In combination with the cams D, D, and screw B, the adjustable elastic cord a. 2nd. The combination of the clamp, A, A', post C, rod b, cams D, D, all constructed as set forth.

No. 4159. GEORGE BARCLAY and JAMES KENNEDY, Oshawa, Ont., 11th December, 1874, for 5 years: "Improvements on Horse Rakes." (Perfectionnements aux râteliers à cheval.)

Claim.—1st. The combination of the cog wheel B, affixed to the hub, A, and a pawl bracket C, secured to the axle having a spring pawl D, to operate as described. 2nd. The projecting arm H, secured to the draw bar to release the pawl engagement, automatically as set forth.

No. 4160. WILLIAM H. PAGE and SAMUEL MAWRY, Greenville, Ct., U. S., (Assignees of G. C. Setchell), 11th December, 1874, for 5 years: "Improvements on House and Garden Trellises." (Perfectionnements aux treillis de maison et de jardin.)

Claim.—The trellis described, made by subdividing boards into rectangular strips and bars, and fastening the subdivisions together in various curved forms by the spring of the curved parts in the manner set forth.

No. 4161. HUBERT R. IVES, Montreal, Que., (Assignee of W. Burlingame), 11th December, 1874, for 5 years: "Steam Drum." (Réservoir à vapeur.)

Claim.—A steam drum or reservoir divided into two compartments as set forth; the lower compartment receiving steam from the generator by a series of ports and the partition between the chambers being perforated as explained, the whole being as stated.

No. 4162. WILLIAM H. CURTIS and ROYAL MORRIS, Buchanan, Mich., U. S., 11th December, 1874, for 5 years: "Carpet Stretcher." (Tendeur de tapis.)

Claim.—1st. The combination of the toothed bar A, lever B, balls b, b', and the bar C, provided with the ratchet c, and hook d; 2nd. The bar A, provided with tooth a, for holding the carpet, while being stretched as set forth.

No. 4163. FRANCIS McGUIRE, Toronto, Ont., 11th December, 1874, for 5 years: "Improvements in Boiler Feeders." (Perfectionnements aux alimentateurs des chaudières à vapeur.)

Claim.—1st. The upright case B, having water gauge I, and "ry-cocks J, attached with detachable bottom B, in combination with and connected to the boiler A, by the pipes U, and C, arranged as set forth; 2nd. The float G, with connecting rod a, lever E, hinged to the standard E, connecting links F, and lever F, pivoted on the standard E, and having the shorter arm F, enlarged to form a disc f, in combination with the supply plug D, arranged as described; 3rd. The plug H, in combination with the case B, arranged as described.

No. 4164. JAMES P. TAYLOR, Elizabethten, Ten., U. S., 11th December, 1874, for 5 years: "Battery Guns and Repeating Ordnance." (Canons de batterie et bouches à feu à répétition.)

Claim.—1st. The oscillating cylinder 8, and sliding cylinder 10; combined to operate as set forth; 2nd. The construction of the sliding cylinder 10, with spiral grooves having terminal notches or recesses adapted to lock the said cylinder in its forward position by the action of studs or projections on an outer cylinder engaging in such grooves and recesses as explained; 3rd. A lock cylinder carrying plungers which contain firing pins, and through the medium of a suitable charging block force the cartridges forward into their places within the barrels; 4th. The hooked retracting rods carried by the sliding cylinder and adapted to engage with the charging block as explained; 5th. The charging block consisting of a pair of plates held together by a clamp screw as set forth; 6th. The spring lips 32, to bear on the flanges of the cartridges; 7th. The guide pins or rods applied to the charging block for the purpose set forth; 8th. The firing mechanism consisting of guiding pins driven forward by springs and one or more revolving cams which retract and release said pins; 9th. The attaching nut 27, screw stem 23, and pin or spline 26, permitting the removal of the handle 25, or its ready attachment in operative position.

No. 4165. JOEL WILSON, Dover, N. J., U. S., 11th December, 1874, for 5 years: "Furnace for Reducing Iron Ores." (Fourneau pour réduire les minerais de fer.)

Claim.—1st. The arrangement and combination of the circular series of upright rotors B, and intervening flues C, the internal chamber E, within said series for the products of combustion, and the collecting chamber I, for receiving said products after they have traversed the intervening flues; 2nd. The arrangement and combination of the said internal chamber E, the circular series of upright rotors B, surrounding that chamber and the flue F, for delivering products of combustion from the balling furnace; 3rd. The arrangement and combination of the internal chamber E, the circular series of upright rotors, surrounding that chamber, the flues C, intervening between the said rotors and the internal annular flue-space b, surrounding said rotors; 4th. The arrangement and combination of the internal chamber E, the circular series of upright rotors surrounding said chamber, the flues C, intervening between said rotors, the annular flue space b, surrounding said rotor; 5th. The flue F, placed below the annular collecting chamber I, and communicating with the internal chamber E, which is surrounded by rotors and flues; 6th. The flue passages n, n', under the rotors B, leading from chamber E, into the annular space b, surrounding the rotors; 7th. The external conduits c, forming communications between the chamber E, and the upper ends of the descending flues C, as described.

No. 4166. JOHN A. GROVE, Bluffton, Ind., U. S., 11th December, 1874, for 5 years: "Differential Pulley." (Poulie différentielle.)

Claim.—The tooth X, arranged on the peripheries of the sheaves A, B, of differential pulley blocks and employed as set forth.

No. 4167. STEPHEN WHITE, Belleville, Ont., 11th December, 1874, for 5 years: "Suspended Whiffletree." (Palonnier suspendu.)

Claim.—The combination of the whiffletree C, sheaves D, trace chains E, guards F, staples G, and girths H, as set forth.

No. 4168. E. LAWSON FENERTY, Halifax, N. S., 11th December, 1874, (Extension of Patent No. 180), for 5 years: "Method of Making and Fastening Skates." (Manière de faire et assujétir les patins.)

Claim.—The method of securing the skate to the boot by drawing the skate lock on the sole of a boot at the same time clamping the heel of the skate firmly to the heel of the boot by means of a lever at the heel of the skate and without any connection between back and front other than the runner, in the parts and combination of parts by which results are obtained as described, the method of so making the heel plate by curving up a portion in front to form a jaw to hold the front part of the heel of the boot that the heel plate and front heel jaw shall be in one piece, the sliding heel plate running and sliding over the heel-plate with portions turned up at the back to form back heel jaws, and a portion turned down at the front for the lever head to work against in the method of adjusting the heel of the skate to different sized boots by moving the boot forming the fulcrum of lever in a slot; the runner, and the method of securing the toe and heel plates to the runner of the skate by cutting and turning down portions of said plates and fastening these portions, thus turned down to the runner, at the same time, forming slots in the toe plate.

No. 4169. GEORGE FOURNIER, Ste. Julie de Somerset, Que., 15th December, 1874, for 5 years: "Improvements on Clothes Buttons." (Perfectionnements aux boutons de hardes.)

Réclame.—Un bouton d'habit composé d'une platine B, portant une tige filetée C, avec une rondelle D, et la tête taraudée E, tel que décrit.

Claim.—A clothes button composed of a plate B, having a threaded stem C, with a washer D, and a screw head E, as described.

No. 4170. SAMUEL C. REDGRAVE, Lyons, N. Y., U. S., 15th December, 1874, for 5 years: "Liquid Measure." (Mesure liquide.)

Claim.—1st. The combination of the interior vessel A, and exterior holder B, the said vessel being made of glass and transparent over its whole surface and capable of an adjustment in the holder for pouring either at the front or side as described; 2nd. The combination with the transparent vessel A, and skeleton holder B, of the fastening consisting of the hinged clamp c, and sliding loop l, for securing the vessel in the holder at any adjustment as described.

No. 4171. HUGH HOLLINGSHEAD, Howick, Ont., 15th December, 1874, for 5 years: "Land Roller." (Rouleau d'agriculture.)

Claim.—1st. The combination of the double bars in front part of the frame of the roller, as set forth; 2nd. The combination of coupling the reach and iron brace to the front part of the frame of the roller, as set forth.

No. 4172. EDWIN O. BRINCKERHOFF, New-York, U. S., 15th December, 1874, for 15 years: "Steam Condenser." (Condensateur de vapeur.)

Claim.—The combination of the concentric cases A, B, having a water space between their tops, bottoms and sides, the pump C, provided with supply pipes D, and discharge pipes E, the U-pipes G, one or more, the coil I, the waste pipes H, h', and the condensed steam-pipes L, with each other and with the exhaust steam pipe K, of an engine; 2nd. The combination of the box or hollow table J, with the coil I, the inner case B, the U-pipe G, and the branch waste pipe h', of the condenser; 3rd. The outer case A, surrounding the mechanism of a steam condenser, in such a way as to form a water space upon the top, bottom and sides of said condenser as described.

No. 4173. FREDERICK W. TUERK, Jr., Berlin, Ont., 15th December, 1874, for 5 years: "Improvements in Water Wheels." (Perfectionnements aux roues hydrauliques.)

Claim.—1st. The curved buckets b, provided with a cylindrical rib, at their inner edge, in combination with the recessed rim of the wheel B; 2nd. The wedge shaped recesses b', formed in the rim of the wheel B, beneath the upper part of the brackets b, in connection with the curved slots f, in the partition plate F; 3rd. The partition plate F, provided with the openings c, and f', and the ring flange h, in combination with the parts A, D, of the case, and with the wheel B, b; 4th. The combination of the lignum vitae step H, the metallic cup I, screw K, with the spider J, and with the shaft C, that carries the wheel B, b; 5th. The combination of the sliding plates or gates L, the cross-arms M, the curved and toothed cross-head N, the rear wheel O, and the shaft and hand wheel P, Q, with the case A, D, for regulating the size of the discharge orifices of said case as described.

No. 4174 DAVID JONES, Millburn, Inverness, Scotland, 15th December, 1874, for 5 years: "Improvements in Lubricators." (Perfectionnements aux graisseurs.)

Claim.—The adoption and use of the construction of lubricator cup or reservoir, to the cylinder or valve, which operates by partial vacuum at each stroke of the piston and by the influences of gravity and capillary attraction with small area opened to the cylinder or valve, covered by a pad or a retarder regulating the quantity of lubricant to the cylinder or valve.

No. 4175. CYRENIUS C. ROE, Hamilton, Ont., 15th December, 1874, for 5 years: "Steam Man or Working Machine." (Mannequin à vapeur ou machine ambulante.)

Claim.—1st. The arrangement of a steam man as shown having the combination of levers F, driven by the crank shaft G, H, and piston K, of the cylinder C, or by two crank shafts and cog gearing as shown in Fig. 3, as specified also the arrangement of the steam pipe B, enclosed in the hollow shaft G, to the cylinder C, as shown or through the arm, all arranged as specified.

No. 4176. ROBERT THOMAS, Toronto, Ont., 15th December, 1874, for 5 years: "Cooking Stove." (Poêle de cuisine.)

Claim.—1st. The general arrangement in the construction of the stove as specified; 2nd. The combination with the circular grate Q, of the oven D, and dome C, of the water vessel or boiler A, of the top F, cover H, and rib R, of the draught doors P, P, raised into S, and chimney G, as set forth; 3rd. The device of extending the dome or cone C, up into the centre of the fire chamber, thus making the fire a circular one, and surrounding it, and applicable to heating as well as to cooking stoves.

No. 4177. JOHN CAMPBELL, Almonte, Ont., 15th December, 1874, for 5 years: "Improvements on Churns." (Perfectionnements aux barattes.)

Claim.—1st. The bars B, hinged at their upper ends to a fixture or beam, and connecting with the churn to prevent lateral motion when oscillating; 2nd. Providing the cream chamber A, with an internal cream breaker F, and cutter G, arranged and applied as set forth; 3rd. The actuating wheel H, and cord I, for operating the same, in combination with a cream chamber oscillating as described; 4th. Constructing the cream chamber with a raised rectangular cover C, provided with air apertures D, E, as set forth; 5th. Providing the cream chamber with an outlet J, for discharging the milk; 6th. Providing the cream chamber with feet K, as described.

No. 4178. GEORGE A. KEENE, Lynn, and FRANCIS A. SAWYER, Boston, Mass., U. S., 15th December, 1874, for 5 years: "Carriage and Car Step." (Marche-pied de voiture et de wagon.)

Claim.—1st. The subdivision of a rubber cushion or pad applied to the step of a vehicle into ridges to enhance its ready resiliency 2nd. The combination of a rubber cushion or pad divided into sections of different resiliency by different thicknesses of rubber. 3rd. The combination with such a pad of an internal plate or other equivalent strengthening material to resist the tearing action of the fastenings: 4th. The arrangement in the depression in the surface of such pad so that they may have free communication with depressed sections on the edge; 5th. Re-inforcing the front edge of such pad by beads or sections of beads of greater thickness and substance than the rest of the pad; 6th. The arrangement and combination of the plate shown in Figs. 7 and 9, with its rubber cover; 7th. The arrangement and combination of the stud I, and detachable shank J; 8th. The arrangement and combination of the plate shown in Fig. 8, with its rubber cover for the purpose of supporting the edge of the upwardly presenting rubber, each and all as described.

No. 4179. USSIUS B. LABERGE, Montreal, Que., 17th December, 1874, for 5 years: "Ironing Table." (Table à repasser.)

Claim.—1st. The combination of an ironing table A, having an elliptical end B, with the folding trestle F, constructed as described; 2nd. The combination of the dove-tailed groove C, and slot C, with an ironing table A, as set forth.

No. 4180. DAVID BISSELL, Detroit, Mich., U. S., 17th December, 1874, for 15 years: "Arm Splint." (Eclisse pour les bras.)

Claim.—The combination of extensible concavo-convex clamping plates A, or B, clamping bars C, and adjusting screws G; the combination of extensible clamping plates A, B, bars C, adjusting screws G, jointed rods E, and an adjustable fastening as I, J, K, the combination of pressure springs L, and adjusting screws M, with the clamping plates B, the springs, arranged to extend out of the plates along the wrist for supporting it, the combination of a clamp for the arm, also a clamp for the fore-arm and rods E, one of said clamps being contrived to adjust along the rods to extend the fractured parts, a splint composed essentially of zinc clamping plates, the combination of zinc facing plates, with the pressure spring as specified.

No. 4181. CHARLES PARIHAM, Valleyfield, Que., 17th December 1874, for 5 years: "Improvements on Suction and force pumps." (Perfectionnements aux pompes aspirantes et foulantes.)

Claim.—The stalk a, tube i, and cylinder c, constructed and arranged as described.

No. 4182. FRANK MOSES, Toronto, Ont., 17th December, 1874, for 5 years: "Heating Apparatus." (Appareil de chauffage.)

Claim.—The metallic coil F, G, and the tube A, A, to conduct the cold air into the said coil, as set forth.

No. 4183. CHARLES CLUTHE, Hamilton, Ont., 17th December, 1874, for 5 years: "Improvements on Truss-pads." (Perfectionnements aux bourlets des bandages herniaires.)

Claim.—The spiral spring of metal working on a centre covered or uncovered to be used as a truss-pad.

No. 4184. HORACE E. ROWE, Brockville, Ont., 17th December, 1874, for 5 years: "Feather Renovator." (Machine à rafraichir la plume.)

Claim.—1st. The chemical holder B, connected to the boiler A, and communicating with the steam pipe D, for conveying any chemical agent along with the steam to the feather chamber E; 2nd. The tubular perforated feather chamber E, and steam jacket G, arranged within the outer casing F, and having a conducting steam pipe or pipes D, connecting with the boiler A, and chemical holder B, as set forth.

No. 4185. ALFRED D. GRISWOLD, New York, U. S., 17th December, 1874, for 10 years: "Feather Duster." (Plumeau.)

Claim.—1st. A feather dusting brush constructed of a series of bunches of feathers A, or of single feathers, each of said bunches or single feathers being secured to one end of an elastic stem or prolongation B, secured to the head of the handle C; 2nd. In combination with the subject matter of the foregoing claim in a crown or shield D, constructed of feathers b, secured between two strips of canvas or other suitable material c, as described.

No. 4186. MAGLOIRE THIBAUT, Hull, Que., 17th December, 1874, for 5 years: "Capstan." (Cabestan.)

Reclame.—1o. La combinaison du levier K, du joug G, des coulisseaux H, H, avec le cabestan A, pour lever l'axe de vis sans fin L, et la décharge de la roue d'engrenage N; 2o. La combinaison d'un cabestan muni d'un joug G, et de ses appareils tel que décrit, avec un viaduc, un trouil, une chèvre, Figs. 4, 5, 6, une grue, Figs. 7, 8, 9, au moyen des roues d'angle U, V, tel que décrit.

Claim.—1st. The combination of the lever K, with the yoke G, of the grooves H, H, with the capstan A, for raising the axis of the endless screw L, and to disengage it from the gear wheel N. 2nd. The combination of capstan provided with a yoke G, and of its apparatus as described, with a windlass, a derrick, a crab wheel Figs. 4, 5, 6, a crane, Figs. 7, 8, 9, by means of pinion wheels U, V, as described.

No. 4187. WALTER M. CONGER, Newark, N. Y., U. S., 17th December, 1874, for 15 years: "Improvements in Metallic Shields and Supports for Stoves and Analogous Articles and in Machines for making the same by Spinning." (Perfectionnements aux garde-murs et sous-poêles et autres objets analogues et aux machines à fabriquer ces objets par le filage.)

Claim.—1st. The metallic stove support and heat shield represented in Fig. 1, having the flat portion A, and domed or elevated centre B, as set forth; 2nd. The device shown in Figs. 3 and 4, having a continuous sheet A, formed with a dome where the heat is received in combination with the shield or shields B, held between the dome and floor with a space above and below; 3rd. The device shown in Figs. 5 and 6, having one or more shields formed separate from the main body and supported above the same with spaces for ventilation between the parts; 4th. The construction of the latter, the dome B, screw b, and nut C, serving relatively to each other and to the body A, and shield or shields B; 5th. The device shown in Figs. 7 and 8, each having a heat shield in two thicknesses with a non-conductor between; them at a little distance from the body A, with space for ventilation between, as set forth; 6th. The chuck B, having an annular flat surface, the opposite holding means M, having a corresponding surface, and adapted to revolve therewith, in combination with each other, and with mechanism for raising the central portion while the flat portion is firmly clamped, and held in the plane condition; 7th. The adjustable frame E, with the sets of anti-friction rollers e, e', in combination with the loose ring M, chuck B, and mechanism for spinning a dome in the centre; 8th. The cam piece E, in com-

binaton with a spinning roller i, and its carrying means I, I, J, and feeding means P, adapted to serve in connection with the chuck B, and holding ring M; 9th. The heading roller r, and its connections in combination with the chuck B, holding means F, and mechanism for raising the centre; 10th. In combination with the chuck B, and adjustable frame E, and its connections adapted to hold a blank and the spinning roller i, and its connections adapted to treat the central portions of such blank, the feed screw P, connected with the carriage J, and receiving motion through the gearing wheel N, which is feathered upon the shaft K, to allow for the elevation and depression of the feed screw and its connected parts; 11th. The automatic liberation of the carriage J, and its connections from the feed screw P, by means of the step E, acting on the partial nut j, to detach it from the screw P, in connection with the cord l, for moving the carriage J, outward, all as specified.

No. 4188. SILAS G. SMITH, Hollis, Me., U. S., 18th December, 1874, for 5 years: "Machine for Removing Snow from Railroads." (Machine à enlever la neige des voies de fer.)

Claim.—The base a, prow b, disc c, carrying the fans j, shafts d, gears e, gears f, and shaft h, all combined to operate as described.

No. 4189. ANDREW W. MITCHELL, Detroit, Mich., U. S., and ANDREW McCORMICK, London, Ont., 18th December, 1874, for 10 years: "Carriage Spring." (Ressort de voiture.)

Claim.—The combination of the springs D, D, and E, E, when arranged as set forth.



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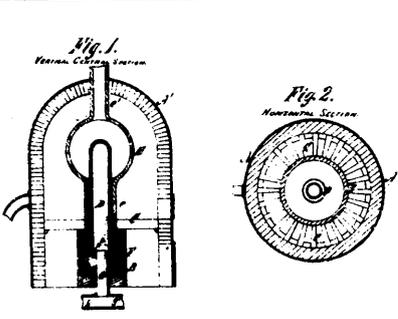
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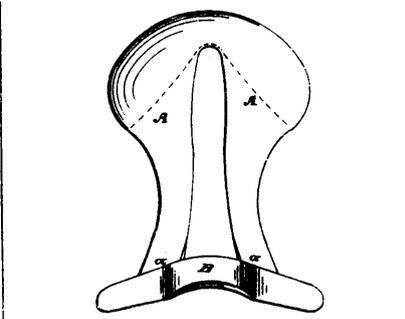
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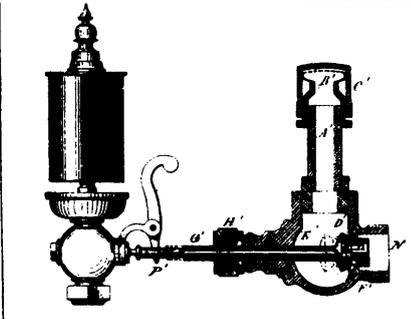
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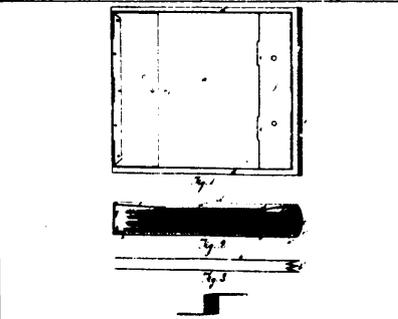
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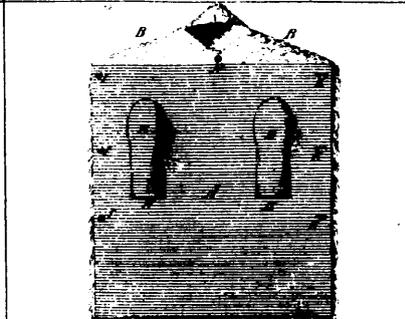
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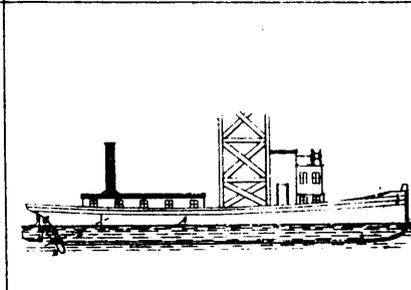
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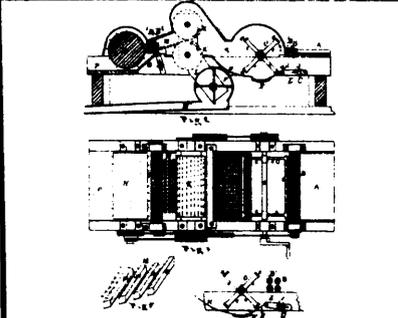
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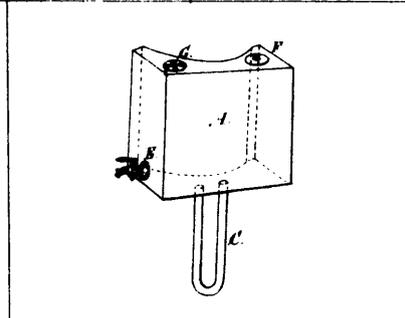
4134 Levy's Combined Overcoat and Carriage Robe



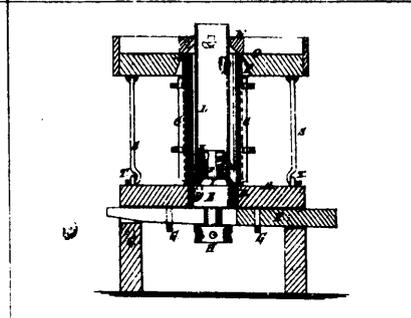
4135 Inglis & Inglis' Improvements on the Construction of Vessels used for Floating Elevators and on the Arrangements of the Screw Propellers Used in the same.



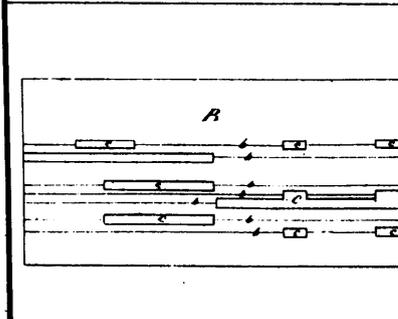
4136 Keene's Cotton Cleaning Machine.



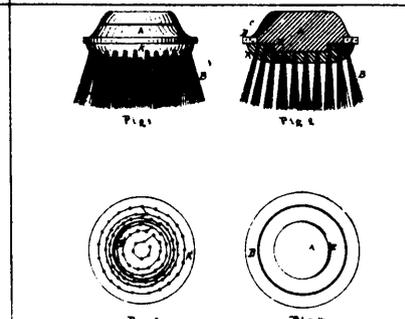
4138 Baldwin's Hot Water Reservoir for Stoves.



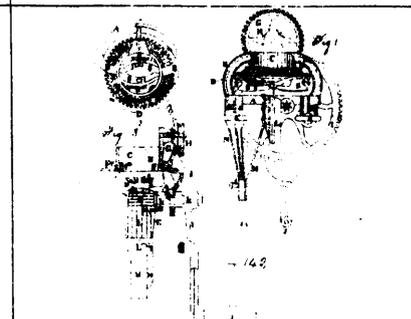
4139 Merwin's Improvements in Drain-pipe Moulding Machines.



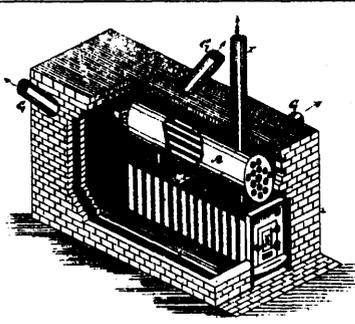
4140 Mortimer's Art of Ruling Paper.



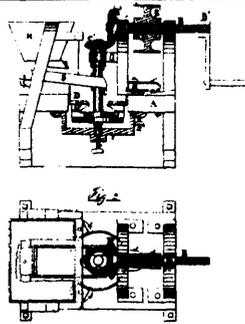
4141 Evan's Car Washer.



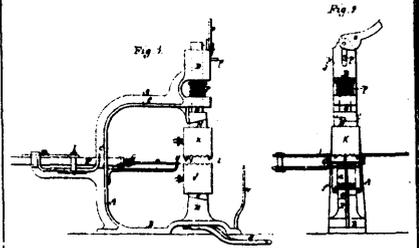
4142 Calhoun's Corn-sheller.



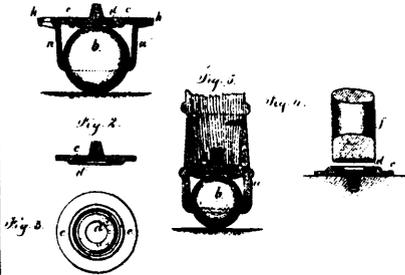
4143 Skinner's Drum Heater.



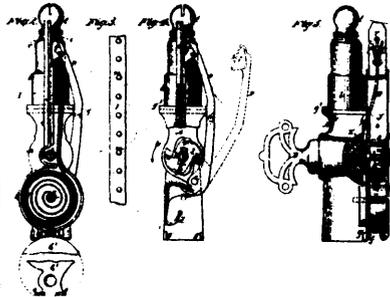
4144 Kaiser's Grain or Corn Crusher and Spice Mill.



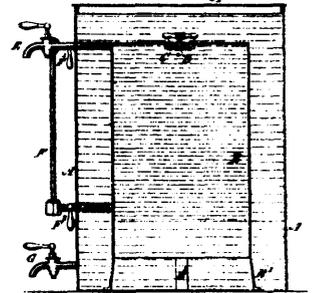
4145 Osmer's Darning Machine.



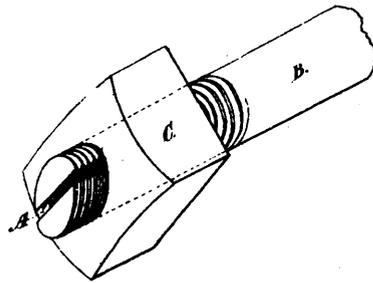
4146 Johnson's Improvements on Ball Castors.



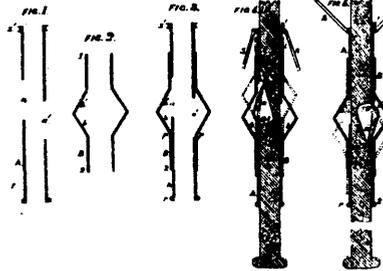
4147 Stockwell and Megill's Self-lighting Gas Burners.



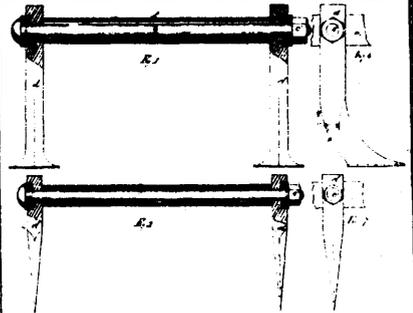
4148 Desgeorges' Apparatus for the Storage and Transportation of Petroleum.



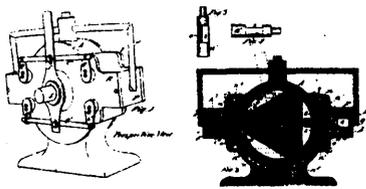
4149 Galbraith's Lock-nut Bolt.



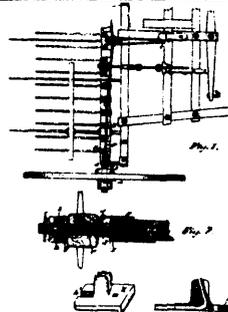
4151 Higgins' Automatic Umbrella Runner.



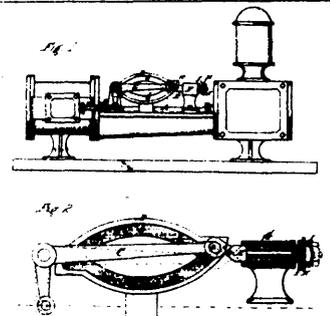
4152 Stafford's Harrow and Cultivator.



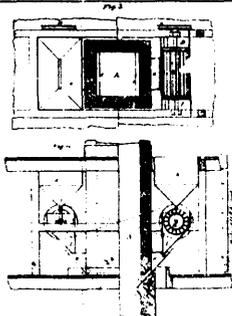
4153 Marsh's Rotary Steam Engine.



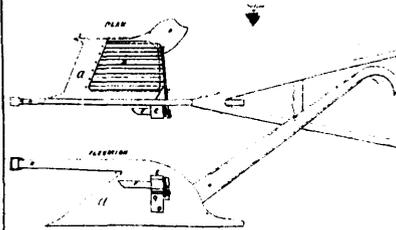
4154 Barclay and Kennedy's Improvements on Horse Rakes.



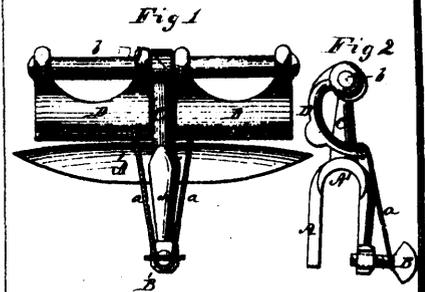
4155 Tesseyman & Smith's Valve Gear.



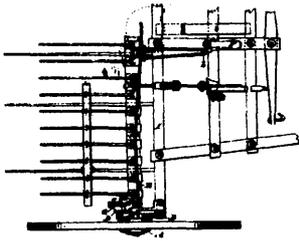
4156 Wheeler's Process and Apparatus for the Reducing of Iron and other Ores.



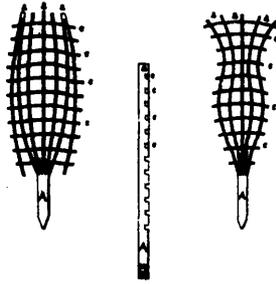
4157 Head's Potato-digger.



4158 Reed & Andrus' Rein-holder.



4159 Barclay & Kennedy's Improvements on Horse Rakes.



4160 Setchell's Improvements on House and Garden Trellises.

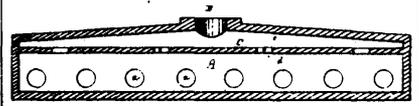
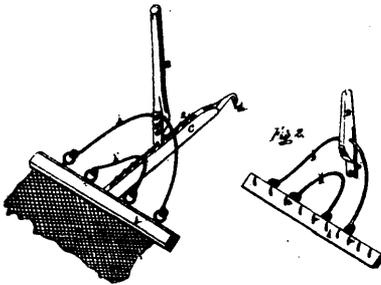


Fig. 2.

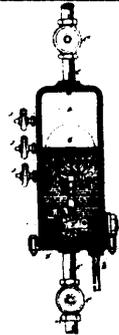
Fig. 3.



4161 Burlingame's Steam Drum.



4162 Curtis & Morris' Carpet Stretcher.



4163 McGuire's Improvements in Boiler Feeders.

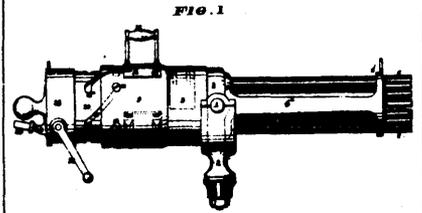
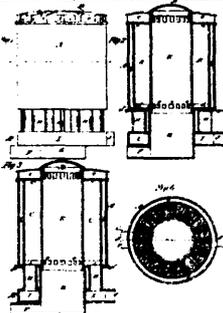
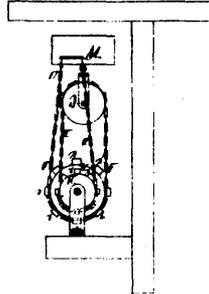


FIG. 1

4164 Taylor's Battery Guns and Repeating Ordnance.



4165 Wilson's Furnace for Reducing Iron Ores.



4166 Grove's Differential Pulley.

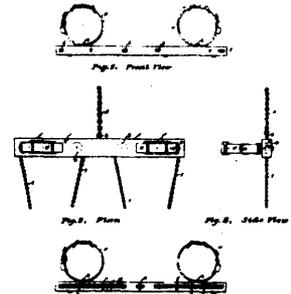
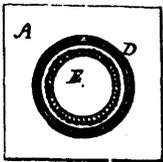


Fig. 1. Front View

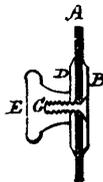
Fig. 2. Plan

Fig. 3. Side View

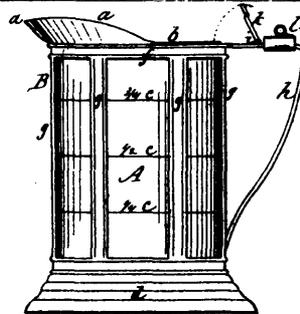
4167 White's Suspended Whiffletree.



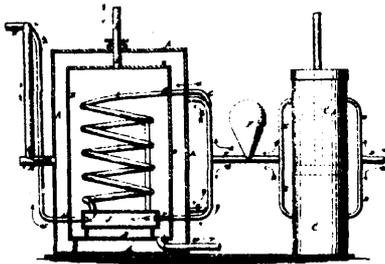
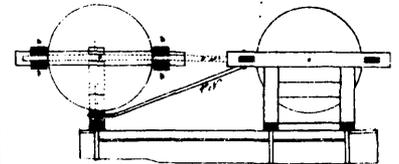
4169 Fournier's Improvements on Clothes Buttons.



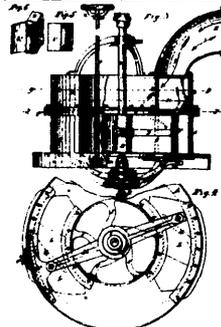
4170 Redgrave's Liquid Measure.



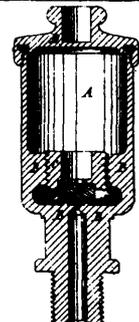
4171 Hollingshead's Land Roller.



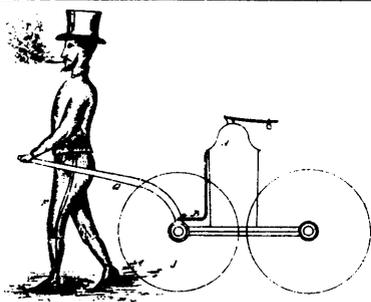
4172 Brinkerhoff's Steam Condenser.



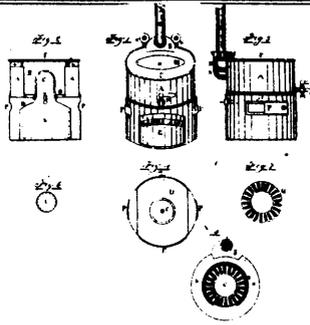
4173 Tuerk's Improvements in Water Wheels.



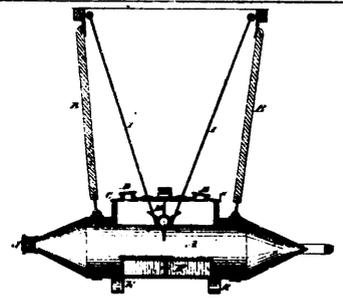
4174 Jones' improvements in Lubricators.



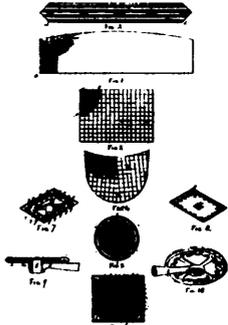
4175 Roe's Steam Man or Walking Machine.



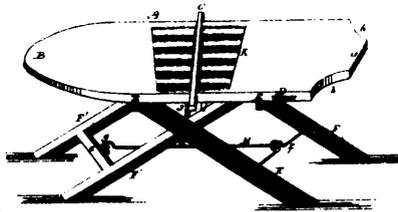
4176 Thomas' Cooking Stove.



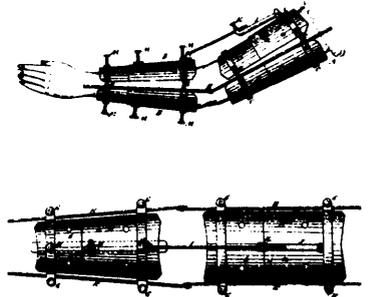
4177 Campbell's Improvements on Churns.



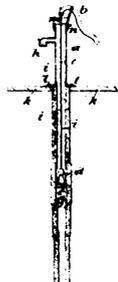
4178 Keene & Sawyer's Carriage and Car Step.



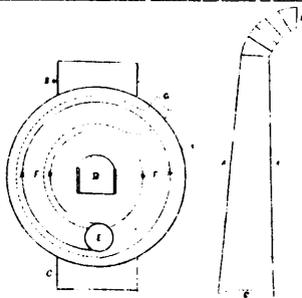
4179 Laberge's Ironing Table.



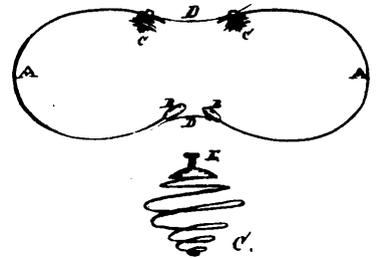
4180 Bissell's Arm Splint.



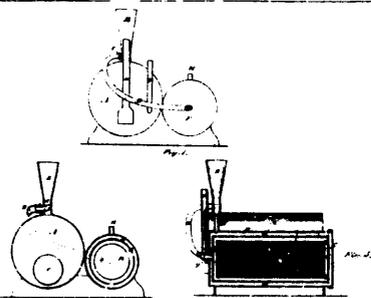
4181 Parham's Improvements on Suction and Force Pumps.



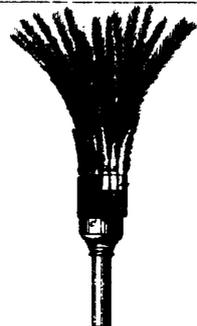
4182 Moses' Heating Apparatus.



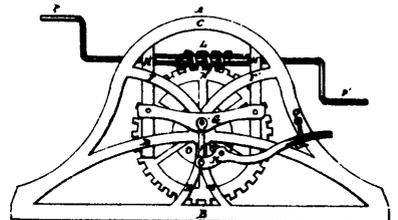
4183 Cluthe's Improvements on Truss-pads.



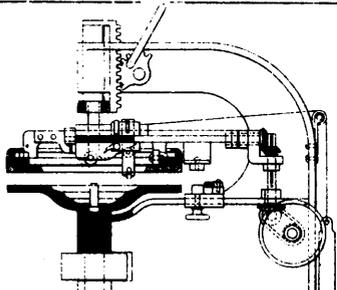
4184 Rowe's Feather Renovator.



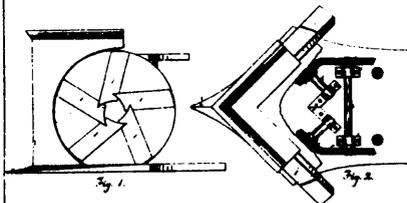
4185 Griswold's Feather Duster.



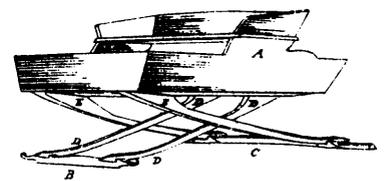
4186 Thibault's Capstan.



4187 Conger's Improvements in Metallic Shields and Supports for Stoves and Analogous Articles and in Machine for making the same.



4188 Smith's Machine for Removing Snow from Railroads.



4189 Mitchell & McCormick's Carriage Spring.