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The Canadian Patent Office Record

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CONTENTS.

INVENTIONS PATENTED.

No. 4190. WILLIAM IRVINE, Rochester, N. Y., U. S., and SAMUEL TREES, Toronto, Ont., 18th December, 1874. for 5 years: "Horse-Collar." (Collier de cheval.)

Claim.—1st. The lower plates A, A, set screws b^1, in combination with the upper plates B, B, with holes b, arranged as described; 2nd. The plates B, B, set screws c, and studs c^1, in combination with the hinged plates C, arranged as described: 3rd. The combination of the perforated strap G, plates A, A, studs g, and g^2, and thong H, as described; 4th. The combination of the draught eye D, breast ring E, lugs a, and plates A, as set forth.

No. 4191. GEORGE D. CHISHOLM and SUMMERFIELD DOUGLASS, East-Flamboro, Ont., 18th December, 1874, for 5 years: "Device for Preventing Horses from Jumping, Kicking and Running Away." (Appareil pour empêcher les chevaux de sauter, ruer et de s'emporter.)

Claim.—1st. The arrangement of the leggins D, with straps a, strap E, ring F, strap B, rings G, G, in combination with the split hook strap C, C, and girt A, all arranged as specified; 2nd. The sliding strap H, passing through a loop in the girt A, provided with rings d, d, said rings secured by pins e, e, for the straps B, and E, to operate in for driving a horse as specified.

No. 4192. HENRY S. COLE, Milwaukee, Wis., U S., 18th December, 1874, for 5 years: "Water Regulator and Alarm for Steam Boilers." (Régulateur d'eau et indicateur de chaudière à vapeur.)

Claim.—1st. The combination of the float G, connected levers K, and K^1, and balanced puppet valve o, o; 2nd. The combination of the float G, connected levers K, and K^1, balanced puppet valve O, O, and cylinder R; 3rd. The combination of the float G, connected levers K, and K^1, balanced puppet valves O, O, and P, P, connected levers K^{11}, and K^{111}, link W, cylinder R, and whistle U, as described.

No. 4193. JAMES F. GORDON, Rochester, N. Y., U. S., 19th December, 1874, for 5 years: "Self-Binding Harvester." (Moissonneuse-lieuse.)

Claim.—1st. A reciprocating binder frame or table constructed to operate in the manner set forth; 2nd. The oscillating binder-arm pivoted on the reciprocating binder-frame or table, in combination with the twisting mechanism arranged to operate conjointly as set forth; 3rd. The automatic locking device J, or its equivalent, constructed or arranged to operate conjointly with the binder-frame and binder-arm for the purpose of controlling the intermittent reciprocations of the binder frame or table, so as to permit the binder arm to compress the gravel and return to its open position alternately as set forth: 4th In combination with the crank arms which actuate the binder-arm shaft, the latter being journaled to the reciprocating binder-frame or table, the open sockets or stops S^3, for the purposes set forth; 5th. The revolving cranks C^1, or their equivalent, and the connected rods C^2, in combination with the crank C, and the stops S^3, for the purpose of imparting to the binder-arm a reciprocating and an oscillating movement as described; 6th. The take up lever T, pivoted to the binder-arm B, in combination with the cam governing plate I, arranged to operate conjointly, upon the binding wire as set forth; 7th. The adjustable tie-rod T^1, in combination with the binder-arm and take up lever T; 8th. The relative arrangement of the wire reel W^1, pulleys m^2, m^3, and take up lever T, in combination with the pulley m^1, on the binder arm B, whereby the slack afforded in the wire when said arm is in its upper position, may be taken up when it descends, in the manner set forth; 9th. The grain supporting slats D, secured to the suspension bracket D^1, on the cross-bar D^{111}; 10th. The supporting slat hinged to the upper ends of the slats E^2, in combination with the detachable cross-bar D^3, to permit of their being folded with the binding mechanism: 11th. The divider fingers, arranged to operate conjointly with the binder-arm B; 12th. The grain supporting slats D, curved at their lower end and extending horizontally over the reciprocating binder-frame or table; 13th. The fender belt B^1, secured to the reciprocating binder frame or table: 14th. The wire clamping jaw N^2, constructed with or without the point a^1, and finger f^2, as shown: for joint operation with the fixed jaw; 15th. The pivoted guard bar b, constructed to operate as described, for the purpose of preventing the binding wire from coming in contact with the twister hook, during the reverse movement thereof; 16th. The elevator roller R, provided with a yielding spur or bolt o, constructed and arranged to operate in combination with the cross bars t^2, of the elevator belt E; 17th. The supporting fingers Q^1, or their equivalent secured to the reciprocating binder-frame for the purpose of retaining the bundle until the next gavel is compressed; 18th. In combination with the binder-arm B, the spring guard o^2, operating to shield the projections r^2, while passing through the grain; 19th. The hanger S^2, fixed to the stock M^1, constructed and arranged to operate conjointly with the plate d, when the latter is provided with track t; 20th. The rack o^1, movably suspended from the stock M^1, or between the bars L, and L^1, and arranged to operate the pinion r^1, on the twister shaft in the manner described; 21st. In combination with the roller e^1, and main track t, the switch track t^2, in the manner set forth; 22nd. The star wheel switch j, arranged to operate on the roller e^1, to change its position to the opposite side of the track t, preparatory to a return movement in its path; 23rd. The cam shaped projection on the track t, and t^1, fig. 2, in combination with roller e^1, and its lever, pivoted to the end of the spindles N, and N^1, for the purpose of opening the lower wire clamping jaw N^2; 24th. The timbers G, supporting the reciprocating binder-frame and binding mechanism, pivoted to the main frame of the harvester, to permit of their being folded vertically, with the binding mechanism; 25th. The bracket d^1, or their equivalent, on the reciprocating frame or table constructed and arranged to operate as set forth; 26th. In combination with the wire-clamping jaws N^2, and a, and the wire-twister, the centering jaws v^2; 27th. The spring compressing arm y, in combination with the binder-arm and binding mechanism for the purposes set forth.

No. 4194. DAVID BISSELL, Detroit, Mich., U. S., 19th December, 1874, for 15 years: "Leg Splints." (Eclisses pour les jambes.)

Claim.—1st. The combination of the extensible and adjustable leg rest t, u, and the foot rest i, and p, the leg rest being itself extensible and the foot rest being extensible relatively to the leg rest; 2nd. The foot plates p, adjustable laterally together and to and from each other on the pivot u, having a fastening screw p^2; 3rd. The foot rest i, p, connected to the upright k, by the swivelled adjustable screws j, and provided with the binding screw r; 4th. The combination of the bar d^1, and adjusting screws e^1, with the leg rest t, u; 5th. The combination of the side spring pressure pads h^1, with the leg rest t, u; 6th. The combination of the top spring pressure pad i, with the leg rest t, u; 7th. The combination

of springs adjusting screw j, and a support for the screws forming a spring pressure pad for a splint: 8th The combination of detachable bars m, supporting cross bars p, and screws m, r^1 for supporting the spring pressure pads. 9th The combination of the detachable bottom and sides with the leg rest and pressure pads; 10th. The combination of the rest and pressure pads for the leg and the rest and pressure pads for the thigh; 11th. The combination of the leg rest and pressure pads, thigh rest and pressure pads and jointed supports R, and I; 12th. The combination of supports R, I, I, rods N, and adjusting screw F, with the leg rest and thigh rest, and their pads. 13th The extensible thigh box composed of bottom plates C C_1, E, E_1, F, side plates D, D_1, adjustable rests I_1, I, bar K, and screws L, combined and arranged as specified; 14th. The combination of adjustable bed-plate F, with extensible plates C, C_1, 15th. The supporting bars g, having notches I_2, in combination with the jointed supports R, I, and the adjusting screw F; 16th. The combination of a shoulder extension device U_2, S_2, T_2, and R_2, with the stand P, and the leg and thigh splint; 17th. The combination of the thigh rest A_2 with the leg rest and its pressure pads; 18th. The improved strap fastening consisting of the staple F_2, holes G_2, and the loop H_2; 19th. The combination of clamping bars A_3, screws B_3, and attaching bars D_3, with the side pressure pads h_1, 20th The combination of the foot bandage E_4, and straps D_4, and G_4, with the foot rest i, p. 21st. The combination of hooks o_3, with the pressure pads, as specified.

No. 4195. GEORGE C. SURLS, Rochester, Pa., U. S., 22nd December, 1874, for 5 years: "Burning Kiln." (Four de poterie.)

Claim.—The combination of the double arch of the furnace and its air conducting front and rear flues, with the kiln connecting flues for producing the intermingling and complete combustion of the heated air, and the fire gases at the mouths or arches of the kiln, for the purpose set forth.

No. 4196. JOHN J. FITZPATRICK, Philadelphia, Pa., U. S., 22nd December, 1874, for 5 years: "Improvements in Drawers." (Perfectionnements dans les caleçons.)

Claim.—A pair of drawers, one of the front sides of which from the crutch upwards is cut in a curved line, while the other front side is cut in a diagonal or straight line, the latter overlapping the former in the crutch, as set forth.

No. 4197. JAMES NELSON, Sunderland, Eng., 22nd December, 1874, for 5 years: "Machine for Cutting and Finishing the Ends of Studs and Bolts." (Machine à couper les Rivets et les boulons et en finir les bouts.)

Claim.—1st. The spindle G, and cutter or knife H, made to rotate in a body D, so as to act against a stud or bolt end as described; 2nd. The rotating spindle G, cutter or knife H, and fixed body D, in combination with the suitable self-acting feed gear as described; 3rd. The self-acting feed gear consisting of the teeth L, on the gland K, the flange M, on the body D, the recess N, on the flange M, and the spring pawl R, carried by the handle I, when combined with a rotating spindle and cutter and a fixed body as described; 4th The internal screw or nut E, or its equivalent, by which the machine is secured to the stud or bolt to be operated upon as described.

No. 4198. JOHN H. WEARE and NATHAN WEARE, Cincinnati, Ohio, U. S., 22nd December, 1874, for 5 years: "Cooking Utensil." (Ustensile de Cuisine.)

Claim.—1st. The combination of vessel A, B, and detachable slide F, connected and operating to form a vapour vent D; 2nd. In combination with the vessel A, B, and slide F, the perforation f^2, in the slide as specified. 3rd. In combination with the vessel A, B, D, the aperture or apertures a, in the side of the vessel opposite or nearly so to the passage D; 4th In combination with vessel A, F, the lugs f, and grooves e, and projection e^1, and pin G 5th. In connection with the detachable slide F, the semicircular open bail ears h, as specified.

No. 4199. SAMUEL S. WHITE, (Assignee of J. W. Gilbert), Philadelphia, Pa., U. S., 22nd December, 1874, for 15 years: "Improvements on Dental Engines." (Perfectionnements aux engins dentaires.)

Claim—1st. The combination of a hand piece A, a chuck or tool holder C, mounted therein, and a spring locking bolt D, moveable endwise in the tool holder. 2nd. The combination of a tubular tool holder C, a locking pin h, intersecting the bore thereof, tangentially a wedge shaped locking bolt D, moveable endwise in the tool holder and a tool G, having a wedge shaped transversely grooved end interlocking with the pin and locking bolt.

No. 4200. JOSEPH W. DUNN and GEORGE B. BOYLE, Niagara, Ont., 22nd December, 1874, for 15 years: "Improvements in the Method of Heating and Protecting Steam Boilers." (Perfectionnements dans la manière de chauffer et protéger les chaudières à vapeur.)

Claim—The method of heating and protecting steam boilers by the Royal Arch Flue and hot air attachment to Furnace doors to be used conjointly in furnaces as set forth.

No. 4201. FRANCIS D. BRODHEAD, Boston, Mass, U. S., 22nd December, 1874, for 5 years: "Improvements on Cans." (Perfectionnements aux boites métalliques.)

Claim—A can or vessel having a contracted mouth, constructing such can or vessel in sections and providing the sections with a suitable connection to confine them together and with or without a suitable packing to prevent escape of liquids from the interior, the whole being as stated.

No. 4202. WILLIAM JONES, Philadelphia, Pa., U. S., 22nd December, 1874, for 5 years: "Bed Spring." (Ressort de lit.)

Claim—A compound bed-spring consisting of two coupled spirals A, and B, composed of a single piece of wire, and each surmounted by an independent loop b, for the reception of a slat as specified.

No. 4203. GEDEON HUNTINGTON, Brantford, Ont., 20th December, 1874, (Extension of Patent No. 192), for 5 years: "Clothes Washer." (Laveuse à linge.)

Claim—1st. The novel arrangement of a cylinder or agitator placed inside a tier or shell when used for the purpose herein set forth, and 2nd. The conducting pipe to carry off the steam and unpleasant odour while the machine is in operation as specified.

No. 4204. ALBERT N. CHRYSTIE, St. Louis, Mo., U. S., and Sir A. T. Galt, Montreal, Que., 23rd December, 1874, for 5 years: "Spark Arrester." (Arrête-flammèches.)

Claim.—The combination of the cone C, coarse wire netting D, and fine wire netting E, constructed, arranged and operating as described.

No. 4205. HENRY SMITH, New-Hamburg, Ont., 28th December, 1874, for 5 years: "Wind Wheel." (Moulin à vent.)

Claim.—The wheel or wheel stop plate E, having the bevelled sectional faces E^1, and shoulders e, in combination with the stay pieces G, and sails F, arranged and operating as described.

No. 4206. JOHN TESSEYMAN and PRESERVED SMITH, Dayton, Ohio, U. S., 28th December, 1874, for 5 years: "Improvements on Valve Gear." (Perfectionnements aux appareils de soupapes.)

Claim.—1st. The combination of the valve and rod H, L, of a steam engine or steam pump, vibrating disc D, connected to the piston rod of the engine, and automatically shifting slide F, the parts being combined and operated in the manner specified; 2nd. In the combination of valve and rod H, and L, disc or crank plate D, slide F and spring M, operating as specified; 3rd. In the combination of the valve and rod H, L, disc D, slide F, spring M, and cushion N, n, operating in the manner specified; 4th. In the curved guide P, in combination with the disc D, and slide F, f, f, operating as specified, 5th. In the curved guide P having relief spaces p, in combination with the disc D, and shifting slide F, f, as specified.

No. 4207. FREDERICK. P. MACKELCAN, Montreal, Que., 28th December, 1874, for 5 years: "Machine for Pulling Stumps." (Arrache-souche.)

Claim.—The combination of the wheels A, A axle B, the capstan heads with sockets C, C, the handspikes D, D, and the chain E, as set forth

No. 4208. WALTER G. P. CASSELS, Toronto, Ont, 28th December, 1874, for 5 years: "Improvements in Stoves." (Perfectionnements aux Poeles.)

Claim —The water receptacle D, when placed in the space F, between the coal reservoir B, and outer shell of stove A1, arranged as described.

No. 4209. MARY G. WILSON, Sherbrooke, Que., 28th December, 1874, for 5 years: "Vegetable Boiler." (Bouilloire à légumes.)

Claim.—The combination of the boiler A, with spout B, strainer C, and lid D, the cover E, and handles F, F, as described.

No. 4210. HORACE D. GIBBS, Batavia, N. Y., U. S., 29th December, 1874, for 5 years: "Device for connecting the Neck Yoke with the Draft Poles of Vehicles." (Appareil à ajuster les jougs aux limons des voitures.)

Claim.—The elliptical concavo-convex metallic ring H, with the inner edges turned in, and elastic ring or packing *f*, united and connected to the clasp A, B, by means of the pivot bolt C, having oblong head E, countersunk ring E, and screw or rivet *e*, all combined as specified.

No. 4211. FREDERICK H. C. MAY, Buffalo, N.Y., U. S., 29th December, 1874, for 5 years: "Grain and Malt Drier." (Séchoir pour le grain et la drêche.)

Claim.—1st. The vibrating pans C, having hooks *c*1 combined with guards D, in the manner set forth; 2nd The vibratory pans C, having air compartments *c*, inclined perforated diaphragms *c* and opening C1, at its outer end. 3rd. The expansion joints or connections F, attached to and combined with the vibratory pans C, at opposite ends in each series thereof, by means of the nozzle *c*, of pipes E, and openings *c*1, as described.

No. 4212. GEORGE WHITE, London, Ont., 29th December, 1874, for 5 years: "Improvements on Carriages." (Perfectionnements aux voitures.)

Claim.—1st. The axle A, formed in one piece of round or square iron or steel; 2nd. The mode of securing the hub F1, and axle box E, by means of the shoulder G, and inner nut B, working against the inner side of end of nut D; 3rd. The continuous spring *a* formed without joints at ends, 4th. The iron jack H, with the taper hole L1, using the natural spring of shaft bar K; 5th The tire M, M1, when constructed with a series of notches or teeth P, in the ends, and bolts N, O, as set forth.

No 4213. THOMAS GAVIN, Montreal, Que., 29th December, 1874, for 5 years: "Screen for Coal Cinders." (Crible pour les cendres de charbon de terre.)

Reclâme.—1o. L'habitacle sasseur A, à fermeture hermétique et à ferrure. 2o. La boîte à sas C; 3o. Le tiroir H, qui reçoit les cendres tamisées, 4o. L'application des pieds semi-circulaires sasseurs P; 5o. Les poignées *q* du sasseur; 6me. Les anses F, tel que décrit.

No. 4214 DARIUS W. SIPRELL, Riviere-du-Loup en bas, Que., 29th December, 1874, for 5 years: "Rock Reamer." (Fleuret-alésoire de mine.)

Claim—1st. In combination with a supporting frame a tubular reaming shaft F, having a rod G, therein for ejecting or retracting the cutters H; 2nd In combination with a supporting frame and tubular reaming shaft F, the tubular screw shaft L, for rotating the shaft F, and cutters H; 3rd. In combination with the screw shaft E and reaming shaft F, a supporting frame having adjustable extension and contraction screw legs B, anchor feet C, and guide tube D 4th The combination of the rotating tubular screw shaft E, rotary toothed collar N and endless screw shaft M, for rotating the reamer shaft; 5th In combination with the reamer shaft F, and central rod G, the nut and screw mechanism J, K, L; 6th In combination with the hollow reaming shaft F, and tubular screw shaft E, the set screws I, or a suitable clamping device for retaining the shaft F adjustably at any desired height.

No. 4215. FREDERICK H. DATE, Niagara, Ont, 29th December, 1874, for 5 years: "Manufacture of illuminating Gas." (Fabrication du gaz d'éclairage.)

Claim.—1st. The process of manufacturing illuminating gas from solid or liquid hydrocarbons by first converting the volatile portions to vapour at any temperature below what is represented by iron heated to a cherry red colour, and then forcing or conducting the vapour or fumes so generated into contact with a red hot surface and instantaneously removing the gas so generated to prevent destructive decomposition, 2nd Combining the gas derived from and produced by the destructive distillation of wood with the vapor or fumes obtained from hydrocarbons, and conducting the gas and vapor combinedly into passing contact with such red hot surfaces in a retort or any suitable decomposing chamber and from thence to a condenser station meter and gas holder for the purpose set forth; 3rd. Combining the gas derived from the destructive distillation of wood with the hydrocarbon gas produced as herein described at any point within the retort and gas holder for the purpose set forth; 4th The use of wood gas produced as described to assist the conversion of the dense vapours of hydrocarbons into a permanent gas for diminishing the liability of such dense vapours to deposit carbons in the retort or decomposing chamber; 5th The combination of the process of making a permanent or fixed gas from the vapour of hydro-carbons either solid or liquid as described, with the gas derived or obtained or produced from the destructive distillation of woods in retorts as set forth. 6th. In illuminating gas produced by the combination of hydrocarbons gas manufactured as described and wood gas produced by the destructive distillation of wood as set forth: 7th. A fixed or permanent gas produced by passing hydrocarbon against a red hot surface or through a red hot retort as described: 8th The manufacture of wood gas in the process described by passing the gas through a series of connected retorts whereby undecomposed elements of gas escaping from one retort are brought into contact with an increased amount of red hot surface of the connecting retort or retorts for the production of incondensible gas as set forth: 9th. The employment of a series of connected or contiguous retorts for the manufacture of wood gas, as set forth.

No. 4216. CHARLES M. CLINTON, LYNFRED MOOD, Ithaca, ERASTUS C. GREGG and CHAUNCEY P. GREGG, Trumansberg, N. Y., U. S., 29th December, 1874, for 15 years: "Horse Rake." (Râteau à cheval.)

Claim.—1st. A wheeled horse rake in which the shaft to which the teeth are attached may be acted upon directly by the draught power for the purpose of oscillating the rake teeth: 2nd. A wheeled horse rake in which the power of the team may be exerted upon the rake mechanism without tending to rotate the wheels and draw the machine: 3rd. A wheeled horse rake in which the power may be utilized to hold the rake teeth down to their work; 4th A wheeled horse rake in which the draught power may be employed both to hold the rake down and lift it up at the pleasure of the driver. 5th. A wheeled horse rake in which the teeth are all attached to an auxiliary shaft or rake head that has a rocking motion to oscillate said teeth. 6th. In combination with the shaft to which the teeth are attached, the geared sector plates (or their equivalents) and suitable levers, whereby the said shaft may be partially rotated with a uniform leverage and motion; 7th A wheeled horse rake in which the teeth are maintained in place while gathering solely by means of their attachment to the rake head; 8th. As a means for utilizing the draught power both to hold down and lift the rake teeth in a sliding draught rod, lever arm and rake head combined and operating together as set forth; 9th. A tooth holder device by means of which the tooth is attached to the rake head so formed as to constitute both a socket for the reception and detention of the root of the tooth and a clamp to grip and make fast to the rake head 10th. A wheeled horse rake in which each tooth has a limited capacity of vibration about a centre of motion near its root and all the teeth vibrate or oscillate about a different centre or axis of motion in dumping. 11th. A tooth holder adapted to be secured to the rake head and formed with a socket for the reception and retention of the root of the tooth when so made as to permit the tooth a desired amount of play up and down in said socket, and about a center of motion or pivotal attachment. 12th In combination with the rake mechanism and a means for lifting the rake by the power of the driver, the jointed or flexible draught rod *n*, *n*1, and a locking pin or device whereby the power of the team may be brought into or kept out of action at pleasure, as set forth; 13th. A wheeled horse rake

in which the main axle is composed of a series of separate pieces during its length; 14th. A cleaner rod projected rearward from the main axle or other supporting part of the machine, and stiffened by any suitable brace or strengthened, in the manner described.

No. 4217. HIRAM J. WATTLES, Toronto, Ont., 7th January, 1875, for 5 years: "Vegetable Washer." (Laveuse à legumes.)

Claim.—1st The combination of the crank handle A, half lid B, and shaft D. 2nd The combination with crank handle A, and the shaft D, lid B, and tub C, as set forth.

No. 4218. JOSEPH R. SMITH, Brockville, Ont., 7th January, 1875, for 5 years: "Clothes Wringer." (Essoreuse à linge.)

Claim.—1st, The hanger G, mounted on the roller journal and having a projecting pin or axle H; 2nd. The combination of the hanger G, pinion J, and cog wheel K, with the roller journal for transmitting motion through the cog gears E, F, to the opposite roller; 3rd. The spring bar L, formed of one piece of wood having saw incisions M, N, longitudinally to give elasticity to the bar; 4th. The woodon spring L, composed of a series of horizontal bars or leaves formed by the incisions M, N, extending from end to end, as set forth.

No. 4219. CHARLES A TERREY, London, Eng., 7th January, 1875, for 5 years; "Setting Diamonds in Drills and Cutting Tools." (Montage des diamants dans les forets et les instruments tranchants.)

Claim.—1st. The novel combination of the drill A, cap B, and diamonds *a*, *a*, constructed and arranged in the manner described: 2nd The combination of saw A, or its equivalent, caps B, and diamonds *a*, *a*, constructed as described.

No. 4220. JOHN A. STOCKWELL, Lynn, Mass., U. S., 7th January, 1875, for 5 years: "Improvements on Boots and Shoes." (Perfectionnements aux chaussures.)

Claim.—1st. The wire or cord *d*, placed within a tip for boots or shoes, as set forth; 2nd. A combined tip and half sole for boots and shoes, made from a strip of leather or other material, and having a portion of its inner edge cut away as at *i*, as shown, so that it can be formed into the desired shape.

No. 4221. JOHN C. STURGEON and CARSON J. STURGEON, Erie, Pa., U. S., 7th January, 1875, for 5 years: "Lawn Mower and Harvester." (Faucheuse-moissonneuse.)

Claim.—The pivoted pinions L, L, revolving on studs M, attached to the driving wheel A, A, in combination with the fixed toothed wheel B, B, forming the ends of the frame of lawn mower and ratchet pinions J, J, on the common shaft C; the revolving cutters D, D, D, attached to the shaft C, working in bearings on the fixed ends B, B, in combination with the adjustable stationary cutter E, attached to the fixed ends B, B the adjustable cutter bar slides G, with slots *g*, in combination with the fixed ends B, B, the combination of rotary cutters with loose driving wheels when both are mounted on the same shaft or on a common axis or centre; the combination of the fixed inside geared wheels B, B, forming the ends of the mower frame horizontal revolving cutters working in suitable bearings on the saw ends with loose driving wheels A, A, mounted on the ends of the shaft of the revolving cutter or on a common axis or centre with the same; The flanges *a*, *a*, on the driving wheels A, A, in combination with the fixed ends B, B, the spring pawls P, fitting in slots sunk in the shaft C, in combination with the notches *p*, cut in the toothed wheels J, arranged and operating as described.

No. 4222. JOHN LENNERTON, Prince Port, N. S., 7th January, 1875, for 5 years: "Treenail Wedge Machine." (Machine à gournables.)

Claim.—1st. The cylinder and knives in the same, adjusted upon a shaft and adapted for the purpose of cutting treenail wedges to any required size; 2nd. The adjustment of a circular saw in connect on with the cylinders for the purpose of cutting treenail wedges to any required length; 3rd. The peculiar construction of frame and table to which the cylinders and saw are affixed and in which they operate, adapted to the purpose of the machine.

No. 4223. JOHN W. ELLIOTT, Toronto, Ont., 7th January, 1875, for 5 years: "Machine for the Application of Croton Oil, &c." (Machine pour l'application de l'huile de croton, &c.)

Claim.—The instrument for the application of croton oil, or other similar counter irritant, the said instrument consisting of the case A, with perforated membranes *a*, and *a*, compound tapering stopper B, collar *a*, thimble B circular brush E, and pivoted roller F, studded with needle points G, all arranged and operating as described.

No 4224. JOSEPH VESSOT, Sr., and SAMUEL VESSOT, Jr, Joliette, Que., 7th January, 1875, for 5 years: "Harrow and Roller Combined." (Herse-rouleau combinés.)

Réclame.—Les améliorations au siège *a*, à la boite à grain *b*, dont le demi rond où roule le cylindre est en fonte au lieu de bois, et pourvu de caoutchou pour raser le grain, la boite à graine de mil *c*, qui est entièrement nouvelle dans toutes ses parties, telles que décrites aux lettres *d*, *f*, *p*, *q*, *r*, *s*, *s*; la boite à poche *f*, et la boite à outils *m*, la boite à engrais *p*, dont le fond est semblable à celui de la boite à graine de mil, l'excentrique *u*, du bras *j*, et de l'équerre *k*, le va-ou-vient *v*, avec ses griffes *l*, la barre de fer plate, qui fait tourner la poulie *q*, les tuyaux *s*, terminés en caoutchou, ainsi que les tuyaux *s*, dans le brasse-grain *m*, avec sa poulie *k*, le raeloir *h*, avec ses ressorts *i*, la manivelle du régulateur *m*, la maniere dont l'un des bouts du rouleau est fixé à l'essieu avec une goupille, les supports en fonte *j*, le brancard *g*, construit avec une barre transversale qui lui donne plus de solidité, la manière dont la perche *e*, est adaptée à la barre transversale et les travails *e*, au brancard *g*, dans le nouveau levier *x*, avec sa demi-roue *y*, son excentrique *w*, et sa chaine *v*, les ferrures *c*, et *r*, les crochets *b*, les étriers *u*, les liens *c*, et *c*, le nouveau patron des dents de herse *t*, et *t*, et la manière de les adapter aux ressorts *a*, l'amélioration des deux lames d'acier au lieu d'une dans les ressorts *a*, le garant *d*, le nouveau débrayeur *x*, la boite *z*, les trous *t*, du cylindre à semer et l'amélioration dans la manière d'on peser les dents sur le long au lieu de biais pour former les compartiments *t*, et *t*, les roues d'engrenage *g*, *g*, et *g*, et la manière dont elles sont adaptées au support *j*.

No. 4225. RICHARD B. ANDERSON, and MILTON ANDERSON, Sackville, N. B., 7th January, 1875, for 5 years: "Improvements on Necktie Holders." (Perfectionnements aux attache-cravates.)

Claim.—The combination of the spring A, A, for the purpose set forth.

No. 4226 GEORGE W. MCNEIL, Akron, Ohio, U S., 7th January, 1875, for 5 years: "Wheat Scourer." (Emotteur à blé.)

Claim.—The revolving stones D, and stationary scouring plates stones or brushes, constructed as set forth, in combination with the hopper *a*, the cylindrical edge of which is perforated and projects above the space between the revolving stone, and the stationary scouring plate stone or brush as described.

No. 4227. RUSSELL COBLEIGH, Chester, Vt., U. S., 7th January, 1874, for 5 years: "Children's Carriage." (Voiture d'enfants.)

Claim.—1st. The moveable platform C, and its operative bent levers D, *c*, and connection rods E, combined with the body I, the seat B, and the moveable back A: 2nd. The moveable platform C, and its operative bent levers D, *c*, connections rods E, and rest F, combined with the body I, the seat B, and the moveable back A, as specified.

No. 4228. JAMES TELFER, Toronto, Ont., 7th January, 1875, for 5 years, "Lamp Holding Attachment to Sewing Machines." (Ajustage des lampes aux machines à coudre.)

Claim.—The lamp holder C, having legs *b*, and hand springs *d*, to adapt it to hold a lamp on or off the swinging arm B, in the manner described.

No. 4229. EDWARD MERCIER, Springfield, Mass., MÉDÉRIC LANCTOT, Jersey City, N. J., and ARVID H. ELLIOTT, New York, U. S.,

7th January, 1875, for 5 years: "Railway Switch." (Aiguille de railroute.)

Claim.—1st. The crank shaft D, carrying the cranks *a*, and *a*¹ and the eccentric *d*, or their equivalents, and arranged in connection with a switch and with a lever F, or F¹, &c., 2nd. The V shaped o oblique lever F, arranged in the track for automatic connection with the train, and automatic adjustment of the switch 3rd The connecting rod E, joining the lever F, and the crank shaft D, and made with an elongated slot at its outer end. 4th The combination of the crank shaft D, of the automatic switch mechanism with the signal H. 5th. The eccentric *d*, on the shaft D, fitted into a slot in the bar *e*, said slot being of extra length for the purpose described; 6th. The crank handle *i*, applied to the crank shaft D, of the self-acting switch mechanism to constitute means for applying manual power, and also serve as self-acting stop. 7th The sliding pin *g*, applied to a railway car or locomotive for automatically acting on the V shaped or oblique lever, F, and adjusting the switch as specified. 8th. The V shaped or oblique levers F, F¹, &c., arranged to overlap the truck to be acted upon by the flanges of the wheels as shown in Fig. 7, as specified.

No. 4230. WILLIAM S. WOOTON, JOHN G. BLAKE and HARMON H. FULTON, Indianapolis, Ind., U. S., 7th January, 1875, for 5 years: "A Secretary." (Un secrétaire.)

Claim.—A secretary constructed in three parts, two of which are together equal in width to the other, each part being provided with compartments or pigeon holes, suitable for storing books, papers, &c., and the two lesser parts hinged to the greater parts to serve as doors to the secretary, as set forth.

No. 4231. RICHARD M. WANZER, Hamilton, Ont., 7th January, 1875, for 5 years: "Improvements on Sewing Machines." (Perfectionnements aux machines à coudres.)

Claim.—1st. The slotted shuttle driver O, provided with chamber X, oiler C, sliding on the plunger P, in combination with the shuttle carrier, and driven by the tablet roll S, of the disc R, for driving the shuttle on the horizontal race of a sewing machine. 2nd. The plunger P, pivoted to the plate M, by the pin Q, and made to work in the chamber X, of the shuttle driver O: 3rd. The arrangement of the leg *n*, on the "take up" J, and the cam E, on the shaft C, for operating said "take up", 4th. The combination of the shuttle driver O, plunger P, operated by the tablet roll S, of the disc R, for driving the shuttle with the cam E, and leg *n*, of the "take up" J, arranged as specified.

No. 4232. WILLIAM F. COCHRANE, LaFayette, Ind., U. S., 7th January, 1875, for 5 years; "Improvements on Harvesting Machines." (Perfectionnements aux moissonneuses.)

Claim —1st. The main frame A, of a harvesting machine suspended from the foot board J, or tongue-bracket by means of a traction latch pivoted to the frame A, at a point between the main axle C, and counter shaft; 2nd. The main frame A, of a harvesting machine suspended from the foot board J, or tongue-bracket, by means of an adjustable traction latch pivoted to the frame A, at a point between the main axle C, and counter shaft. 3rd. The traction latch adapted for adjustment upon the foot board J, or tongue-bracket by means of the ratchet clutch N, and the ratchet slot in the foot board J. 4th. In combination with the main frame A, of a harvesting machine, suspended from the foot board J, or tongue-bracket by the traction latch at a part between the main axle C, and counter shaft, and adjustable detent S, for the purpose of holding the frame A, and the finger bar H, at the requisite height for cutting grain, as described.

No. 4233. SAMUEL PALING, Woodstock, Ont., 7th January, 1875, (Extension of Patent No. 598), for 5 years: "Window-Blind." (Jalousie.)

Claim.—The flexible blind or curtain A, with a roller B, cords C, eyes D, E, and weighted tassel F.

No. 4234. SAMUEL PALING, Woodstock, Ont., 8th January, 1875, (Extension of Patent No. 598), for 5 years: "Window Blind." (Jalousie.)

No. 4235. HENRY A. DIERKES, New York, U. S., 8th January, 1875, for 5 years: "Improvements in Hanging and Operating Bells." (Perfectionnements dans la pose et le fonctionnements des cloches.)

Claim.—1st. The hanging and arrangement of the bell A, upon a revolving post or axle B, and otherwise so arranged it as to partially rotate the bell at each stroke of the hammer, 2nd. The hammer and its arm *d*, *d*², when arranged as described and operated by the spring follower E; 3rd The arrangement of the arms *b*, upon the bell post or its equivalent in such a manner as to operate the spring follower E, as set forth.

No. 4236. JOHN M. SCHRAMM and CHARLES T. SCHRAMM, Pontoosuc, Ill., U. S., 8th January, 1875, for 5 years: "Improvements in the Shingling of Roofs" (Perfectionnements dans la maniere de couvrir les toitures en bardeaux.)

Claim.—1st The combination of the board L, strap hinges E, with pins *f*, and the adjustable plates A, with feet *b*, all constructed and operating as described, 2nd The adjustable roofing bracket R. S. M, O, T, I, P, constructed and arranged as described

No. 4237. JAMES L. MASSIE, Cowansville, Que., 8th January, 1875, for 5 years: "Improvements on Heaters." (Perfectionnements aux poeles sourds.)

Claim —The heater composed of chamber A, with tubes D, set therein with one end higher than the other, as set forth.

No. 4238. CHARLES H. MILLER, Buffalo, N. Y., U. S, 8th January, 1875, for 5 years: "Wooden Pavement." (Pavage en bois.)

Claim —A wooden pavement consisting of blocks A, recessed at the lower end in combination with the supporting sleepers or rails *b*, as set forth.

No. 4239. JOHN C. CODYÉ, Windsor, Ont., 8th January, 1875, for 5 years: "Water Filter." (Filtre à eau.)

Claim.—The combination of granulated lava or pumice stone, and hair-felt, sustained at each end of filter by perforated tin, in the manner specified.

No. 4240. LUTHER A. POWERS, Meriden, Ct., U. S., 8th January, 1875, for 5 years: "Improvements on Rakes." (Perfectionnements aux râteaux.)

Claim.—The head A, handle C, and braces E, when the said handle is secured to the head by the hooked bolt D, and the braces to the handle by the hooked bolts F, as set forth.

No. 4241. WILHELM S. VON ESSER, Hamburg, Germ., 8th January, 1874, for 5 years: "Apparatus for Cleaning Boiler Tubes by Steam." Appareil à vapeur pour nettoyer les bouilleurs.)

Claim.—The combination with the smoke box D, and fire tubes C, of one or more perforated steam blow pipes G, made adjustable up or down from the exterior of the smoke box and without opening the latter, into or out of line with consecutive upper and lower rows of the fire tubes, as specified.

No. 4242. WILLIAM A. MARTIN, London, Eng., 8th January, 1875, for 5 years: "Improvements on Furnaces and Furnace Doors." (Perfectionnements aux fourneaux et aux portes de fourneaux.)

Claim —1st. A furnace door so constructed, supported and arranged that it may be opened either inwardly or outwardly as set forth; 2nd. The said door so arranged in its frame and in combination with the sloping plate *b*1, or otherwise that it will direct the air admitted through its opening through instead of over the fuel for the purpose specified; 3rd In combination with the said door the openings *e*, and passages *f*, *g*, arranged as set forth; 4th. The fire bars *h*, projecting outside of the front of the furnace and supported in such a manner that they can be turned on their bearers as set forth: 5th. A furnace constructed with the peculiar transverse section shown in figure 3 or with the same transverse section as set forth; 6th. The furnace door *a*, constructed, supported and arranged as set forth, in combination with a furnace constructed as shown in the drawing.

No. 4243. JOHN G. MULLER, and WILLIAM MULLER, Dayton, Ohio, U. S., 8th January, 1875, for 5 years: "Gas Machine." (Machine à gaz.)

Claim.—1st. The arrangement between the gas generator and receiver of the valve E, formed of an outer vessel having an annular portion containing liquid for sealing the moveable top or

cover, the valve *g*, *g*, and tar escape pipe *h*, and gas inlet and exit pipes *i*, *i*, projecting up into the chamber of the valve, all as described; 2nd. The improved gas apparatus formed of reservoir D, retort A, with funnel attachment *e*, *e*, and pipe *f*, valves E, E, purifiers F, and receivers C, all constructed and arranged to operate as specified.

No. 4244. MELLEN BRAY, Boston, Mass., U. S., 8th January, 1875, for 15 years: "A Rivet." (Un rivet.)

Claim.—The improved rivet described, constructed with a tubular body, extending to the head and having a cutting extremity, for the purpose set forth.

No. 4245. JAMES BOYLE, Toronto, Ont., 8th January, 1875, for 5 years: "Iron Moulding Machine." (Machine à mouler le fer.)

Claim.—1st The recessed table A, admitting the pattern B, as it may be constructed to the towered out of the mould; 2nd. The combination with recessed table A, of the pinions *a*, *a*, and racks *b*, *b*, and handle E, of the frame with sliding bars *d*, *d*, *d*, and handle D, of the core bench F, and barrel G, with handle H, for the purposes set forth.

No. 4246. CHARLES A. SHAW, Boston, Mass., U. S., (Assignee of H. Halvorson), 8th January, 1875, for 15 years: "Improvements on Lamp Wicks." (Perfectionnements aux mèches de lampes.)

Claim. A fibrous lamp wick charred or partially carbonized, as specified.

No. 4247. LÉONCE LETOURNEUX, Montreal, Que., 8th January, 1875 for 5 years: "Life Preserver." (Appareil de sauvetage.)

Réclame.—1o Le système de ceinture-bouée de sauvetage A, qu'elle soit en gutta percha, en cuir, ou en toile simple, etc., ou a double contexture caoutchoutée ou vernie pour la rendre imperméable et étanche, ainsi et de même pour les petits tubes de gonflement C; 2o. Un nombre plus ou moins grand de tubes bouées composant la susdite couture, ainsi qu'un plus ou moins grand nombre de ligatures attachant ces tubes bouées aux flancs du navire; 3o Le système de jointures des tubes de gonflement C, aux tubes bouées A, permettant dans le cas de rupture de l'un de ces derniers de dévisser le tube bouée, diamétralement appliqué sur l'autre flanc du navire de manière à pouvoir de suite rétablir la stabilité de flottaison du naviro, un moment troublée par cette rupture accidentelle; 4o. Le système de pouvoir placer les tubes de gonflement C, sous le pont du naviro afin de les préserver le plus possible des chocs qui pourraient les rompre; 5o. La fixation à la machine à air comprimé en dessous de cette dernière; 6o. Le système de faire traverser le bastingage aux parties étroites B, des tubes bouées pour les préserver également de tous chocs.

No. 4248. JUDSON L. THOMPSON and FRANCIS N. DAVIS, Beloit, Wis., U. S., 9th January, 1875, for 5 years: "Manufacture of Paper Barrels." (Fabrication des barils en papier.)

Claim.—1st. The method of forming a seamless paper barrel by first winding a web of soft paper pulp, to the requisite thickness upon an expanding cylinder, directly from the cylinder or coucher of a wet paper machine and then contracting and with drawing the former from the barrel while the latter is in a wet condition: 2nd. The process of hardening, compacting, smoothing and finishing the interior and exterior surfaces of the barrel; 3rd. The method of forming a seamless barrel from soft paper pulp, by first winding the web upon an expanding cylinder, to the requisite thickness, then removing and drying the package so formed and lastly hardening, compacting, smoothing and finishing its interior and exterior surfaces between rollers of less diameter than said barrel, as described; 4th The method of preventing the web, after it is formed into a barrel, from peeling off or blistering while drying, by applying the greatest pressure to the first few layers or plies on the forming cylinder, and decreasing such pressure as the thickness of the barrel increases; 5th. The compound water weights applied to the web of pulp while being wound upon the former for the purpose of graduating the pressure upon such web; 6th. A paper barrel consisting of a body of wound paper pulp provided with hoops and heads.

No. 4249. ESEK RUSSEY, Troy, N. Y., U. S., 9th January, 1875, for 5 years: "Baseburning Stove." (Poele à charbon.)

Claim.—1st. The combination of the following elements; the upper fire pot E, the lower fire pot D, and windows I, in the casing opposite or nearly opposite the space between the fire pots; 2nd. The combination of the following elements, the upper fire pot E, the lower fire pot D, the opening between the fire pots, the dead air-chamber K, and the windows I, in the casing opposite the dead air-chamber K, as described; 3rd. The combination of the upper fire-pot E, the lower fire pot D, and the dead air-chamber K, as described.

No. 4250. GEORGE WILLIAMS, Toronto, Ont., 9th January, 1875, for 5 years: "Improvements in Friction Pulley Blocks." (Perfectionnements aux moufles de poulies à friction.)

Claim.—A friction pulley block for wire rope, &c. the combination of the plates A_1, A_{11}, grooved roller B, screws C, C_1, and ferrules D, all arranged and operating as described.

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ILLUSTRATIONS.

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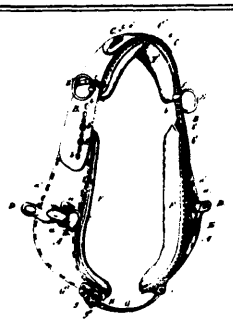
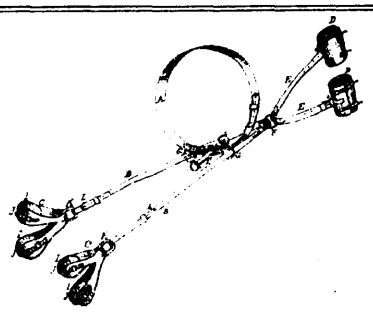


4190 Irvine & Trees' Horse-collar.



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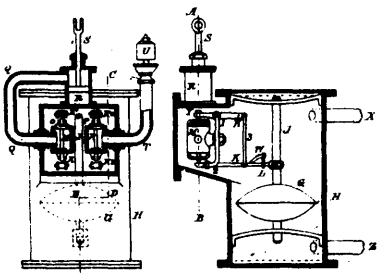

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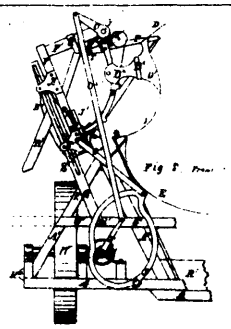

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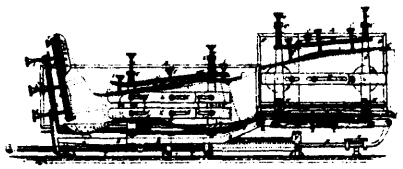

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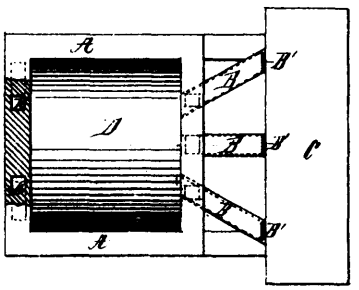

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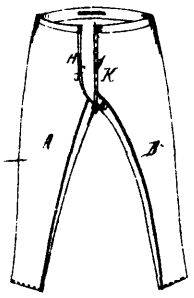

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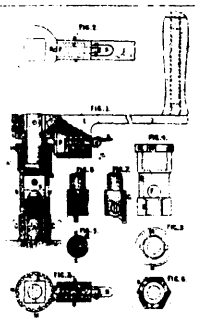

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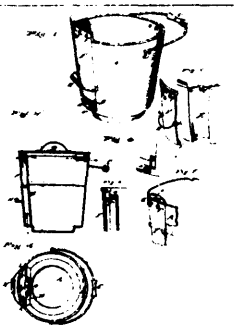

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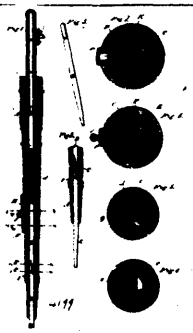

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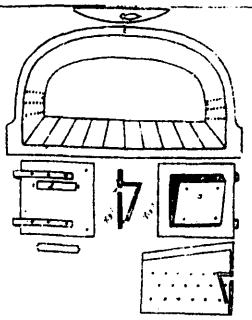

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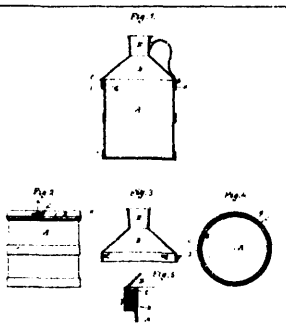

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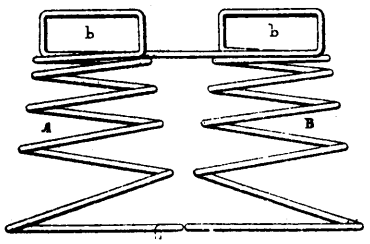

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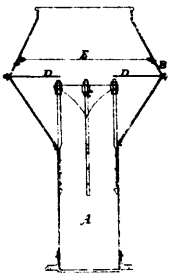

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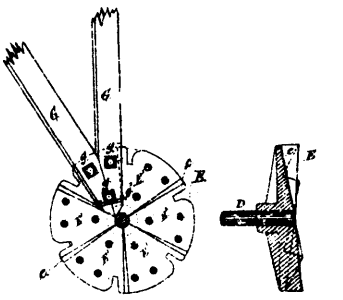

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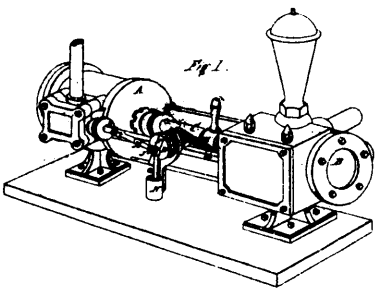

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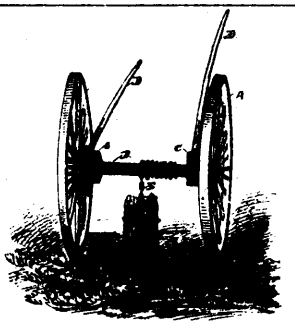

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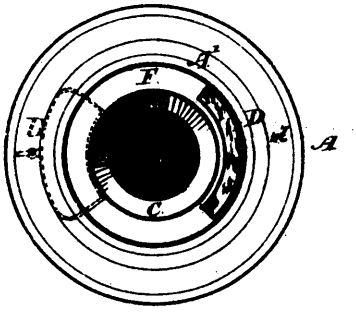

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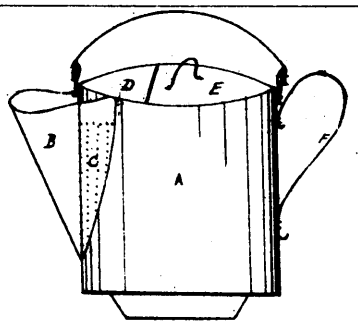
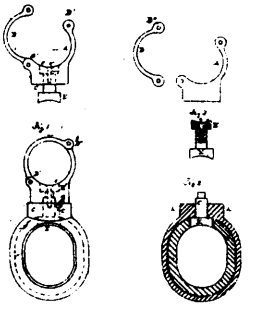
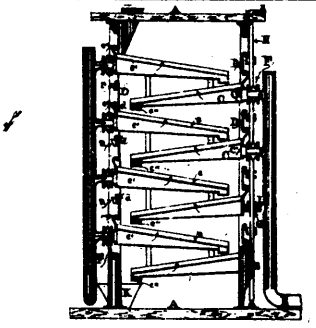


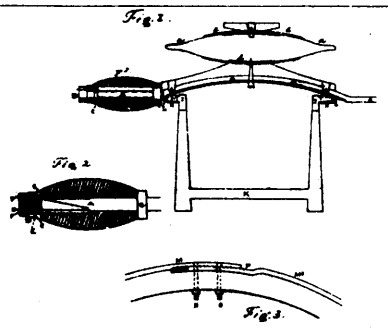
4209 Wilson's Vegetable Boiler.



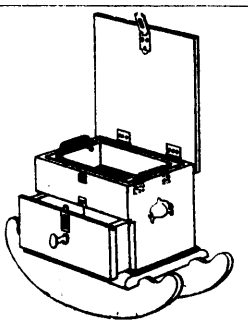
4210 Gibbs' Device for Connecting the Neck Yoke with the Draft Poles of Vehicles.



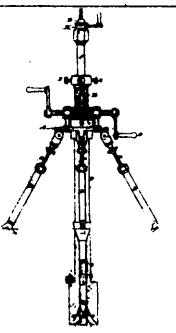
4211 May's Grain and Malt Drier.



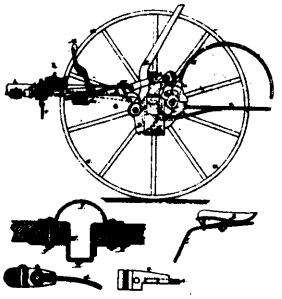
4212 White's Improvements on Carriages.



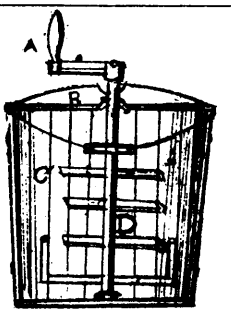
4213 Gavin's Screen for Coal Cinders.



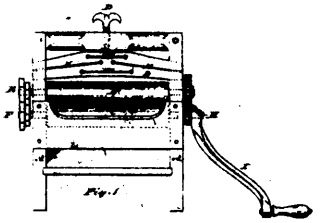
4214 Siprell's Rock Reamer.



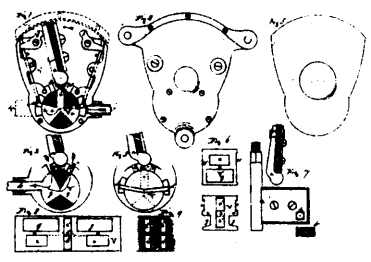
4216 Clinton, Mood & Gregg's Horse Rake.



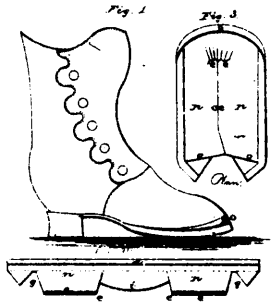
4217 Wattles' Vegetable Washer.



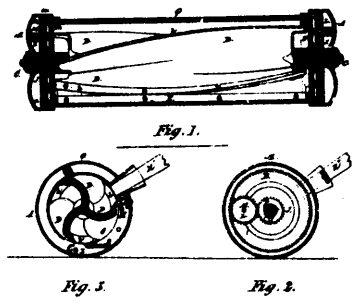
4218 Smith's Clothes Wringer.



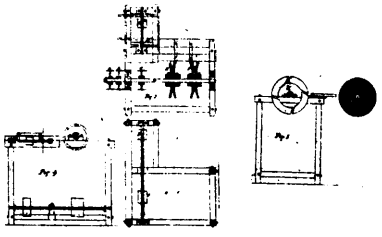
4219 Terrey's Setting Diamonds in Drills and Cutting Tools.



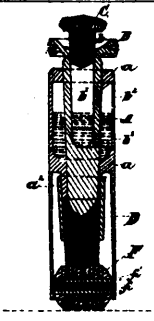
4220 Stockwell's Improvements on Boots and Shoes.



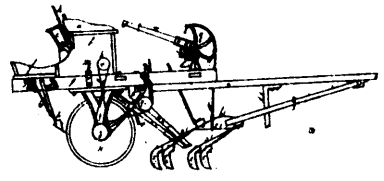
4221 Sturgeon's Lawn Mower and Harvester.



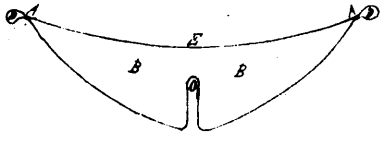
4222 Lennerton's Treenail Wedge Machine.



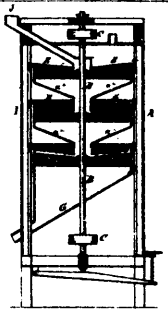
4223 Elliott's Machine for the Application of Croton Oil, &c.



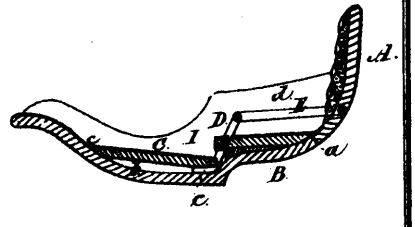
4224 Vessot's Harrow and Roller Combined.



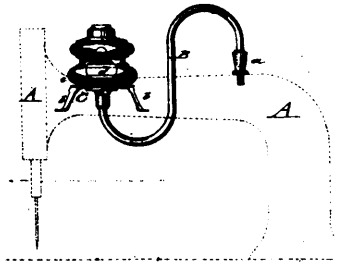
4225 Anderson's Improvements on Neck-tie Holder.



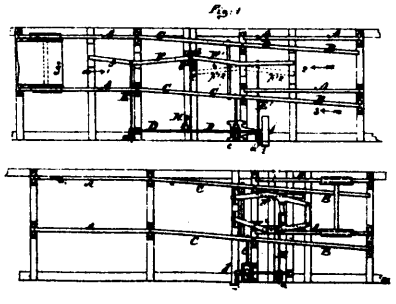
4226 McNeil's Wheat Scourer.



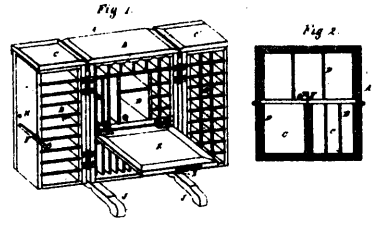
4227 Cobleigh's Children's Carriage.



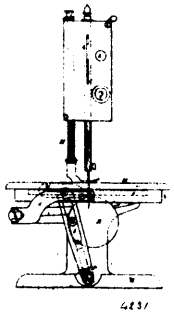
4228 Telfer's Lamp Holding Attachment to Sewing Machine.



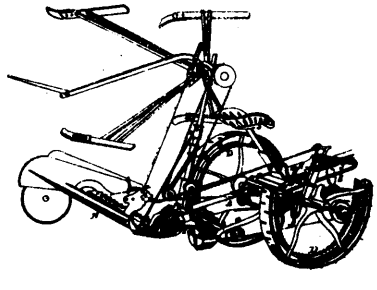
4229 Mercier, Lanctot & Elliott's Railway Switch.



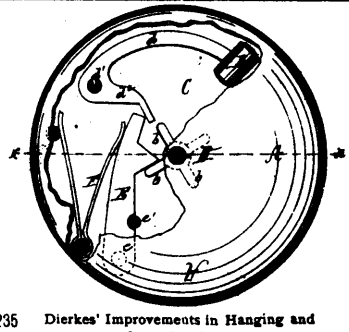
4230 Wooton, Blake & Fulton's Secretary.



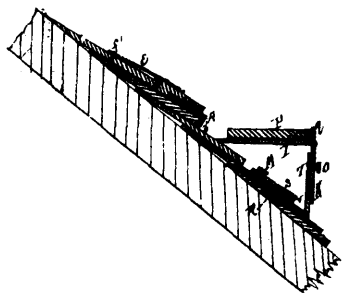
4231 Wanzer's Improvements on Sewing Machines.



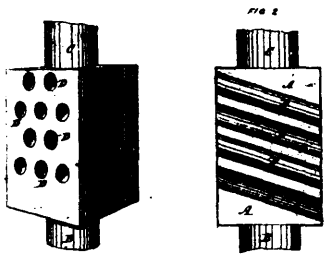
4232 Cochrane's Improvements on Harvesting Machines.



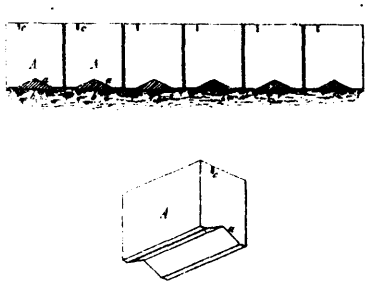
4235 Dierkes' Improvements in Hanging and Operating Bells.



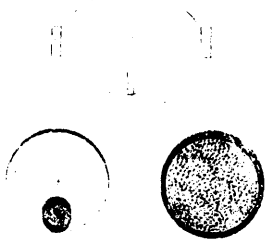
4236 Schramm's Improvements in the Shingling of Roofs.



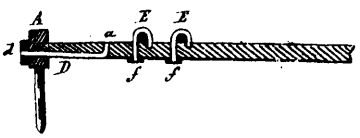
4237 Massie's Improvements on Heaters.



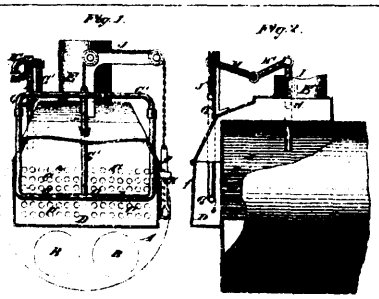
4238 Miller's Wooden Pavement.



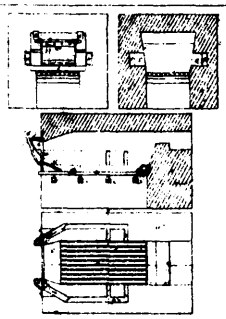
4239 Codye's Water Filter.



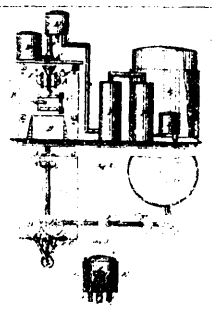
4240 Powers' Improvements on Rakes.



4241 Von Esser's Apparatus for Cleaning Boiler Tubes by Steam.

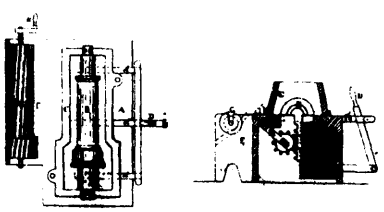


4242 Martin's Improvements on Furnaces and Furnace Doors.



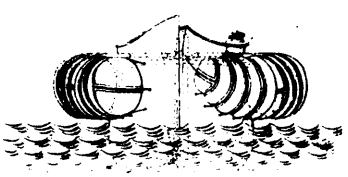
4243 Muller's Gas Machine.

4244 Bray's Rivet.

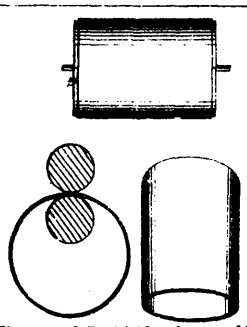


4245 Boyle's Iron Moulding Machine.

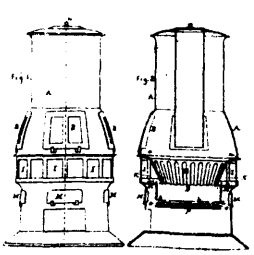
4246 Halvorson's Improvements on Lamp Wicks.



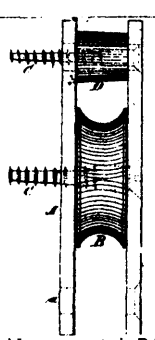
4247 Letourneux's Life Preserver.



4248 Thompson & Davis' Manufacture of Paper Barrels.



4249 Russey's Base-burning Stove.



4250 Williams' Improvements in Friction Pulley Blocks.