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The Canadian Patent Office Record

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INVENTIONS PATENTED.

No. 4511. FRANCIS G. WHITE, Ottawa, Ont., 19th March, 1875, for 5 years: "Manufacture of Artificial Honey." (Fabrication de miel factice.)

Claim.—In the manufacture of artificial honey, the compounding of alum, oil of rose, alcohol and sugar with water.

No. 4512. JAMES M. MEHARG, Montreal, Que., 19th March, 1875, for 5 years: "Improvements on Stop-valves." (Perfectionnements aux soupapes d'arrêt.)

Claim.—The wedge shaped valve C, in combination with the stem B, seat *d*, and inclines *e*, *e*, in the case A.

No. 4513. LABAN HEATH, Boston, Mass., U. S., 19th March, 1875, for 5 years: "Improvements on Shoes." (Perfectionnements aux souliers.)

Claim.—1st A shoe having the quarters A, cut in one piece and moulded or crimped to fit the shape of the foot, and form the shank *m*; 2nd. A shoe having the quarters A, cut in one piece and moulded or crimped to fit the shape of the foot and form the shank *m*, and provided with the metallic shank-piece C.

No. 4514. THOMAS B. COURSEY, Spring-Mills, Del., U. S., 19th March, 1875, for 5 years: "Improvements on Water Wheels." (Perfectionnements aux roues hydrauliques.)

Claim.—The wheel formed of the plate B, and hub or plate D, having secured thereon, the buckets E, and provided with the lips *e*, arranged to hold the water near the outer edge of the buckets and discharge it rearward.

No. 4515. WILLIAM C. NORTH, Cleveland, Ohio, U. S., 20th March, 1875, for 5 years: "Ventilating Faucet." (Robinet-ventilateur.)

Claim.—1st. The extension piece D, provided with a cleft or notch *a*, in combination with the stem A, of the faucet; 2nd. The rubber tube N, float *o*, in combination with the air tube E; 3rd. The rubber tube N, float *o*, and air tube E, in combination with the neck G, core *b*, having passage ways *c*, *c*, valve *k*, piston I, valve M, and cylinder H; 4th. The key C, provided with a vent or hold *f*, in combination with the chamber B, provided with a vent or hole *f*.

No. 4516. JACOB BLOW, Bowmanville, Ont., 20th March, 1875, for 5 years: "Fire Kindler." (Allumeur de feu.)

Claim.—A compound of common rosin, tallow, and saw-dust.

No. 4517. WILLIAM WALKER, Montreal, Que., 25th March, 1875, for 5 years: "Tubular Lantern." (Lanterne tubulaire.)

Claim.—In a tubular lantern the combination of the cone F, and flange G, with the tube E, E.

No. 4518. BENJAMIN P. AYLSWORTH, Picton, Ont., 20th March, 1875, for 5 years: "Buggy-body." (Caisse de voiture.)

Claim.—The octagon-buggy-body, and the dove-tail corner piece.

No. 4519. BENJAMIN F. STURTEVANT, Boston, Mass., U. S., 20th March, 1875, for 5 years: "Machine for Compressing Peg-ribbon." (Machine à comprimer le bois à cheville.)

Claim.—1st. The combination with the compressors for compressing ribbon peg-wood or a peg strip of heating mechanism; 2nd. The combination of compressors for compressing peg-wood heating mechanism for heating such compressors and mechanism for presenting the material to such compressing mechanism; 3rd. The combination with compressors for consolidating peg-wood of rotary presenting mechanism for presenting such peg-wood to the jaws, 4th. The combination with compressors for consolidating peg-wood of mechanism to take the peg-strip from the compressors; 5th The combination with compressors for consolidating peg-strips of mechanism to present the strip to and take it from the compressors, 6th. The feeding rollers to present the peg-strip to the compressors when provided with flanges to receive and guide such strips; 7th. A compressor for consolidating the peg-strip when provided with a ledge or flange to sustain the edge of the strip that forms the heads of the pegs; 8th. A compressor for consolidating peg-wood strips or ribbon peg-wood, having combined therewith ledges for guiding the strip at each edge. 9th. The combination with compressors for consolidating peg-wood of mechanism for moving the peg-strip and for winding it; 10th. The compressors for consolidating the peg-strip, having their faces inclined with reference to each other in the direction of their length, 11th The compressors for consolidating the peg-strip or ribbon having their faces inclined with reference to their length, and bevelled and provided with ledges, as described; 12th. The combination with compressors for compressing the peg-ribbon by means as described, for heating the strip.

No. 4520. BENJAMIN F. STURTEVANT, Boston, Mass., U. S., 20th March, 1875, for 5 years: "Fastenings for Boots and Shoes." (Cheville de chaussures.)

Claim—1st A wooden peg having its point formed by compression, 2nd. A wooden peg-strip or ribbon, having its point forming-edge compressed, 3rd. A peg-ribbon or peg-blank having its head or the edge which is to meet the peg-driver hardened or consolidated: 4th. A peg-ribbon or peg-blank condensed and hardened throughout.

No. 4521. JOHN L. KERR, Alleghany, Pa., U.S., 20th March, 1875, for 5 years: "Improvements on Guns." (Perfectionnements aux fusils.)

Claim.—A gun, the calibre bore of which is enlarged for about one-fourth or one-third of its length commencing at the muzzle end, the larger bore being on parallel lines with the smaller bore.

No. 4522. ORLANDO JENNESS, Alton, N. H., U. S., 20th March, 1875, for 5 years: "Vehicle Spring." (Ressort de voiture.)

Claim.—In an independent attachment to vehicles, a spring consisting of a top and base plates *a*, *c*, rods *d*, which have a vertical play through one of the plates and the coiled springs *e*, parts being combined as set forth.

No. 4523. THOMAS LINKLATER, Belleville, Ont., 20th March, 1875, for 5 years: "Eave Trough." (Dalle de toiture.)

Claim.—The combination of the rims C, tubes D, shoulders E, lips F, and screw G.

No. 4524. CARL W. VOLNEY, Brockville, Ont., 20th March, 1875, for 5 years: "Improvements on Explosive Compounds." (Perfectionnements aux compositions explosives.)

Claim.—The explosive compound composed of nitrated naphthaline and an oxydizing agent, prepared in the manner and in the proportions set forth.

No. 4525. GARRET SEGER, JOSEPH HEILBRUNN, JOHN KOABEL and JACOB BAUER, Humberstone, Ont., 20th March, 1875, for 5 years: "Force Pump." (Pompe foulante.)

Claim.—The tongue L, in combination with the inner ends of the conducting pipes I, I, being so arranged as to answer the purpose of a check valve.

No. 4526. EDWARD C. IBBOTTSON, Chelsea, Mass., U. S., 22nd March, 1875, for 5 years: "Railway Joint." (Joint de rail de railroutes.)

Claim.—1st. The clasp D, having projections *d*, *d*, in combination with rails A, A, provided with notches *e*, *e*, and screw or spike *f*; 2nd. The clasps D, and D^1, of equal or unequal lengths having projections *d*, *d*, in combination with rails A, A, notches *e*, *e*, and screws or spikes *f*; 3rd. The clasps D, having projections *d*, *d*, in combination with the spring clip or scabbard B^1.

No. 4527. DANIEL L. TOPPAN, Somerville, DAVID C. MELOON, East Cambridge, GARDNER B. CHAPIN, Medford, and HOPKINS H. MELOON, East Cambridge, Mass., U. S., 22nd March, 1875, for 5 years: "Wood Planing Machine." (Machine à raboter le bois.)

Claim.—The cutter-shaft B, having a simultaneous lateral and rotary motion.

No. 4528. EDGAR CLIFF, Pickering, Ont., 22nd March, 1875, for 5 years: "Rein-holder." (Porte-guides de cheval.)

Claim.—The combination of the spring B, with the frame A, together with the mode of attaching the same to the dash-board.

No. 4529. JAMES N. EDY, (Assignee of H. Bolton), Brantford, Ont., 22nd March, 1875, for 5 years: "Motive Power." (Pouvoir moteur.)

Claim.—1st. The ratchet wheel I, having sixteen or any number of teeth made so that one revolution of shaft D, will move the ratchet wheel one tooth, also the application of pawl P, which drives ratchet wheel by eccentric O; 2nd. The spring Y, between and fastened to ratchet wheel I, and wheel K, to drive the machine, it may be coiled or otherwise as required, also the application of ratchet or stop wheel M, and pawl Q; 3rd. The application of pinion F, and wheel X, driven by coiled spring V, to assist eccentric O, and pawl P, in driving up ratchet-wheel I; 4th. The combination of loose pulley *a*, having a wheel attached to it the same size as wheel *b*, on shaft D, to reduce the speed of pulley *a*, when required.

No. 4530. ADAM CANT, Galt, Ont., 23rd March, 1875, for 5 years: "Improvements in Wood Planing Machines." (Perfectionnements aux machines à raboter le bois.)

Claim.—1st. The endless rotary bed B, consisting of the alternately arranged slats C, with double ended male lugs C_3, cast thereon and slats C^1, with double ended female lugs G, cast thereon; 2nd. The driving wheel F, with teeth *f*, and shoulder *f*, in combination with the projections H, and G_2, and lugs C_3; 3rd. The slat B^2, with male and female lugs C^2, and G^1, cast thereon.

No. 4531. ALBERT A. POPE, Boston, Mass., U. S., (Assignee of H. M. Quackenbush), 23rd March, 1875, for 5 years: "Improvements on Air Guns and Pistols." (Perfectionnements aux fusils et aux pistolets à air.)

Claim.—1st. The sliding barrel D, and cylinder A, in combination with the spring-impelled plunger G, and rod C, connecting the plunger with the barrel for operation; 2nd. In combination with the barrel and plunger rod, the adjustable clasp I; 3rd. The cap *f*, with its stud *g*, in combination with the spring H, rod *c*, and barrel D.

No. 4532. DERRICK ALLARD, St. Albans, Vt., U. S., 23rd March, 1875, for 5 years: "A Smoke Stack. (Une cheminée.)

Claim.—1st. The variable inside pipe B, terminating in a funnel shaped mouth H, and a reversed flange *a*, the spiral grooved reversed plates N, and Y, having an interspace *b*, between them, the open space F, the lower guides S, and the V-shaped flange T; 2nd In combination with the variable inside pipe B, the rack E, and pinion D, the guide-rods G, G, G, G, the cone K, and the stack A.

No. 4533. JAMES MCELROY, Arkona, Ont., 23rd March, 1875, for 5 years: "Table-Leaf Support." (Porte-pliant de table.)

Claim.—The spring D, in combination with the supporting arm B, and yoke A.

No. 4534. MATTHEW BIRD, London, Eng., 23rd March, 1875, for 5 years: "Waterproofing and otherwise Improving the condition of Leather." (Mode de traitement du cuir pour le rendre imperméable, etc.)

Claim.—The process of water proofing and otherwise improving the condition of leather by heating it and causing it to absorb or imbibe the mixture of paraffine or wax and pitch, its treatment with that mixture and its after treatment.

No. 4535. GEORGE WALKER, Erie, Pa., U. S., 23rd March, 1875, for 5 years: "Improvements on Clothes Wringers." (Perfectionnements aux essoreuses à linge.)

Claim.—1st. The combination in a folding clothes wringer frame of the parallel bars A, A, and E, E, uprights D, D, and G, G, tenoned bars C, C^1 C^2, C_3, braces H, H, provided with metal plates *a*, *a*, and the rack bars *b*, *b*,; 2nd. The combination with the wringer-rollers I, I^1, of the slotted and flanged plates P, P, provided with the guard-flanges *m*, *m*, and the perforated board R; 3rd. The plates *d*, provided on both sides with right-angular flanges *c*, in combination with the uprights G, G, and bars E, E; 4th. The stop bar S, applied in combination with the uprights G, G, and bars E, E; 5th. The plate *h*, in combination with the rollers I, I^1; 6th. In combination with the plates *h*, *h*, the cross-bar K, pivoted to bar L, and lever M.

No. 4536. JULIUS A. PEASE, Boston, Mass., U. S., 23rd March, 1875, for 5 years: "Improvements on Lamps." (Perfectionnements aux lampes.)

Claim.—In combination with a reservoir of a lamp having central tube E, the cap or flame-spreader F, having a downward extending tube *f*, in combination with the cup I, and wick-tube G

No. 4537. LOUIS SCHWENDLER, Calcutta, India, 23rd March, 1875, for 5 years: "Duplex Telegraphy." (Télégraphe à double courant.)

Claim —1st The double balance method of Duplex Telegraphy; 2nd The ratios and the magnitudes of the resistances to be employed in the double balance method: 3rd. The method of simultaneous adjustment by means of a regulator, and the apparatus designated "regulator;" 4th. The method of adjustment by means of an indicator and the apparatus designated "indicator:" 5th. The method of automatic adjustment by means of an "operator" and the apparatus designated "operator," 6th. The method of adjusting in the battery branch, and the special apparatus for effecting it; 7th. The constant resistance key with spring and double battery: 8th The use of any cable in connection with the *d*, branch of the arrangement: 9th. The application of a shunt for the receiving instrument in the *b*, branch and the use of such a receiving instrument in the *b* branch.

No. 4538, JOHN A. MCMARTIN, Montreal, Que., 27th March, 1875, for 5 years: "Improvements on Pumps." (Perfectionnements aux pompes.)

Claim.—1st. In combination with the pipe I, the cylinder K' provided with two side chambers M, M₁, the chamber M, communicating with the cylinder K at its upper end, and the pipe I, at its lower end, the chamber M₁, communicating at its upper end with the pipe I, and at its lower end through the reservoir O, with the lower end of the cylinder K, all working together and in combination with the other parts; 2nd. The packing of the piston L, composed of a rubber ring or Tube T, with or without flange or flanges T₁.

No. 4539. GEORGE W. SCRIBNER, Chatham, Ont., 29th March, 1875, (Extension of Patent No. 323) for 5 years: "Improvements in Reed Organs." (Perfectionnements aux orgues à anches.)

Claim.—The tubes B., with or without the tuning slides D made of wood, metal, or any suitable material, and the application of them to reed organs, melodeons and similar instruments, whether applied horizontally or vertically, and having openings for the emission of the sound, either on the top or any other position which circumstances may render expedient.

No. 4540. JOHN H. BARBARICK, Casco, Me., U.S., 31st March, 1875, for 5 years: "Improvements in Slates." (Perfectionnements aux ardoises.)

Claim.—1st. The channel made in the slate frame as illustrated at *a*, together with the cule or bar *b*, the said bar being removable and secured when in place by an elastic or other band; 2nd. The combination of the incision *d*, and cap *c*, 3rd The slate constructed as described, that is having the recesses and the other devices as set forth.

No 4541. EBENEZER W. PHELPS, JOSIAH GREGORY and NATHAN BOSTWICK, Newark, Ohio, U. S., 31st March, 1875, for 5 years: "Machine for Grinding the Knives of Mowing and Reaping Machines." (Machine à affûter les couteaux des faucheuses-moissonneuses.)

Claim.—The guide handle *m*, in combination with the swinging frame and guide-plates O, and P, P.

No. 4542. JOHN SUGDEN and JAMES P. GAFFNEY, Lawrence, Mass., U. S., 31st March 1875, for 5 years: "Improvements in horse checks." (Perfectionnements aux appareils à contrôler les chevaux qui s'emportent.)

Claim.—The combination with the axle A, and the wheel L, the gears I, and J, shaft G, loose reel E, clutch flange F, shifting lever C, ratchet N, and cord K, or their mechanical equivalent.

No. 4543. THADEUS HODGSON, Amherst, N. S., 29th March, 1875, (Extension of Patent No. 317) for 5 yeas: "Circular Saw Guard." (Garde-scie circulaire.)

Claim —1st. The plate B, so arranged as to occupy the space cut in the lumber immediately behind the saw whether supported beneath the table, or suspended from above or both: and 2nd. The part C, so arranged as to turn upon the joint at D, whether to make room for thicker lumber or to admit of the filing of the saw.

No. 4544. JOHN SMITH, Brantford, Ont., 1st April, 1875, (Extension of Patent No. 340,) for 5 years: "Improvements in Stove and Fire Grates." (Perfectionnements aux grilles de poeles et de foyers.)

Claim.—The combination and arrangement of the heating space C, and air chamber B, having inlet air pipes I and K, and perforations G, apertures H., perforated top E, with apertures I, or their equivalent, and descending and return smoke flue D, when constructed and applied to the fire chamber A, of a grate and stove.

No. 4545. ERNEST A. HORNBOSTEL and EDWARD CARROLL, Guelph, Ont., 1st April, 1875, for 5 years: "Improvements in Wooden Taps." (Perfectionnements aux robinets de bois.)

Claim.—1st. The cork lining E, in combination with a wooden tap A; 2nd. A non corrosive plug B, having a projection or lip E, in combination with a cap C, having a lip *d*, and projection or guard *a*, and a key D.

No. 4546. FRANK MARSH, Montreal, Que., 1st April, 1875, for 5 years: "Compression, Stop and Waste Cock." (Robinet de compression, d'arrêt et de décharge.)

Claim.—In combination with any compression cock having a heel or projection G, formed on the compression box E, the waste water valve or cock, composed of the waste H, with seat I, valve spindle L, with spring N, and nut or washer M, and with or without washer M₁.

No. 4547. GERRY MORGAN, Andover, N. H., U.S., (Co-inventor with and assignee of J. R. Foster) 1st April, 1875, for 5 years: "Improvements on Machinery for Making Wedges." (Perfectionnements aux appareils à faire des coins.)

Claim.—1st. In combination with a supporting frame A, and reciprocating carriage B, the series 1 of saws, the frustum shaped inclined series 2 of saws, and the cutting off saw F, constructed and acting in co-operative relation with each other; 2nd. The combination of the series of saws 1, frustum-shaped inclined series of saws 2, frustum-shaped inclined series of saws 3, and cutting-off saw F; 3rd. The combination of the two frustum-shaped, and inclined series 2, 3 of saws, arranged in manner for forming wedges; 4th. The combination of the series 1, of saws, and the two frustum-shaped series 2, 3, of saws; 5th. The combination of the two frustum-shaped series 2, 3, of saws, and the cutting-off saw F.

No. 4548. GEORGE B. DIXWELL, Boston, Mass., U. S., 1st. April, 1875, for 5 years: "Improvements on Steam Engines." (Perfectionnements aux machines à vapeur.)

Claim.—The combination of the cooler F, with the superheated steam generator G, the engine cylinder A, their connection pipe H, and a valve *b*, arranged in such pipe, all being as described and shown in figures, 1, 2, 3, 4 and 5, of the drawings, in combination with the superheated steam boiler or generator G, and engine cylinder A, and their connection pipe H, the two throttle valves *b*, *f*, and the cooler F; the combination of the steam alarm or whistle with the superheated steam generator G, and engine cylinder A, and their connection pipe H, the two throttle valves *b*, *f*, and the cooler F; the pyrometric regulator or governor as described consisting of the gears *g*, *h*, *i*, the vibratory shield *u*, the pyrometer I, and the vibratory arm *p*, and its pawls *n*, *o*, the combination of the said pyrometric governor, with the superheated steam generator G, and engine cylinder A, their connection pipe H, the valve *b*, *f*, and the cooler F, the cylinder and piston, or either provided with wire gauze *i*, *k*, applied to, or arranged therewith, in operating a steam engine piston by superheated steam used expansively in the cylinder provided with a variable cut off, or mechanism for arresting at different parts of the stroke of the piston, the admission of steam to the cylinder, the new art or method as described, consisting in elevating the temperature of the steam of the generator or superheater, as the cut off may be lessened, and lowering the temperature of the said steam as the cut off may be increased, the same being so as to maintain in the cylinder a high or maximum safety temperature such as will prevent condensation of the steam thereon, and effect other useful advantages; the combination of the pyrometer or heat measure with the steam engine cylinder, its piston, valve chest, valve and a cut off, applied thereto; the combination of the two pyrometers D, E, with the superheater B, and the engine A, to be operated by such for the purpose specified, and shown in figures 6, 7 and 8, of the drawings; the superheater pyrometer provided with cut off indicating marks, with its scale to indicate temperatures; the combination of the adjustable slide *f*, *f*₁, with the superheater pyrometer E, and one or more electro-magnetic alarms applied to the slide or slides and to the pyrometer; the combination or use with a steam engine cylinder, the new or improved thermometric apparatus, consisting of the rod B, having the open-bore in that part within the cylinder A, and provided with measuring devices, (viz: the lever, spindle, mirror, slitted plate and the scale.)

No. 4549. IRWIN BRIDGMAN, Toronto, Ont., 1st April, 1875, for 5 years: "Improvements on Railway Cars." (Perfectionnements aux wagons de railroutes.)

Claim.—A passenger railway car having at each end thereof a vestibule in which the car door is hinged swinging outwardly, and having the closets adjacent to the vestibule forming one or both sides, of one or both vestibules.

No. 4550. DUNCAN D. MCMILLAN, La Crosse, Wis., 1st April, 1875, for 15 years: "Self-regulating Gas-Burner." (Bec à gaz modérateur.)

Claim.—The combination of the lower section or shell A, provided with a circumferential annular chamber *a*, having bottom openings *a*¹, the top section having upwardly converging channels *b*, and the flexible diaphragm C, and valve D, secured between the two sections inside the annular gas chamber.

No. 4551. JOHN W. WEST, Boston, Mass., U. S., 1st. April, 1875, for 5 years: "Spooling Machine." (Machine à bobiner.)

Claim —1st. The head stock I, rods K, bar S, rod H, screw *d*, *e*, arms *a*, *a*¹, in combination with a device for automatically changing the movements of the rods K; 2nd. The arms *a*, *a*¹, provided with the studs *b*, *b*¹, in combination with the levers *f*, *f*¹, springs *g*, *g*¹, and screw *d*, *e*; 3rd. In combination with the finger M, the rocking shaft W, bar Q, and slotted bars P, for actuating the levers *f*, *f*¹. 4th. In combination with the rods K, the wires *x*¹, eyes L and lever *x*; 5th. The rod K, provided with the slot V and the spoke J, provided with the pin *z*; 6th. The stop mechanism described, the same consisting of the levers U, provided with the necklets 6, the levers T, provided with the eyes *t*, and the lever H, combined to operate with the shipper *q*. 7th. The spool rods C, provided with the pulleys D, and arranged in the arc of a circle alternately with the rods K, provided with the fingers M, in combination with devices for conjointly rotating the rods C, and producing reciprocating rectilinear movements of the rods K.

No. 4552. JOHN PORTH and HENRY SCHEUERLE, New-York, U. S., 1st April, 1875, for 5 years: "Nail Machine." (Machine à clou.)

Claim.—1st. The novel combination of the shaft L, crank W, rod *b*, bar U, rod T, sliding-bar Q, blocks P, and *p*, pincer-rod R, nail-blank S, sliding bar X, levers *m*, *m*¹, pins *v*, *v*¹, spring levers *n*, *n*¹ and frame N; 2nd. In communicating to the after end of the pincer-bar R, a vibrating motion, diminishing gradually as the same advances toward the machine; 3rd. The moveable block P, operated by the weight Z, in combination with the transverse-sliding bar Q, by which the lateral motion is given to the pincer-bar R; 4th. The arrangement of two cranks V, V¹, of unequal length, connected by a bar or rod U, and operated from a rotating shaft L, in combination with a sliding-bar Q; 5th. The combination of the levers or springs *n*, *n*¹, sliding-pins *v*, *v*¹, levers *m*, *m*¹, sliding bar X, with slides *w*, *w*, attached, and crank V; 6th The arrangement of the strap Y, with plate *h* screws *s*, *s*, in combination with the cam C, and arm E¹, and other parts.

No. 4553. HENRY BLAND, Luton, Eng., 1st April, 1875, for 5 years: "Improvements on Sewing Machines." (Perfectionnements aux machines à coudre.)

Claim.—1st. The application and use to and in sewing machines of an oscillating feed block, mounted on a crank arm or lever carried by a rocking shaft; 2nd. The combination with the oscillating feed block mounted and actuated as set forth of the two feeding surfaces when arranged to operate together; 3rd. The application and use of a lever acting upon inclined surfaces or of an equivalent arrangement for regulating during the working of the machine, the throw of the feeding surface independently of the feeder; 4th. The combination with the adjustable presser, forming also an adjustable guide for one portion of the material to be sewn, of the plate for separating the two portions of such material; 5th. The peculiar construction and arrangement of shifting guide, operating by hand during the progress of the work, 6th. Guiding the material to be stitched as it enters the machine by passing it over a tubular support containing a yielding pin with enlarged head so arranged as to yield to any irregularity in the width of the material which passes over such support; 7th. The combination with the above mentioned shifting guide and its guide pins of an adjustable plate or gauge for accommodating various widths of plait or braid.

No. 4554. WILLIAM A. HOLWELL, Montreal, Que., 1st April, 1875, for 5 years: "Sash Regulator." (Ajustage de croisées de fenêtres.)

Claim.—1st. The combination of the lifter A, (Fig. 1), with the stud C, bent-lever D, (Fig. 2), and wire-chain or rod B, leading to the sash-fastener, 2nd. The combination of the lifter A, (Figs. 3 and 4) directly with the wire (or other equivalent device) B, leading to the sash-fastener, as set forth.

No. 4555. FRANÇOIS CUNY and PIERFORT T. BRIANT, Ottawa, Ont., 1st April, 1875, for 5 years: "Scrubbing Brush." (Brosse à frotter les planchers.)

Claim.—1st. The board-strip B, receptacle D, india-rubber strip E, spring F, coil-springs G, G, hooked-wires H, H, lip J, J, in combination with a scrubbing-brush A, as set forth.

No. 4556. THOMAS DEWITT, Grand Ledge, Mich., U. S., 1st April, 1875, (Extension of Patent No. 3163), for 5 years: "Washing Machine." (Machine à laver.)

Claim— The combination of the ribs or bars *f*, *f*, *h*, *h*, and the cylinder, and cylinder-head.

No. 4557. THOMAS DEWITT, Grand Ledge, Mich., U. S., 1st April, 1875, (Extension of Patent No. 3163), for 5 years: "Washing Machine." (Machine à laver.)

No. 4558. JOHN BORER, West Flamboro', Ont., 1st April, 1875, (Extension of Patent No. 333), for 5 years: "Cultivator or Gang Plough." (Cultivateur ou charrue à soc-multiples.)

Claim.—The construction and arrangement of the braces R, R, the lever E, on the rear end of the long tongue, the hook G, and the chain J.

No. 4559. WILLIAM S. TORRIE, Moncton, N. B., 5th April, 1875, (Extension of Patent No. 350) for 5 years: "Manufacture of Soap." (Fabrication du savon.)

Claim.—1st. Saponifying common rosin by treatment with salsoda; 2nd. The combination of the saponified rosin with soap made from tallow or from bone or other grease.

No. 4560. FRANCIS ROURK, Montreal, Que., 5th April, 1875, for 5 years: "Apparatus for Ventilating Sewers and Mines." (Appareil de ventilation des égouts et des mines.)

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

No. 4561. WILLIAM T. ROOT and WILLIAM G. WOOD, Ingersoll, Ont., 5th April, 1875, for 5 years: "Boiler Magazine for Heating Coal." (Soute-étuve pour chauffer le charbon.)

Claim.—The iron pipe C, and heating space *d*, in combination with the magazine B.

No. 4562. GEORGE MCEWAN, Derby, Vt., U. S., 5th April, 1875, for 5 years: "Milk Pan Discharge Tube and Stopple." (Tuyau de décharge et tampon de boite à lait.)

Claim.—1st. The stopple or valve A, made of glass or other suitable material ground to fit a seat upon the inner circumference of the discharge tube B, and its application to milk-pans, 2nd. The combination of the stopple or valve A, with the metallic discharge-tube B, tinned or galvanized to facilitate the process of soldering to a milk-pan, as set forth.

No. 4563. GEORGE A. BEIDLER, Philadelphia, Pa., U. S., 5th April, 1875, for 10 years: "Lamp Burner." (Bec de lampe.)

Claim.—1st. The rarefying conductor B; 2nd. In combination with the rarefying conductor B, the conical deflector A, 3rd. The combination of the conical deflector A, rarefying conductor B, cap C, wick tube D, screw E, and gas-tube *d*, all as set forth.

No. 4564. WILLIAM H. W. SHEPPARD, Newmarket, Ont., 5th April, 1875, for 5 years: "Improvements on Heating Stoves." (Perfectionnements aux caloriferes.)

Claim—1st. The combination in a stove of the air heating chamber P, and drum heating attachment, having ascending and descending air and smoke passages; 2nd. The internal plate C, having upward flanged mouth D, downward projecting smoke pipe L, both above the fire chamber, whereby an air current discharging in the chamber P, through the duct O, passes into the smoke-flues, 3rd. The annular water reservoir arranged within chamber P, and receiving the air current passing through the drum, 4th. In combination with a stove, having an air heating chamber P, a drum having an arrangement of pipes for conducting the smoke upwardly and downwardly, and double walls and top perforated to admit and discharge air circulating downwardly and upwardly.

No. 4565. JOSEPH W. BEAUMONT, Petrolia, Ont., 5th April, 1875, for 5 years: "Artificial Coal." (Charbon factice.)

Claim.—The solid form of a compound of crude petroleum oil, tar or refuse of the oil, with clay and saw dust or chopped straw, grass, leaves or other absorbents in the proportions set forth.

No. 4566. FRANK P. PEACE, Marysville, and JAMES W. D. WILLIAMS, Knoxville, Ten., U. S., 5th April, 1875, for 5 years: "Improvements on Breech-loading Fire-arms." (Perfectionnements aux armes à feu chargeant par la culasse.)

Claim.—1st. The combination of two chambers *a*, a transferring block B, and mechanism for actuating the latter through the medium of the trigger so that the loading and firing will be accomplished merely by the pulling of the trigger; 2nd. The combination of discharging block I, and spring *g*, with the reciprocating block E, for discharging the shells; 3rd. The combination and arrangement of the trigger with the hammer and the mechanism for actuating the transferring block.

No. 4567. LOUIS M. E RAVEAUD, and VINCENT MARTY, New Orleans, La., U. S, 5th April, 1875, for 5 years: "Improvements on Heating Stoves." (Perfectionnements des caloriferes.)

Claim.—The fire clay back E, provided with an oval faced concave in combination with the outer casing A, cover B, and bottom C, and irons D, D1, and grate bottom *a*, ash damper *b*, and smoke pipe I.

No. 4568. WILLIAM J. WILSON, Chicago, Ill., U. S., 5th April, 1875, for 5 years: "Process for Preserving and Packing Cooked Meats." (Procédé de conservation et empaquetage des viandes cuites.)

Claim.—1st. The process for packing cooked meats for transportation by compressing the same while heated with cooking into an air tight package, so as to preserve the meat in its integrity and retain all the natural juices and nutritious qualities of the meat; 2nd. Cooked meat put up in solid form, in its natural state, without disintegrating or desiccation, in hermetically sealed packages.

No. 4569. LOUIS COTÉ, St. Hyacinthe, Que., 5th April, 1875, for 5 years: "Heel Stiffener Shaping Machine." (Machine à former les contreforts de chaussures.)

Claim.—The combination of the conoidal rotary counter body turner A, not only with the conoidal case C, extending around it as shown and provided with the receiving and discharging mouth *a*, but also with the counter lip turner E, fixed to the head or cap D, of such case; the case C, provided with the counter-body and lip receiving mouths *a*, *k*, arranged therein and with the counter body and lip turners A, E; the adjustable gauge F, and its screw G, with the case C, and the counter body and lip turners.

No. 4570. GEORGE W. MCCREADY, Petitcodiac, N. B., 5th April, 1875, for 5 years: "Perpetual Calender and Penholder." (Porte-plume calendrier perpétuel.)

Claim.—1st. The construction and use of the tubes A, B, and C, made of any suitable material, in connection with the stem D; 2nd. The arrangement of the numbers of the centuries or figures representing them, the names of the days of the week; the names of the months and numbers representing the days of the month, and the years from 0 to 99, to be stamped, engraved or otherwise marked upon the tubes A, B, and C, 3rd. The use of the pressure springs *a*, *a*, and *b*, *b*, or equivalent device.

No. 4571. FREDERICK M. WILLSON, and WILLIAM VASSIE, Hamilton, Ont., 5th April, 1875, for 5 years: "Lamp Holding Attachment for Sewing Machines." (Ajustage des lampes aux machines à coudre.)

Claim.—1st. The hollow socket A, hollow pillar B, and stem C; 2nd. The arm G fitting into the lug F, having a joint H, holding the reflector L; 3rd. The combination of the several parts A, B, and C, which with the bracket form a simple, effective and complete arrangement for holding a lamp for lighting the operator and which is so arranged as to enable the operator to place the lamp in any position required; 4th. The combination of the several parts E, G, and H, forming an effective arrangement for holding the reflector at any angle required to throw the light directly upon the work at any point required.

No. 4572. ARTHUR WOODS and THOMAS T. STEVENS, Liverpool, Eng., 5th April, 1875, for 5 years: "Life-saving Appliances." (Appareils de sauvetage.)

Claim.—1st. The buoyant pieces *a*, *a*, with connections *b*, and *c*; 2nd. The buoyant pieces *a*, *a*, with connections *b*, *c*, and *d*; 3rd. The buoyant pieces *e*, *e*, with connections *f*, *f*, and *g*.

No. 4573. JOHN FORSYTH, Dundas, Ont., 5th April, 1875, for 5 years: "Improvements on Mowing and Reaping Machines." (Perfectionnements aux faucheuses-moissonneuses.)

Claim.—1st. Connecting the clutch couplings A, and B, by lever C; 2nd. The raising and lowering of cutter bar I, and holding same in any position by the combination of lever L, joint-lever E, and foot or stop on end of connecting bar H.

No. 4574. ISAAC R. HAYES, and JOHN SOMERSET, Manchester, Eng., 5th April, 1875, for 5 years: "Improvements on Umbrellas." (Perfectionnements aux parapluies.)

Claim.—1st. The combination of the hooked ends *a*, *a*, of the ribs *b*, *b*, with the holes in the flanges on the notches *c*, *c*, or with the wire ring *q*, *q*, or with the ordinary wire on the notch; 2nd. The combination of the similarly hooked ends *a*, *a*, of the stretchers *d*, *d*, with similar holes or a ring *q*, *q*, secured to the flange of the runner *e*, *e*, or with the ordinary wire of the runner, 3rd. The construction of the spring-fork *g*, *g*, with its slide *i*, *i*, either applied to the ribs or stretchers or to both whether connected thereto by means of a barrel *f*, *f*, or fixed directly to the end of the rib or stretcher, 4th. The combination of the spring forks *g*, *g*, with the nebs *l*, *l*, on the notches *c*, *c*, and runners *e*, *e*, whether the joint pins *h*, *h*, are fixed in the spring-forks or in the nebs *l*, *l*; 5th. Construction of the upper ends of the ribs *b*, *b*, and the lower ends of the stretchers *d*, *d* with balls or spherical ends *m*, *m*, in combination with circular recesses and slots in the notches *c*, *c*, and runners *e*, *e*; 6th. The combination with the balls or spherical ends *m*, (and the circular recesses) of the loose ring *n*, *n*, with its notches *o*, *o*, and the fixed pin *p*, *p*, for the purpose of keeping the balls or spherical ends in their places in the circular recesses.

No. 4575. SAMUEL S. ARNOLD, Dresden, Ont. 5th April, 1875, for 5 years: "Improvement in Lounges." (Perfectionnement des causeuses.)

Claim.—The combination of hinged end rails C, and front rail B, in such a manner that there is no rail in centre of bed when opened out, the arrangement being such as to leave the bed of uniform elasticity throughout, also the arrangement of the springs and ribbons E, E in such a manner that the springs in the back part of the bed serve as a support to the spring in the lounge seat when used as a lounge, and thereby making a very elastic and substantial seat.

No. 4576. HENRY TAYLOR, Richmond-Hill, Ont., 4th April, 1875, for 5 years: "Improvements in Lamps." (Perfectionnements aux lampes.)

Claim.—1st. The oil reservoir A1, with collar *a*, wick tube plate B, with studs *b*, and wick tube C, in combination with the burner deck plate D; 2nd. The burner F, constructed of glass, mica or other transparent or semi-transparent material in combination with the wick tube C, wick C1, and burner deck plate D, with clips *f*, *f*.

No. 4577. CHARLES D. BIGELOW, Brooklyn, N. Y., U. S, (Assignee of C. Tyson), 6th April, 1875, for 15 years: "Machine for Screwing the Soles of Boots and Shoes." (Machine à visser les semelles de chaussures.)

Claim.—1st. The method of automatically severing the proper lengths of the screws formed upon and cut from a continuous wire while under the action of being inserted to the varying and differ-

ent thicknesses of stock, by the co-operation with the arresting device M, of a depressing device E, a clamp device D, for the wire, the nose K, and the horn L, whereby the distance between the nose and the horn will be equal to that between the depresser and the arrester, and the clamp thereby held upon the wire for a length of time corresponding in its movement only to the thickness of the stock between the nose and the horn, and so determine the point of time at which the cutter shall be brought into action to sever from the continuous wire. 2nd. A clamp D, for the wire having a rising and falling movement upon the screwing spindle, in combination with the spindle C, having an axial and revolving motion; 3rd. The combination of the sliding clamp-head D, with the clamping jaws *b*, *b*, the toggle-pins *c*, *c*, and the screwing spindle operating to clamp the wire. 4th. The combination of the clamping device D, for the wire with the depressing device E, or its equivalent for operating the clamping device; 5th. The combination of the wire clamping device D, and its operating device E, with an arresting device M, for releasing the wire from the clamp; 6th. The arresting device M, for releasing the wire from the clamp, in combination with a holding and tripping or escapement device *m*, *m*¹, for holding the arrester and allowing it to drop out of the way. 7th. The arrester M, depresser E, wire clamp D, and nose K, arranged in relation to each other as described, and to the spindle and beak iron L; 8th. The escapement detent *m*⁴, and the stop *m*, arranged upon the fixed frame in combination with the screwing spindle C, and the operating cam H, arranged upon the pivoted oscillating frame B, connected as described and for joint operation to release the arrester M, at the moment the wire is unclamped to free the arrester for the farther de-cent of the screwing spindle. 9th. The arrester M, in combination with the escapement devices and the spring *m*⁴, for bringing up the arrester and holding it in position to again be caught by the detent; 10th. The combination with the cam H, of the connecting rod N, *n*, and the escapement detent device. 11th. The screw-driving spindle C, its wire clamping device D, and the depresser E, which operates it, the pressing nose K, and the cut off for the screw, carried by and arranged upon the pivoted oscillating frame B, and the arrester M, and its escapement devices *m*, *m*¹, arranged upon the fixed frame A, and having their several and distinct movement produced from the cam shaft F, automatically and in their respective successive relations to each other: 12th. The combination with the pivoted oscillating frame B, of a toggle crank device R, carried thereby and having a crank pin connection with the cam shaft and a lever joint connection with the treadle rod O¹, to effect the automatic alternate pressing and releasing action of the nose upon the stock: 13th. In combination with the pivoted oscillating frame and its pressing nose, of the adjustable stop *j*, the yielding treadle O, and the treadle O, for regulating and limiting the descent of the nose K, and its pressure upon the work: 14th. The combination with the treadle O, and the oscillating frame B, of a yielding treadle-rod O₂, its stop *j*, and the lever device Q, uniting said oscillating frame and the treadle-rod by a positive connection, whereby the resistance of said frame is borne by the spring treadle rod and the varying thicknesses of stock thereby equally pressed by the nose: 15th. The combination with the clamp depresser E, and the cam E⁴, which operates it to clamp the wire of a stop lever device T₂, T₃, whereby to relieve said clamp depresser from the action of the cam to control the operation of driving the screws at the will of the operator without stopping the machine: 16th. The combination with the hand controlling lever device T₂, T₃ and its spring-pin U, of the fixed and loose arms, T, E₅, and the interlocking projecting *t*², whereby the fixed and loose arms are locked and unlocked to receive the action of the cam E⁴, to operate the clamp depresser E, and to render such action non-effective in relation to said depresser: 17th. The combination with the spindle C, for rotating the wire and the lever G, connected with said spindle and an escapement detent of the wire clamping device D, and a screw-cutter *f*, whereby the screw thread is cut upon the wire without a screw-spindle. 18th. The combination with the grooved cam H, and the rock shaft roller arm connection therewith, or a take up cam 8, and an adjustable lever 9, on said rock shaft whereby any back lash or play is prevented at the time the clamp is set upon the wire, and the screw threads thereby formed free of blanks or irregular threads, 19th. The combination with the treadle O, and a fixed stop *r*, therefor, of a pivoted spring treadle catch for joint operation with said treadle: 20th. The combination with the pivoted oscillating frame, the nose which it carries and the treadle O, O₁, of the pivoted spring treadle catch J, J₃, and the fixed stop *r*, for said catch whereby the nose is held within working distance of the horn for automatic action in pressing upon and receding clear of the work for feeding and allow the operator to have freedom of his feet during the operation of screwing; 21st The combination with the treadle O, its yielding rod O₁, and rod carrier P, of the shifter rod O₂, connected therewith by spring-bearings and with the pivoted band-shifter, whereby the driving band is shifted upon the driving pulley simultaneously with bringing the nose into working position by the depression of the treadle; 22nd. The shifter rod O², provided with upper and lower bearing springs O₃, O₃, for action both upward and downward upon the treadle carrier, whereby the band shifter has a non positive or cushioned connection with the treadle. 23rd. The combination with the horn L, and its stem support L₃, of the adjusting screw L⁴, and lock nut L⁵, whereby the horn is adjusted vertically in relation to the nose; 24th. The combination with the rotating work, supporting horn L, of a pan *l*⁴, to catch and hold the brass cuttings: 25th. The socket stem L₄, of the horn or beak iron in combination with the extensible post *q*; 26th. The combination of the socket extensible post *q*, with the removable supporting pin *q*², for said posts; 27th. The cutter for severing the screw, having a screw stem *y*, and nut *y*², for adjustment; 28th. the cutter point 3, combined with a separate socketed stem holder *y*, wherby the cutter point when broken can be removed from the stem and replaced by a new one as a fixture therewith; 29th. The removable plates *g*, *g*², of the nose K; 30th The lever K, K⁴, in combination with the cam *l*, on the shaft F, and the cut off *y*³, 31st. The combination with the spindle connecting devices and the depressing rod N, *n*, of a free connection with the detent arm *m*², whereby the detent points are caused to operate as an escapement, with rigid parts. 32nd. In combination with the driving pulley I₃, the brake *t*, arranged to be operated by the oscillating frame B.

No. 4578. CHARLES D. BIGELOW, Brooklyn, N. Y., U. S., (Assignee of C. Tyson), 6th April, 1875, for 15 years: "Machine for Screwing the Soles and Heels of Boots and Shoes." (Machine à visser les semelles et les talons de chaussures.)

Claim.—In machines for screwing the uppers on to the soles of boots and shoes and in which the screw pins are made and severed from a continuous wire, a stopping and starting hand-lever, in combination with fast and loose friction pulleys F, G, and the screwing spindle A, having a pulley B, for imparting to it the screwing action.

No. 4579. HENRY WANDBY, Toronto, Ont, 6th April, 1875, for 5 years: "Kiln for the Calcination of Plaster of Paris capable of being used as a Baker's Oven." (Four pour la cuisson du plâtre propre à l'usage des boulangeries.)

Claim.—The brick kiln A, having side openings with iron doors B, and provided with iron shelves C, and trays D, in combination with suitable furnaces.

No. 4580. JOHN B. MCCORMICK, Armagh, and JAMES L. BROWN, Brockville, Pa., U. S., 6th April, 1875, for 10 years: "Turbine Water Wheel." (Turbine hydraulique.)

Claim.—1st The bucket d_2, having curved edges and concave discharge surfaces, in combination with the bell shaped rim d_1, and bell crown shaped hub d, to form a constantly enlarging opening for discharging the water so as to permit the wheel to free itself therefrom without loss by friction; 2nd. The subdivisions b_2, formed by partitions, in the guide-wheel B, having the bell shaped sides shown in combination with the gate A, having enlarged openings; 3rd. The combination of the wheel D, having buckets d_2, and guide-wheels B, having subdivisions b_2, and gate A.

No. 4581. CHARLES W. CLEMENTS, Yarmouth, N. S., 6th April, 1875, for 5 years: "Jib and Sail Hank." (Bague de foc et de voile.)

Claim —The tongue and slot hinge joint and clip hook combined, and its application to the jib hank; also the application of this contrivance to the bending of top sails and other sails to jack stays and the attachment of bonnets to jibs.

No. 4582. JOHN DOYLAND, Hamilton, Ont., 6th April, 1875, for 5 years: "Device for Preventing Gravy, &c., from Spattering over a Cooking Stove." (Appareil pour empêcher la sauce, &c., d'éclabousser les poeles.)

Claim.—In combination with a spider *b*, or other cooking utensil of a stove *a*, the anti-spatterer *c*, with flanges c^1, c, and handle *d*

No. 4583. JOHN K. PAIGE, GEORGE W. PAIGE and JEREMIAH A. PAIGE, Henniker, N. H, U. S., 6th April, 1875, for 5 years: "Box Machine." (Machine à faire des boites.)

Claim —1st The drum Q, 2nd The presser-bar I, combined to operate with the drum Q; 3rd. In combination with the drum Q, the cam *v*, arranged to operate as specified.

No. 4584. JOHN T. MCNALLY, Brooklyn, N. Y., U. S., 6th April, 1875, for 5 years: "Improvements in Means for Separating Flour from Bran and other Foreign matter." (Perfectionnements dans le mode de séparer la farine du son et des matières étrangères.)

Claim —1st. The wire card clothing applied to the surface of the picker duster or separator for bran or other products of cereals, in combination with the revolving fan or brush to loosen the useful from the refuse portion by contact with the points of the wire card clothing; 2nd The combination with such wire card clothing and fan or brush of a screen or screens to separate the materials operated upon.

No. 4585. JAMES S. BOUTER, Blairton, Ont., 6th April, 1875, for 5 years. "Quilting Frame." (Métier à piquer.)

Claim.—The standards A, foot bar B, cross-bar C, keys D, rollers E, and F, ratchet wheels H, dogs J, and J_3, crank K, hooks L, and L_3, strip M, arms N, pins O, staples P, shoulders Q, sliding-bar R, pegs S, holes T, foot U, and straps V.

No. 4586. EDWIN HORSEY, Kingston, Ont., 8th April, 1875, (Extension of Patent No. 354), for 5 years: "Improvements on Pumps." (Perfectionnements aux pompes.)

Claim—Constructing the pump chamber in two parts with flanges to be bolted together, the upper part having an open beam B, (with a throat sufficiently large to admit the passage of the oscillating rashed plate C,) spout E, and feed D, the base portion consisting of the bridge piece G, with socket aperture H, for suction tube, also constructing the valve plate C, with a socket N, to receive a handle or break O, and its oscillation on an axis bolt J, passing through the ends of the pump chamber; also the manner of securing the packing to the oscillating plate C, by the rims Q, and bolts.

No. 4587. PHILIP NICOLLE, Lindsay, Ont., 8th April, 1875, (Extension of Patent No. 356), for 5 years: "Improvements in Bee-hives." (Perfectionnements des ruches.)

Claim.—The arrangement of the bottom-board C, the support D, the metallic gauge and ventilator G regulated by a latch F, and a catch I, also of a piece of wood W¹, W¹, nailed on the under edge of hive, projecting at the ends to receive the outer case; the arrangement of hook and eye fasteners K, K, for securing the cover to the outer case, and the outer case to the bottom, the arrangement of the honey box C, composed of the top and bottom of wood held together with four strips of tin, and four glass sides fitting in a groove and hook and eye fasteners K, for honey board to prevent it from being lifted up by the cover, the arrangement of the pieces of wood F, F, at top and bottom placed on the angle, and F, F, at the sides; the edges being chamfered back, and sharp, the arrangement of the malleable nails N, N, N, N, in the form of a cross resting upon tin, also of a piece of wood P, and of a rabbeted piece of wood R; the arrangement and combination of the crank nut and bolt M, (in the division board W,) for tightening and loosening the frame; the levelling of the bottom of the division board, and the arrangement of the honey board O, containing two lights of glass as slides.

No. 4588. BENJAMIN H. DAVIS, Foxcroft, Me., U. S., 8th April, 1875, for 5 years: "Machine for Raising Stumps, &c." (Machine à arracher les souches, &c.)

Claim.—The combination of the lever *f*, and link *g*, with the ratchet and sprokett wheel *c*, *b*, pawl *d*, and chain *h*, all arranged in a suspended yoke *a*.

No. 4589. THOMAS N. EGERY, Bangor, Me., U. S., 8th April, 1875, for 5 years: "Water Wheel." (Roue hydraulique.)

Claim—1st. A water wheel having its top *a*, as much smaller in diameter than the bottom *b*, as the distance between them and its buckets inclined inward, 2nd. Buckets C, having their ends cut slantingly as shewn at *d*, E.

No. 4590. SAMUEL J. LUNDY, Uxbridge, Ont., 8th April, 1875, for 5 years: "Improvement on Ploughs." (Perfectionnement des charrues.)

Claim.—The draw clevis D, the pressure plates *h*, and *p*, and the attaching chain *g*.

No. 4991. EDMOND D. REYNOLDS and OLIVER B. REYNOLDS, Brockton, Mass., U. S., 8th April, 1875, for 5 years: "Improvements on Tags." (Perfectionnements aux étiquettes.)

Claim—1st. A tag having a double body, 2nd A tag constructed and reinforced as shown in Figs. 9 and 11; 3rd. A tag having a double body and reinforced by overlapping; 4th. A tag having a double body cut from a blank and interfolded to form a reinforce at the centre as shown in Figs. 2nd 3; 5th. A tag having a duplex body and reinforced as shown in Fig 6, the string *d*, 6th. In a merchandise tag, the nick *Z*, for retaining the string in position; 7th. A tag having a double body and provided with the tuck B.

No. 4592. FELIX DAGENAIS and GEORGE S. BRUSH, Montreal, Que., 8th April, 1875, for 5 years: "Rock Drill." (Foret de mine.)

Claim—1st. The wheel B, with segments of cogs cast thereon C_1, and C_2, in combination with the slide-box Fig 3, and its combination of ratchets H, drill spindle E, drill and spiral collar G, 2nd. The spiral collar G, when taken in connection with the drill-spindle E and operated by the combination of the finger and spring K, for the purpose of partialy revolving the drill in one direction at each reciprocation.

No. 4593 JAMES BATTERSBY, Ingersoll, Ont., 8th April, 1875, for 5 years: "Portable Steam Boiler." (Chaudière à vapeur portative.)

Claim.—1st. The shield F, with inner plate H, packing of fire clay or other suitable material I, and the draught space J; 2nd The combination of shield F, with the fire box C, and tubes E.

No. 4594. ANDREW DICK, Hamilton, Ont., 9th April, 1875, (Extension of Patent No. 1288), for 5 years: "Improvements on Signal Lights and Head Lamps for Railways." (Perfectionnements aux lumières de signaux et lampes d'avant de railroutes.)

Claim.—The arrangement of cord *e*, with pulleys C, in combination with spring roller D, by means of which the oiled signal curtain A, may be immediately drawn or withdrawn in front of light in lamp.

No. 4595. ANDREW DICK, Hamilton, Ont., 9th April, 1875, (Extension of Patent No. 1288,) for 5 years: "Improvements on Signal Lights and Head Lamps for Railways." (Perfectionnements aux lumières de signaux et aux lampes d'avant de railroute.)

No. 4596. DUNCAN MCLELLAN, Charlottenburg, Ont., 9th April, 1875, for 5 years: "Sap Evaporator." (Appareil de cuisson de la sève.)

Claim—1st. The arrangement of the elevated reservoir E, heater F, tubes G, J, having self-regulating valves H, and a series of kettles I, I, I, connected by syphons K, the whole having automatic action; 2nd. The valve H, having hinged arm M, and float N.

No. 4597. AUSTIN V. M. SPRAGUE, Rochester, N. Y., U. S., 9th April, 1875, for 5 years: "Combination Ice-tool." (Outil à glace à combinaison.]

Claim—1st. the instrument consisting of a head A attached to a handle B, and having the pick C, and cutter D, cast therein, upon opposite sides, 2nd. The head A, constructed with the teeth *a*, *a*, and concavity *b*, upon its two opposite faces, for the purpose of crumbling and pulverizing ice.

No. 4598. GEORGE P. SIMMONS and JOHAN FRANZ, Cambridge, Mass, U. S., 9th April, 1875, for 5 years "Quilting and Mat Frames." (Métiers à piquer et à natter.)

Claim.—The rail A, sides B, B, eyes K, head stocks C, C., and roller D, the head stocks being provided with the screws *h*, and bolts G, and the roller with holes in its ends to receive the bolts.

No. 4599. FRANK M. GOODHUE, Freepont, Ill., U. S., 9th April, 1875, for 5 years: "Wind Mill." (Moulin à vent.)

Claim.—1st. The upright governor vane F, having inclined wings *f*, oscillating from a perpendicular to a horizontal position in combination with the hinged rudder vane E, and wind wheel D, through the flexible connection made by the rods *e*, *e¹*, and *e²*, as described; 2nd The combination of the cord or chain *j*, guide box I, rods *i*, *i*, cord or chain *h*, weighted lever *g*, vane or rudder E, and wind-wheel D, 3rd. The tower composed of the four timbers A, bolted cornerwise and obliquely to the outsides of the rectangular hollow step-box B

No. 4600. AMOS BOWMAN, Blair, Ont., 9th April, 1875, for 5 years: "Improvements on the Construction of Railways" (Perfectionnements dans la construction des railroutes.)

Claim—1st. In combination with the double line of timbers A, A, having their joints broken, the splicing block B, applied between the joint and the middles of the opposite bearing rails to secure the strength and perforation of a single compound stringer or double rail under each of the bearing wheels gaining at the same time the advantages of the stability of a double track, or two rail railway. 2nd. In combination with the compound stringer or double rail A, A, united by splicing blocks B, and bound together by the bolts C, the notched sleepers or cross-ties D, having the combined track secured in the notch *e*, by the taper wedges or keys *f*.

No. 4601. WILLIAM MCKAY, Ottawa, Ont., 9th April, 1875, for 10 years. "Metallic Paint." (Peinture métallique.)

Claim.—An oleaginous silicated metallic paint produced by united chemical action of the ingredients of which it is composed, namely, the tersubacetate of lead, in combination with borate acid neutralizing the alkali of the silicate, causing the silicate when freed from the soda to form an insoluble silicate of lead and zinc, that the oil being protected under this process from the action of the carbonic acid of the atmosphere by its combination with wax and paraffine (or either of them separately), will prevent the paint from becoming chalky and losing its adhesive properties.

No 4602. R. DELUC VAN DE CARR, Rochester, N Y., U. S., 9th April, 1875, for 5 years: "Improvement on Canisters, &c, for Tea, &c." (Perfectionnement aux bidons, &c., pour le thé, &c.)

Claim. A case, canister or caddy for holding teas, spices and other merchantable articles or materials, having combined with its front panel or face plate, a clock or its representative attached outside of said front panel in any desired manner, or seated in a socket formed in said front panel as specified

No 4603. SYLVESTER SNELL, Watertown, N. Y., U. S., 9th April, 1875, for 5 years: "Straw and Barley Fork." Fourche pour la paille et l'orge.)

Claim. 1st A wooden fork constructed by the arrangement of the bars B, and C, notched into and across the tines A, at face and rear, and a handle D, inserted between said bars transversely to each, and notched and bolted thereto, and The wire F, removably attached by the bent ends springing into the tines and supported angularly by a raised eye E, in the handle.

No. 4604. AUGUSTUS H. HORNSBY, Chicago, Ill., U. S., 9th April, 1875, for 5 years: "Extension Arm Chair." (Fauteuil à rallonge.)

Claim.—The extra arm rests E, E, in combination with the front leg *b*, and arm rest C, as described.

No. 4605. THOMAS HAWKS, Rochester, N. Y. U. S., 9th April, 1875, for 5 years: "Brewing Process." (Procédé de brassage.)

Claim.—The process of converting the starch of barley when in a liquid state by the use of the diastase of malt, into a saccharine solution known as wort which by the common operations of browing is made into the various kinds of malt liquors of commerce.

No. 4606. WILLIAM ASCOUGH, Buffalo, N. Y., U. S., 9th April, 1875, for 5 years: "Improvements on Wrenches." (Perfectionnements aux clés à écrous.)

Claim In combination with the stem A, provided with the serrated edge D, the head B, and the loose jaw E, having a pawl F and a thumb piece H, provided with spring G.

No. 4607. WILLIAM A. LYTTLE, The Grove, Hammersmith, Eng., 9th April, 1875, for 15 years: "Manufacture of Iron, Steel, &c." (Fabrication du fer, de l'acier, &c.

Claim.—1st. The method of smelting metals from their ores by compounding the ores along with suitable fluxes and carbonaceous ingredients into bricks or lumps, and charging these into a cupola or furnace where they are subjected to the heat necessary for smelting: 2nd. The smelting furnace described in reference to Figs. 1 and 2, consisting of a central cupola charged with the ore compound and lateral fuel chamber where the combustion of the fuel is effected without its admixture with the materials under treatment. 3rd. The method of reducing metallic ores without fusing the metals, by exposing bricks or lumps compounded of ore and agglutinating material to the action of hot carbonic oxide, and cooling the lumps before exposure to the atmosphere, 4th. The reducing furnace described in reference to Figs. 4, 5, and 6, consisting of a reducing chamber with lateral fuel chambers for the production of the reducing gases, 5th. The method of separating reduced metal in a spongy, or pulverulent condition from the earthy matters of the lumps by pulverizing the product of the reducing furnace and winnowing the same. 6th The method of producing steel direct from iron ore or from spongy or pulverulent iron by exposing the compound of ore, or iron and carbonaceous matter, the cementation in the reducing furnace compounding the product with fluxes and fusing the same. 7th. The aerating apparatus described in reference to Fig. 7, for refining fused metal by causing a blast to press upon it and to bubble through the same in such manner as to create a current of the metal across the mouth of the aerator.

No. 4608. THOMAS E. EDISON, Newark, N. J., U. S., 10th April, 1875, for 5 years: "Quadruplex Telegraph." (Télégraphe à quatre courants.)

Claim.—1st. The combination in telegraphic circuits of keys that produce a use or fall of the electrical tension keys, that change the polarity of the current connected with the line, receiving magnets operated by rise and fall of electrical tension and polarized magnets that operate by change of polarity of the electrical current; 2nd. The combination with electro magnets operated by rise and fall of electrical tension of relay circuits batteries and electro magnetic receiving instruments or sounders; 3rd. The combination with a polarized relay magnet operated in the telegraphic circuit by change of polarity of the current of relay circuits batteries and receiving electro magnet or sounders; 4th. A telegraph arranged to operate by rise and fall of tension, and change of polarity of the electrical currents, the use of condensers rheostats or induction coils to neutralize the static charges and discharges; 5th. The arrangement of circuit connection to relay quadruplex or duplex telegraphic messages: 6th. The arrangements of the telegraphic instruments and circuits for duplex and quadruplex transmission.

No. 1609. WILLIAM JOSLEYN, Upper Bedford, Que., 10th April, 1875, for 5 years: "Combined Separator and Fanning Mill." (Tarrare-séparateur.)

Claim.—1st. The removable and adjustable bars D, having cog wheels I, and shoe C, hung suspendedly having rack plates F, for imparting tremulous motion to the shoes interchangeably with a smooth motion, 2nd The slides G, for adjusting the bars D, 3rd. The adjustable blank board K, constructed in sections sliding extendingly, 4th The screens fitting loosely in the shoe C, and secured at any desired pitch by spring bolts O, entering holes in the shoe.

No. 4610. MARGARET A. JOHNSON, wife of H. L. JOHNSON, Rochester, N. Y., U. S., 10th April, 1875, for 5 years: "Lamp Chimney Protector." (Protecteur de cheminée de lampe.)

Claim.—1st. The tube A, constructed with the perforated pad *g*, resting within the chimney and the closed end *f*, resting above the chimney as described, whereby the heated air which rises above the lower end of the tube is drawn in through the perforations in the sides and there discharged above the top of the chimney without coming in contact with the glass, as described, 2nd. The combination with the tube A, of the radial arms *d*, *d*.

No. 4611. JOHN A. WEARE and NATHAN WEARE, Cincinnati, Ohio. U. S., 10th April, 1875, for 5 years: "Improvements on Culinary utensils." (Perfectionnements aux ustensils de cuisine.)

Claim—1st In combination with the vessel A, having a continuous interior surface convenient for scouring, the detachable exterior plate C, forming the vapour duct on the exterior of the vessel; 2nd. The combination of plate C, suitably attached at the top, and the lugs *g*, *g*, adapted to engage inside of the rim *a*, to effect the bottom fastenings; 3rd. The detachable plate C, having flange *d*, 4th. The combination of vessel A, flanges B, B, and plate C.

No. 4612. CHARLES G. IMLAY, Philadelphia, Pa., U. S., 20th April, 1875, for 5 years: "Fare Device for Street Cars." (Mode des billets pour les chemins de fer urbains.)

Claim.—The combination of the tube A, made in sections of glass and metal and adapted to be extended in an inclined position along the car and having openings *a*, in its side, at suitable intervals with the box B, and alarm C, therein so that as balls are dropped into the openings they will gravitate to the box and sound the alarm.

No 4613 HENRY AITKEN, Falkirk, Scot., 10th April, 1875, for 5 years: "Process of Making Illuminating Gas:" (Procédé de fabrication du gaz d'éclairage.)

Claim.—1st. Treating the gases obtained by the destructive distillation of coal and other substances so that they are maintained at a temperature whereby they are either prevented from depositing the volatile hydrocarbons and rich gases in the tars, or by revolatilizing the said hydrocarbons and rich gases which have been absorbed in the tars so that these gases become saturated therewith and their illuminating power is improved, 2nd. The several arrangements of apparatus for treating crude gases obtained by the destructive distillation of coal and other substances so that they are enabled to retain, or be saturated with the volatile hydrocarbon vapours and rich gases, or the modifications of such apparatus; 3rd. Removing aqueous vapours from gases by passing them over or through an absorbent of such vapours: 4th. Removing aqueous vapours from gases and thereafter passing the gases in or through volatile hydrocarbons thereby increasing their illuminating power: 5th The employment of oil or tar saturated with paraffine spirit or other light spirit as a liquid for wet meters; also for covering the water in gas holders with.

No. 4614. PAUL CHARLAND, Stanbridge, Que., 10th April 1875, for 5 years: "Movable Roof." (Toiture mobile.)

Claim —The chains *a*, hooks *d*, and boards *e*, in combination with pins *b*; 2nd. The chains *a*, hooks *d*, and boards *e*, in combination with the weights *c*; 3rd. The combination of boards *e*, with rope or chain *g*, and weights *h*.

No. 4615. ELIJAH GLENDILLEN, Owen Sound, Ont., 10th April, 1875, for 10 years: "Force Pump." (Pompe foulante.)

Claim.—1st. The arrangement of a pair of chains, cords or wires U, working on the quadrant end of the pump handle or lever R, for communicating a vertical motion to the piston; 2nd. The addition of a handle Q, to the ordinary packing box-lid; 3rd. The addition of a conical disc N, N, to the ordinary leather clad piston L, to make it fit tightly by the pressure of the water above. 4th. The arrangement of the cylinder F F, with the outlet valves D, opening into a cavity between it and the pump, 5th. The arrangement of the air-chamber and check-valve M, in the piston rod K.

No. 4616. CHARLES CLAMOND, Paris, France, 10th April, 1875, for 5 years: "Improvements on Thermo-electric Piles." (Perfectionnements aux piles thermo-électriques.)

Claim.—1st. Sealing or fitting negative plates of thermo-electric piles; 2nd Casting bars of thermo-electric piles in moulds previously heated almost to the point of fusion of the thermo-electric material from which they are to be made; 3rd. Heating thermo-electric piles by gas, especially those piles or generators in which bars are built up and arranged between two ring plates united by bolted cross-bars; 4th The construction and employment of circular thermo-electric generators or piles.

No. 4617. CYRENIUS WHEELER, Jr., Auburn, N. Y., U. S., 10th April, 1875, for 5 years: "Cutting Apparatus for Harvesting Machines." (Appareil à couper pour les moissonneuses.)

Claim.—1st. In combination with the cutter-head and its wrist-opening, the pitman H, and its wrist G, and the latch I, and its spring bolt *j*, co-operating together; 2nd In combination with a knife-bar having its rivet-holes punched or drilled at equal distances apart, the sections or cutters punched or drilled with two rivet-holes, so that any two of the holes in the section will exactly match any two adjacent rivet-holes in the knife-bar; 3rd. The leger-plate composed of the steel-plate *a*, and the malleable cast-iron shank *b*, riveted thereto and extending under the finger-bar.

No. 4618. PETER SCHOFIELD, Philadelphia, Pa., U. S., 10th April, 1875, for 5 years: "Improvements on Steam Gauge Cocks." (Perfectionnements aux robinets-jauges de vapeur.)

Claim.—1st The combination in a cock of a weighted handle, a screw or incline, and a valve to render such cock self-closing; 2nd. The sleeve *b*, with the valve seat at the end, a discharge tube *f*, a weighted handle and screw or incline O; 3rd. The combination of a stop S, with the weighted handle *g*, valve and screw or inclined O, to limit the movement in opening the gauge cock 4th. The gauge cock made with the grooves *u*, around the stem, the screw portion *n*, and the discharge orifice *f*, at the end, in combination with the sleeve *b*, and weighted handle *g*.

No. 4619. JEREMIAH F. COLE, Sophiasburg, Ont., 10th April, 1875, for 5 years: "Motive power for Churns, &c." (Pouvoir moteur pour les barattes, &c.)

Claim.—1st. The combination of the standards B, connecting rod F, lever G, connecting bar H, and arm J, 2nd. The combination of the guide N, strap P, slat Q, screw R.

No. 4620. SAMUEL E. GRISCOM, Pottsville, Pa., U. S., (Assignee of W. P. Uhlinger), 10th April, 1875, for 15 years: "Improvements on Millstone Dressing Machines." (Perfectionnements aux machines à rhabiller les meules.)

Claim.—1st. The combination with the star-wheel E, and yielding pawl F, of the spring-guard G; 2nd. The combination with the feed-screw D, of the lever I, its threaded bearing H, the spring S, and the hinged dropping-arm L; 3rd. The spring-guard G, having the laterally inclined spring-tongue *b*; 4th. The star wheel E, having teeth whose square edges *a*, are at right angles to the radius of said wheel, and whose bevelled edges *a*, are inclined so as to approximate to said radius; 5th. The laterally-yielding pawl F.

No. 4621. WILLIAM S. SAMPSON, New York, U. S., 10th April, 1875, for 5 years: "Improvements in Kilns for Calcining Lime, Burning Cement and Plaster, and Roasting Ores and similar materials." (Perfectionnements aux fournaux à cuire la chaux, le ciment et le plâtre, et griller les minérais et autres matieres semblables.)

Claim.—1st The combination of the cone shaped bond plate L, at the base of the furnace or kiln, the series of bond plates S, all provided with slotted openings V, with the horizontally divided sections of masonry of the walls G, and G_1, the whole rigidly tied together by the series of tie rods T; 2nd. The air space P, between the walls G, and G_1; 3rd The method of utilizing the unconsumed carbon in the fire chambers by introducing into the said fire chambers fresh air by means of air passages; 4th. In combination with a furnace or kiln a draught flue suspended therein, 5th. A draught flue, to be suspended in a furnace or kiln, made tapering from its apex to its base, provided with longitudinal flanges C, having projecting flanges E, and the slotted openings or inlets F, constructed in sections B, or cast in one solid piece; 6th. In combination with a draught flue suspended in a furnace or kiln, the smoke stack or chimney J, as provided with a damper K.

No. 4622. CHARLES C. PARKER, Aylmer, [Ottawa] Que., 10th April, 1875, for 5 years: "Potato-digger." (Extracteur à patates.)

Claim.—1st. The open perforated or barred cylinder D, rotating in line with the draft within the frame A, of the machine, in combination with a scoop G, discharging into the said cylinder and rotating by the traction of the machine; 2nd. The arrangement of the gear wheels I, J, M, N, and shaft E, in combination with the frames A, and F, for rotating the cylinder D; 3rd. The supplementary frame F, supported from the frame A, in front, and axle B, rearward for bearing the scoop G, and operating gears; 4th. The arrangement of the shaft O, crank lever R, arms P, and rods Q, in combination with the scoop G, for adjusting the same.

No. 4623. EDWARD BARTLETT, Renfrew, Ont., 10th April, 1875, for 5 years: "Potato-digger." (Extracteur à patates.)

Claim.—1st. The use of rotating cylindrical screen; 2nd. The blades or the screw principle attached to the inner side of cylindrical screen for the purpose of delivering the potatoes into the spout: 3rd. The wire-spout placed and used as set forth.

No. 4624. JOHN ELLIOTT, London, Ont., 10th April, 1875, for 5 years: "Improvements on Straw-cutters." (Perfectionnements aux coupes-pailles.)

Claim.—1st. The coil spring B, arbour C, and bolt D, with foot E, in combination with the upper feed-roller A, 2nd. In combination with lower feed-roller F, the ratchet-wheel G, and dogs H, H_1; 3rd. The mode of communicating motion to upper and lower rollers by chain I, chain-wheels J, K, and additional chain-wheel L, M, 4th The iron plate or journal N, bolts O, slots P, P_1, in combination with wheels L, M; 5th. The guide-piece S, pivoted on adjustable screws T, T_1, in combination with the dog Q, lever R, arm *a*, stay *b*.

No. 4625. JONATHAN P. ABBOTT, Cleveland, Ohio, U. S., 10th April, 1875, for 5 years: "Hanging Device for Eaves Troughs, Pipes, &c." (Appareil d'ajustage des dalles de toitures, tuyaux, &c.)

Claim.—1st. The finger F, and hook G, in combination with the bar B 2nd The hook C, and lug *a*, in combination with the bar B; 3rd. The clamp J, consisting of a piece of wire bent at one end into an eye *b*, and the opposite end formed into a hook K, in combination with the strap H, and the eaves of a building; 4th. The bar B, having one or more fingers for holding or clamping the rear side of the trough hook C, and lug *a*, for clamping the front edge of the trough and suspending the same from the roof or cornice by means of a strap; 5th. The spike K, having an arm N, provided with an eye P, in the end thereof and an arm M, having its end terminating in a hook *a*, and shoulder C_1, in combination with the band Q, and key R.

No. 4626. JOHN COWMAN and SAMUEL B. BARBER, Rochester, N. Y., U. S., 10th April, 1875, for 5 years: "Manufacture of Artificial Marble and Stone." (Fabrication du marbre et de la pierre factices.)

Claim.—1st The composition for making imitation stone consisting of the combination with gypsum of glue, gum tragacanth and alum compounded; 2nd The process of forming artificial marbles and other factitious stones by combining gypsum, glue, gum tragacanth and alum with mineral colours in separate ves-

sels, and applying the coloured cements by suitable instruments in building up a body or facing of the stone with the colours blended throughout: 3rd An imitation marble or similar factitious stones composed of coloured cements built up in a body, with the colours blended through the whole thickness, or through a facing placed upon a neutral backing.

No. 4627. JOHN MCKENZIE, Kincardine, Ont., 10th April, 1875, for 5 years: "Improvement on Churns." (Perfectionnement des barattes.)

Claim—The dasher C, with bevels D, and upright knives E.

No. 4628. WILLIAM W. INGRAHAM and EDWARD BEARD, Chicago, Ill., U. S., 16th April, 1875, for 5 years: "Grain Scourer and Separator." (Nettoyeur-séparateur des grains.)

Claim.—1st. A wire rope surface for scouring grain; 2nd. The inclined corrugated beaters G; 3rd. The rings I, provided with the wallowers O, in combination with the cylinder for scouring grain; 4th. The crimped rings E, placed at the top of the cylinder; 5th. The combination of the perforated plate O, for the admission of air in combination with the trunk K; 6th. The combination of the partitions Q, S, T, and suction fan N; 7th. In combination with the members of the trunks K and L, the slide W, and opening V; 8th. The weighted valve X, for regulating the discharge of the grain from the scouring cylinder.

No. 4629. JAMES MATTICE, Chinguacousy, Ont., 16th April, 1875, for 5 years: "Alternating Screw Power." (Came motrice.)

Claim.—The combination of the cylinder A, groove B, friction-roller C, shaft D, and crank F.

No. 4630. LOUIS H. HEBERT, St. Jean, Que., 16th April, 1875, for 5 years: "Improvements on Cultivators." (Perfectionnements aux cultivateurs.)

Résumé.—1o. La combinaison de l'axe D, des leviers E, E_1, ayant les freins F, F_1, les arcs dentés I, I_1, les bras *h*, *i*, les chaines G, G_1, avec les sommiers H, H_1, boulonnés à la traverse V; 2o. La combinaison de l'axe M, des bras *o*, *o*, des roues régulatrices N, N, du levier E_1, ayant le frein F_1, avec la crémaillère cintrée O, boulonnée à la traverse V; 3o. La combinaison de la crampe K, de la vis et de la manivelle L, avec la flèche J, du cultivateur pour l'élever ou l'abaisser

Claim.—1st. The combination of the shaft D, levers E, E_1, having the brakes F, F_1, the toothed arcs I, I_1, the arms *h*, *i*, the chains G, G_1, with the cross pieces H, H_1, bolted to the frame V, 2nd. The combination of the shaft M, the arms *o*, *o*, regulating wheels N, N, the lever E_1, having the brake F_1, with the arched rack O, bolted to the frame V; 3rd. The combination of the cramp K, the screw and crank-handle L, with the beam J, of the cultivator for raising or lowering it.

No. 4631. LOUIS H. HEBERT, St. Jean, Que., 16th April, 1875, for 5 years: "Improvements on Tables of Mowing and Reaping Machines." (Perfectionnements aux tables de faucheuses-moissonneuses.)

Résumé.—1o. La combinaison de la crémaillère cintrée E, du levier F, ayant le frein G, l'essieu H, le bras Y, avec la roue I, pour lever ou baisser la table A; 2o. La combinaison du poteau J, du fer à cheval K, ayant une rainure *d*, et une vis *e*, de l'anse à dents de rochet O, du levier F_1, ayant le frein G_1, le bras P, la biellc Q, les branches verticales L, L, les tiges *f*, *f*, la traverse M, l'axe T, la poulie R, avec le dévidoir S; 3o. Un dévidoir S, dont les montants *j*, *j*, et les palettes *h*, *h*, sont mobiles et forment les ailes V.

Claim.—1st. The combination of the arched rack E, lever F, having the brake G, axle H, arm Y, with the wheel I, to raise or lower the table A; 2nd. The combination of the post J, horse shoe K having a groove *d*, and a screw *e*, with ratchet toothed handle O, lever F_1, having the valve G, arm P, connecting rod Q, vertical branches L, L, rods *f*, *f*, cross bar M, shaft T, pulley R, the reel S; 3rd. Reel S, of which the uprights *j*, *j*, and the bars are movable and form the wings V.

No. 4632. DANIEL MCCULLOUGH, Kemptville, Ont., 16th April, 1875, for 5 years: "Axle Oiler." (Graisseur d'essieu.)

Claim.—1st. The spring D, provided with a pad or cushion E, in combination with the hub A, and tube or bore C; 2nd. The keeper E_1, in combination with the spring L.

No. 4633. WILLIAM BOWES, Pinkerton, Ont., 16th April, 1875, for 5 years: "Improvements in Wind Wheels." (Perfectionnements aux moulins à vent.)

Claim.—1st. The horizontal wind wheel A, working around the centre pivot I, and mounted on the rails D_1 and E_1, or their equivalent, the said wheel consisting of the platform C, friction rollers D and E, radially placed, sail arms B, pivoted blocks G, and pivoted sails F, and F_1; 2nd. The sail F_1, in combination with the cleat B_1, and block G; 3rd. The wheel A, shaft I, and bevel wheel J, in combination with the bevel wheel J_1, and shaft K.

No. 4634. THOMAS DEWITT, Chatham, Ont., 16th April, 1875, for 5 years: "Plough Coulter." (Coutre de charrue.)

Claim.—The mode of curving or inclining the prong or spur B, forward.

No. 4635. JAMES E. WISNER, Friendship, N. Y., U. S., 16th April, 1875 for 5 years: "Horse Hay Rake." (Râteau à cheval.)

Claim.—1st The thimbles S, S, having lugs V, V, in combination with the rake teeth J, and bolts U, 2nd. The combination of a hooked detent connected to the lifting bar with the ratchet wheel on the revolving rake axle; 3rd. The curved plate Q, adapted to form a guard for the ratchet wheel, and an adjustable trip for the lifting device, 4th. The mode of attaching rake teeth by means of the downward band in the end of the tooth, the cavity and tapering slot to accommodate the tooth and the removable cap C_1, to secure the teeth in place, 5th. A frame constructed to support the axle near the hubs and at intermediate points; 6th. The frame composed of the thills T_1, T_1, the oblique side braces V_1, V_1, and the cross bars N_1, N_1, and O_1; 7th. The rake teeth adapted to be automatically raised to varying heights for dumping the load.

No. 4636. WILLIAM T. ROOT, and WILLIAM G. WOOD, Ingersoll, Ont., 16th April, 1875; "Improvements on Steam Radiators." (Perfectionnements aux radiateurs de vapeur.)

Claim.—1st. The radiator A, with transverse tubes C, formed in one casting; 2nd. The admission of steam to radiator by pipe E, at a point at one end near the top; 3rd. The mode of drawing off the water by drip pipe I, from bottom of radiator A, inclining in direction of boiler N, 4th. The steam-pipes O, when set at an angle leading downwards from the boiler N, in combination with drip pipes P, connected to them at their lowest point *e*.

No. 4637. JAMES L. ADAMS, Montreal, Que. 16th April, 1875, for 5 years: "Tobacco Cutter" (Hache tabac.)

Claim.—The combination of the cutter C, with rotary cylinder B, lever handle D, and feeding-plane E.

No. 4638. JOHN D. STARK, Brooklyn, N. Y., U. S., 16th April, 1875, for 5 years: "Improvements on Lubricators for Car Axles." (Perfectionnements aux graisseurs d'essieux de wagons.)

Claim.—1st. The flexible elastic lubricating wheel consisting of a rim so connected to the hub, by a coiled spring, or its equivalent that it assumes the form of an eccentric when running in contact with the journal; 2nd. The combination of the tilting standard, the wheel and the base on which it doubles down when being put into the box; 3rd. The division of the ring or wiper, into a larger and a smaller segment in combination with the spring at its upper side to draw it together; 4th. The double revolving ring in combination with its projections, and the longitudinal grooves in the axle.

No. 4639. ALVA H. SWAIN, Winchester, Ind., U. S., 16th April, 1875, for 5 years: "Improvements on Tables for Ironing and other Purposes. (Perfectionnements aux tables à repasser et autres.

Claim.—1st. The combination of the ironing board B, and press-board D, hinged together, and adapted for operation; 2nd. The combination of the frame A, ironing-board B, and press-board D, adjustable together; 3rd. The supplementary press-board F, in combination with the frame A; 4th The combination of the frame A, boards G, and F, adjustable with a sill or table V; 5th. The inclined arrangement of the frames A, and horizontal adjustment of the boards B, clamping to form a table of any continuous length, for market or other tables.

No. 4640. ROBERT F. COOKE, New-York, U. S., 16th April, 1875, for 5 years: "Improvements on Horse Shoes." (Perfectionnements aux fers à chevaux.)

Claim.—1st The novel combination of the frames A, A^1, central rib E, sockets B, plate *a*, india-rubber C, with strips of canvas *n*, or their equivalents; 2nd. The skeleton shoe consisting of the frames A, A^1, connected by a plate *a*, and the strengthening rib E, in combination with hubs or sockets B; 3rd. The skeleton horse-shoe, in combination with an india-rubber filling C, mixed with strips of canvas, cloth or hemp *n*; 4th. A skeleton horse-shoe in combination with an india-rubber-lining, when said rubber is cast or pressed into the skeleton frame while in a crude state and then, when in place, vulcanized.

No. 4641. JAMES E. WISNER, Friendship, N. Y., U. S., 16th April, 1875, for 5 years: "Horse hay Rake." (Râteau à cheval.)

Claim.—1st. A horse hay rake, in which the load is dumped by the draft or power of the team, provided with means for connecting the locking and tripping devices to the seat standard, or other part of the rake frame, for the purpose of enabling the driver to set the dumping mechanism with his foot; 2nd. A horse hay rake in which the line of draft is adjustable to hold the teeth into the hay with greater or less force 3rd The axle arms, 4th. The locking and tripping lever H, provided with the spring J, in such a manner as to hold the two parts of the lever in contact with each other and to press the longest part within a recess of the slot N, 5th. The locking and tripping lever connected to the seat standard or other part of the frame by the chain or rope P, 6th The combination of the tripping chain and locking lever with the sliding clutches and wheels of the rake, 7th. The tripping chain or rope combined with the tripping lever H, in such a manner as to set the latter within the path of the cam-guide R, when the chain is pressed by the operator; 8th. The axle arms cast with angular sockets, to receive the front lower corners of the axle; 9th. The axle arms constructed with a base collar *w*, and an enlarged portion X, between said collar and the wheel hub, to receive the sliding clutch; 10th. The coiled or spiral spring Z, combined with the axle arm and its clutch; 11th. The spring of the clutches combined with the tripping lever and axle arms; 12th. The thills of the rake adapted to be hinged at any point upon the front of the axle; 13th. The rake teeth bent over at their upper ends to form the short arms C^1, which are first passed through the metal guide loops and then inserted in recesses of the axle, 14th. The teeth of the rake adapted for independent movement; 15th. The teeth of the rake adapted for independent application and removal.

No. 4642. MICHAEL D. MURRAY and JOHN C. HUTCHINSON, (Assignees of G. P. Cole.) Johnstown, N. Y., U. S., 16th April, 1875, for 5 years: "Improvements in Breast Collars for Harness." (Perfectionnements aux bricoles de harnais.)

Claim.—A neck-strap B, consisting of the olliptical piece H, top-piece I, bottom J, and internal spring F, put together.

No. 4643. AARON L. COREY and EDWARD W. GRANT, Ypsilanti, Mich., U. S., 17th April, 1875, for 5 years: "Cham-Pump Bucket." (Godet de pompe à chapelet.)

Claim.—1st The elastic chain pump bucket A, having the annular groove *a*; 2nd The link B, nut *c*, screw-eye-bolt C, and washer *d*, in combination with an elastic expansible pump-bucket A

No. 4644. WILLIAM H. GIBBS, Oshawa, Ont., 17th April 1875, for 5 years: "Middlings Purifier." (Epurateur de gruaux.)

Claim.—1st. The combination of the fans G, G, with the revolving saucer or silent-feed D, together with the perforated metal bottom F, and regulating slats O, O; 2nd. The combination with the fans G, G, with the blast spout L, together with two or more elbows and spouts P, P.

No. 4645 RICHARD W. JEFFERY, Woodbridge, Ont., 17th April, 1875, for 5 years: "Improvements on Reaping Machines." (Perfectionnements aux moissonneuses.)

Claim.—The combination of the split pin E and E^1, with the bolts A, and A^1, and the swivel D, and D^1.

No. 4646. JAMES CURRIE, Toronto, Ont., 17th April, 1875, for 5 years. "Improvements on Steam Boilers." (Perfectionnements aux chaudières à vapeur.)

Claim.—1st. An interior dome C, placed over the opening in the shell of a steam boiler A, A, leading into the steam dome B; 2nd An interior dome C, perforated with an unlimited number of small holes; 3rd. A plate D, perforated with holes, and covering the opening in the shell of a steam-boiler A leading into the steam-dome B; 4th Two or more perforated plates E, E, placed across the steam dome B, with a porous substance F, between them.

No 4647. JOHN F. WEBSTER, Hamilton, Ont., 17th April, 1875, for 5 years: "Improvements in Screw Machines." (Perfectionnements aux machines à vis.)

Claim.—1st In combination with a screw machine, the grooved sleeve D, hardened bush U, and collet E, operated by the forked lever F, hand lever H, and connecting rod I; 2nd. In combination with a screw machine, the grooved-sleeve D, hardened bush U and collet E, used singly or in combination with the feeding devices; 3rd. In combination with a screw-machine, the arrangement of the feeding device consisting of the sliding stud K, the bar L, cam O, vice jaws P, split taper collar or collet Q, and nut R, slotted lever M, operated by the hand-lever H; 4th. The arrangement of the grooved sleeve D, bush U, collet E, and the stud K bar L, cam O, jaws P, split-collet Q, operated by levers H, F, M, in combination with hand lathes and filing machines.

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ILLUSTRATIONS.

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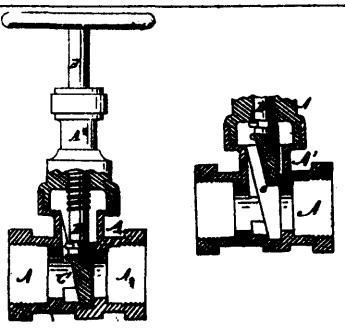

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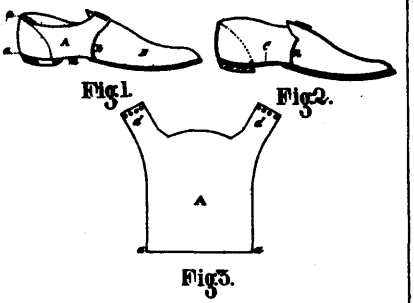

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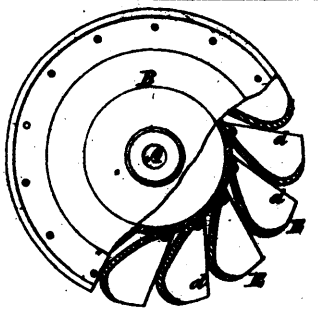

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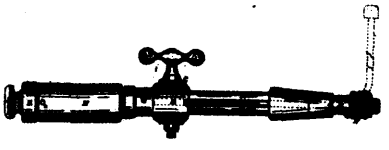

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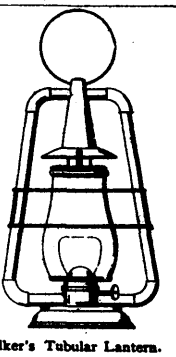

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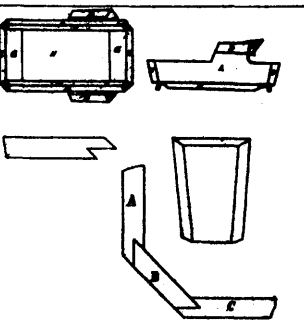

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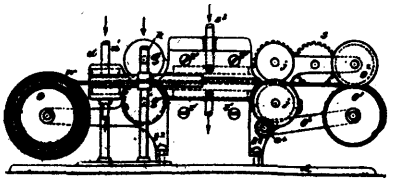

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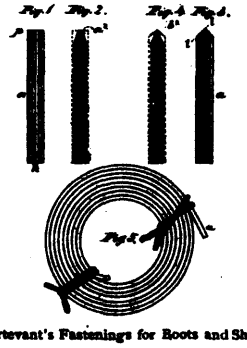

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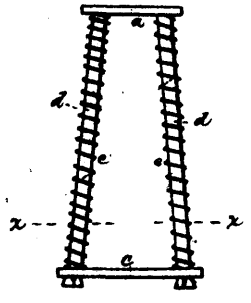

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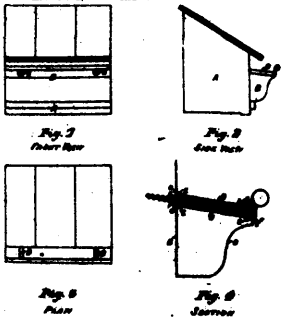

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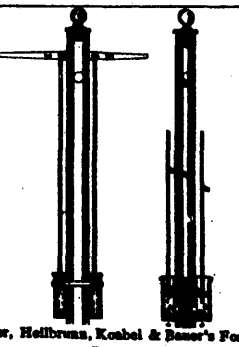

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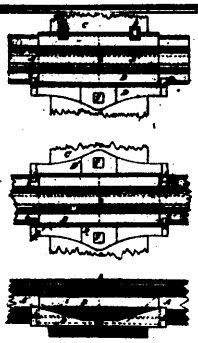

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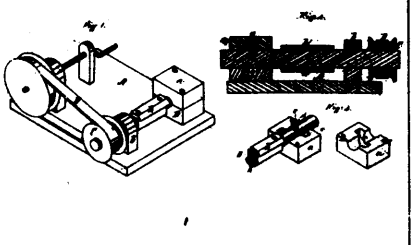

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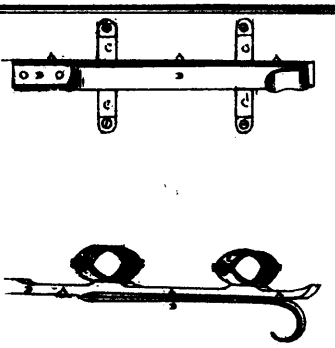

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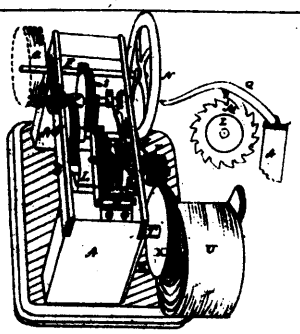

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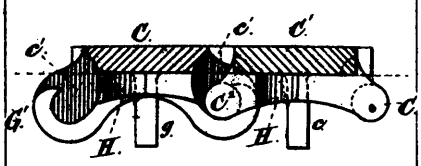

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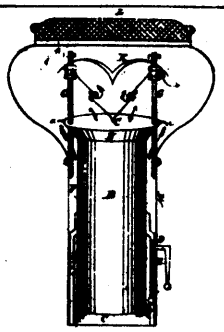

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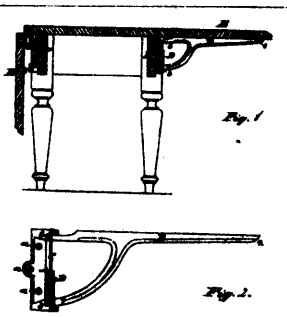

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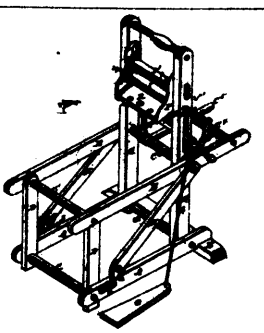

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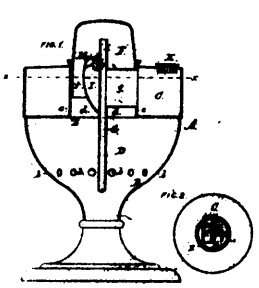

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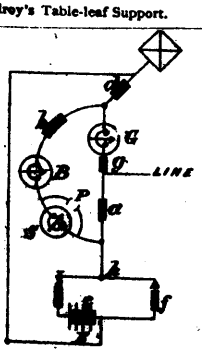

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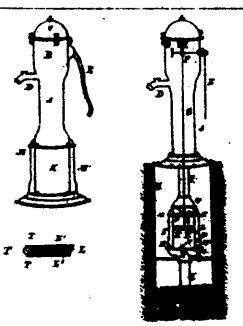

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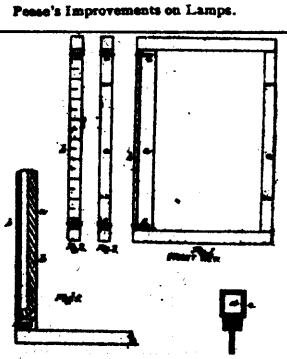

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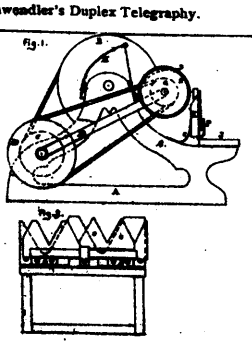

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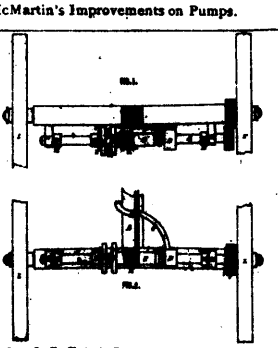

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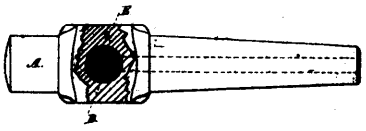

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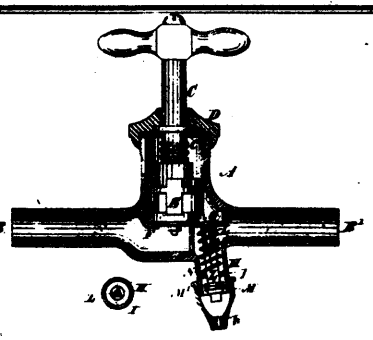

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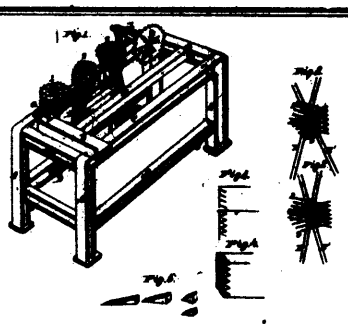

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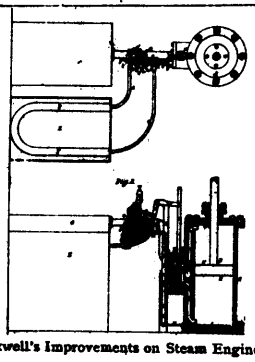

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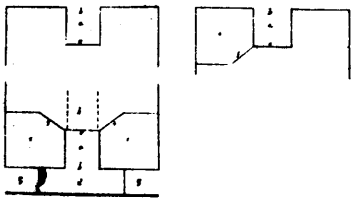

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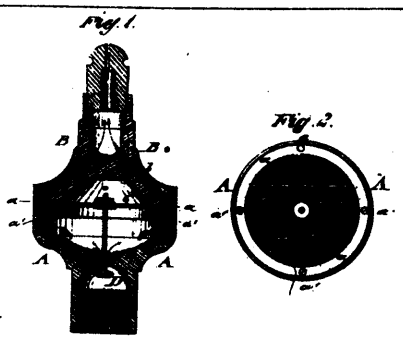

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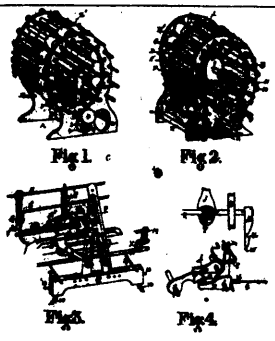

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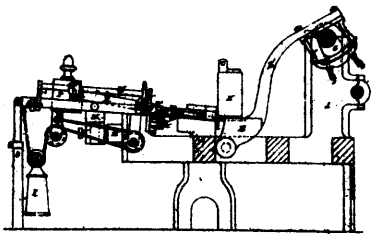

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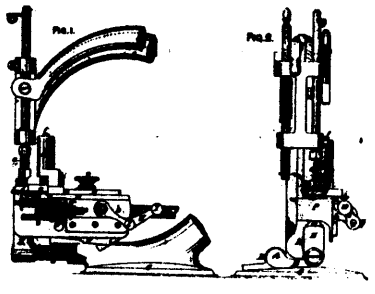

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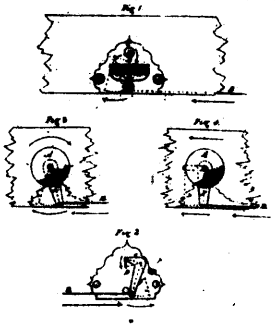

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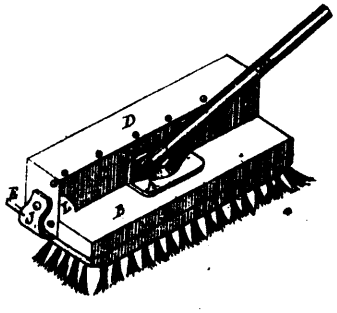

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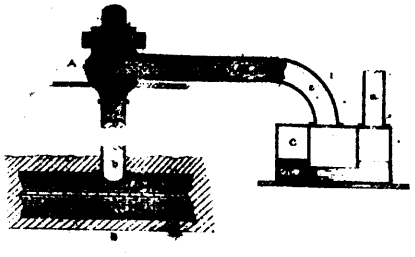

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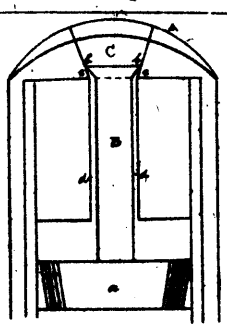

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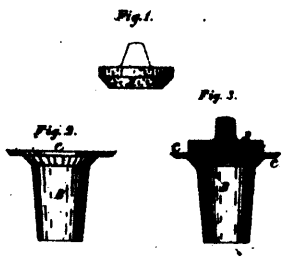

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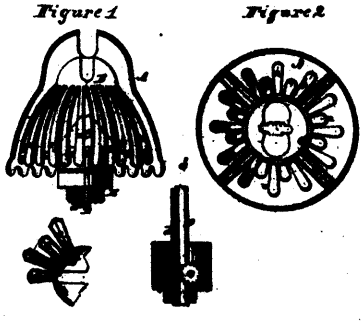

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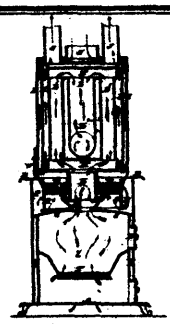

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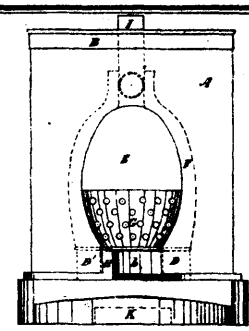

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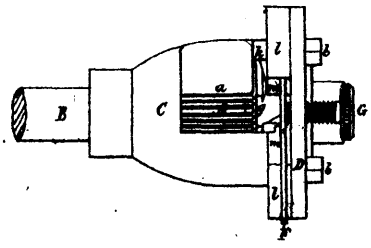

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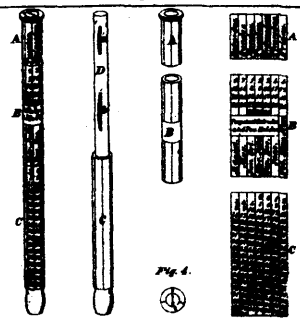

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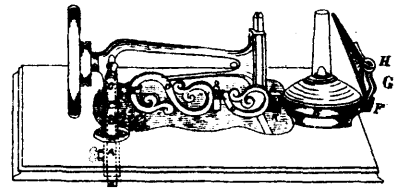
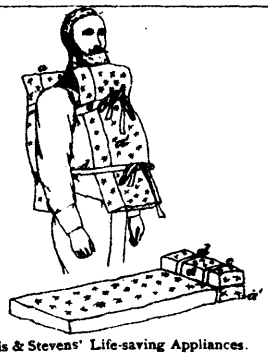
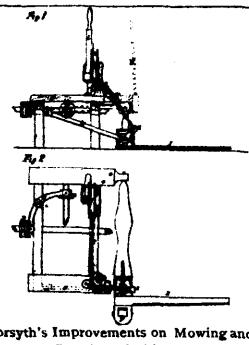


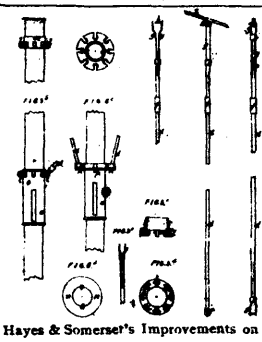
4571 Willson & Vassie's Lamp Holding Attachment for Sewing Machines.



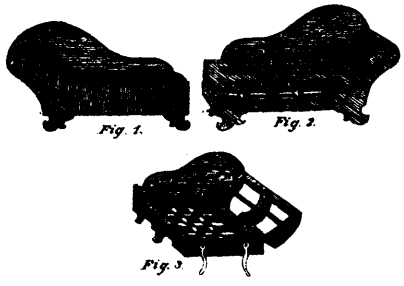
4572 Woods & Stevens' Life-saving Appliances.



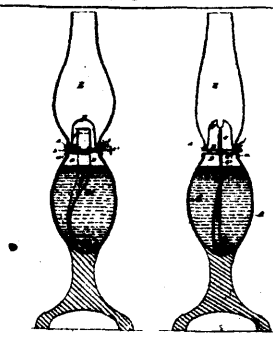
4573 Forsyth's Improvements on Mowing and Reaping Machines.



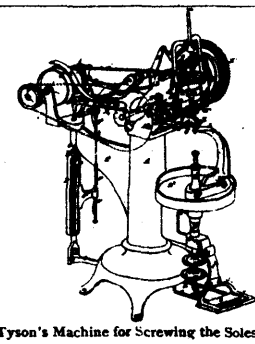
4574 Hayes & Somerset's Improvements on Umbrellas.



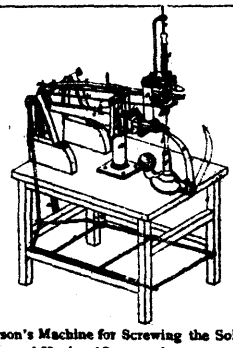
4575 Arnold's Improvement in Lounges.



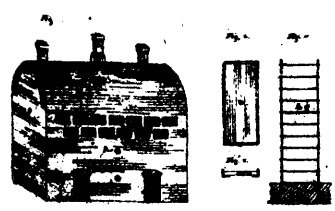
4576 Taylor's Improvements in Lamps.



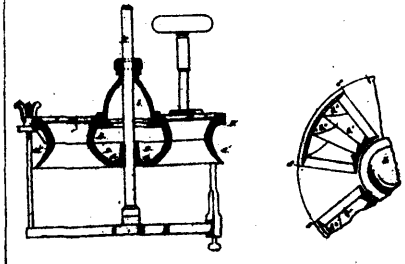
4577 Tyson's Machine for Screwing the Soles of Boots and Shoes.



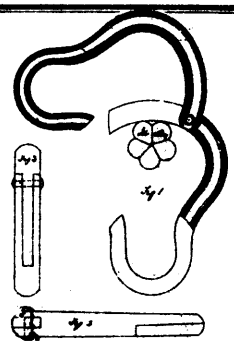
4578 Tyson's Machine for Screwing the Soles and Heels of Boots and Shoes.



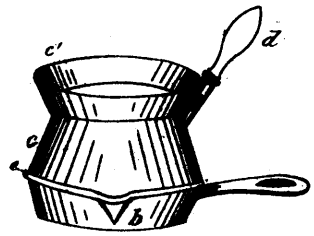
4579 Wandby's Kiln for the Calcination of Plaster of Paris capable of being used as a Baker's Oven.



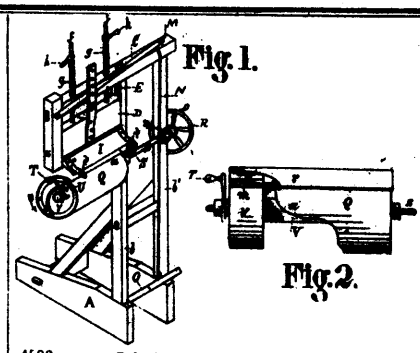
4580 McCormick & Brown's Turbine Water Wheel.



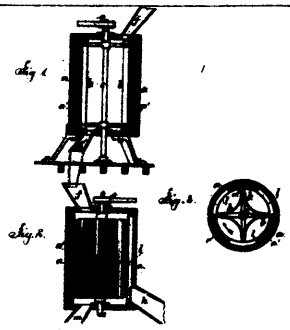
4581 Clements' Jib and Sail Hank.



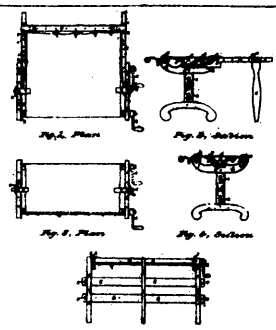
4582 Doyland's Device for Preventing Gravy, &c., from Spattering over a Cooking Stove.



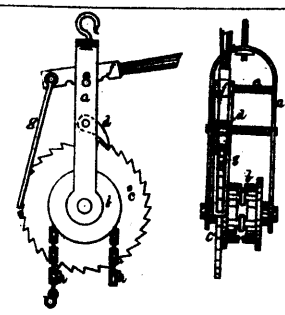
4583 Paige's Box Machine.



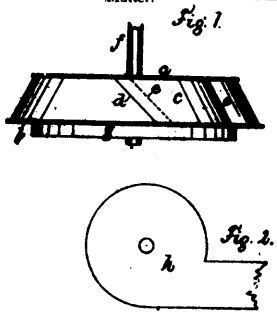
4584 McNally's Improvements in Means for Separating Flour from Bran and other Foreign Matter.



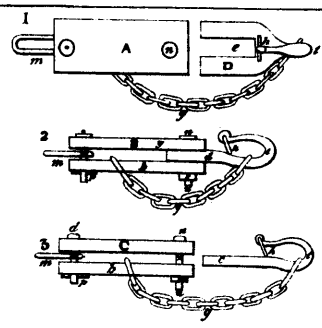
4585 Bouteb s Quilting Frame.



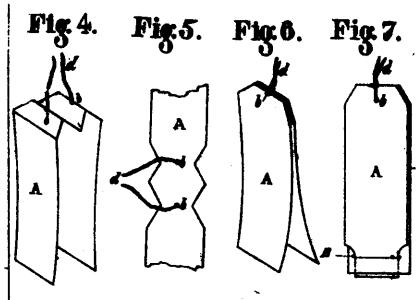
4588 Davis' Machine for Raising Stumps, &c.



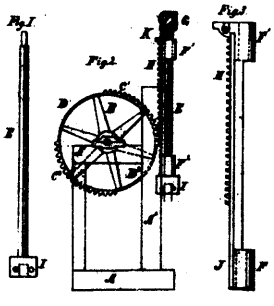
4589 Egery's Water Wheel.



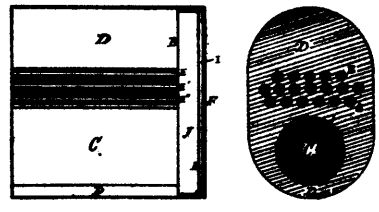
4590 Lundy's Improvement on Ploughs.



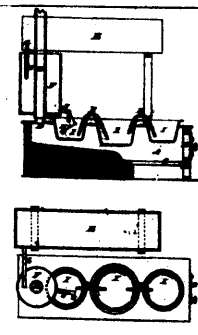
4591 Reynolds' Improvements on Tags.



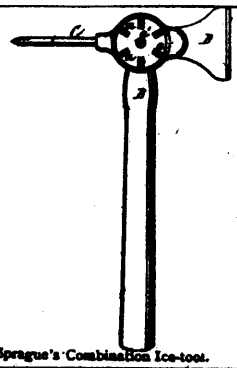
4592 Dagenais & Brush's Rock Drill.



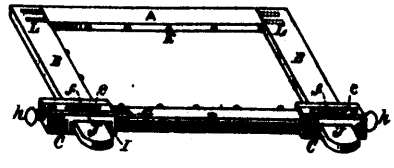
4593 Battersby's Portable Steam Boiler.



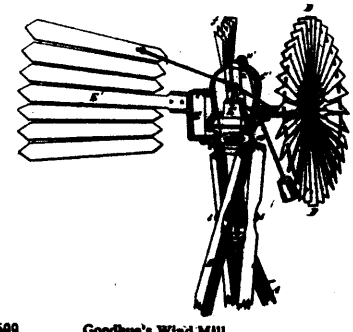
4596 McLellan's Sap Evaporator.



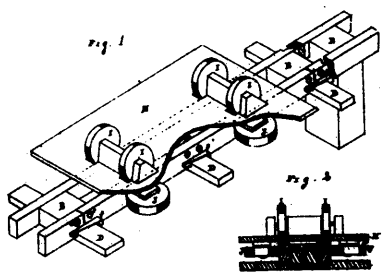
4597 Sprague's Combination Ice-tool.



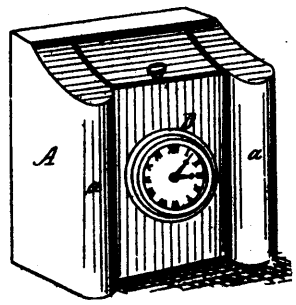
4598 Simmons & Franz's Quilting and Mat Frames.



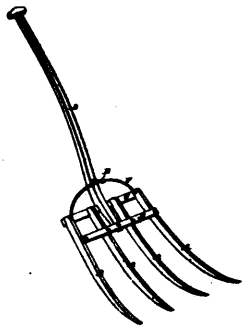
4599 Goodhue's Wind Mill.



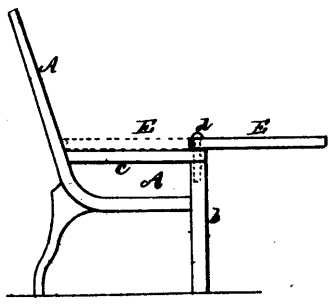
4600 Bowman's Improvements on the Construction of Railways.



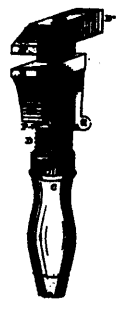
4602 Van de Carr's Improvement on Canisters, &c., for Tea, &c.



4603 Snell's Straw and Barley Fork.

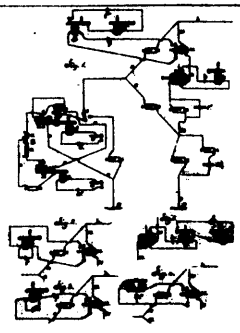


4604 Hornsby's Extension Arm Chair.

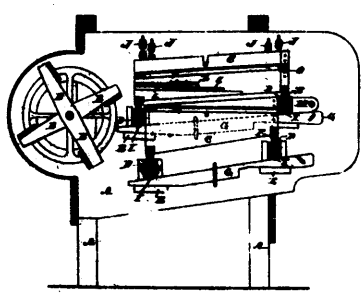


4606 Ascough's Improvements on Wrenches.

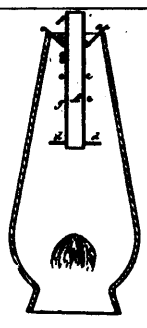
4607 Lyttle's Manufacture of Iron, Steel, &c.



4608 Edison's Quadruplex Telegraph.

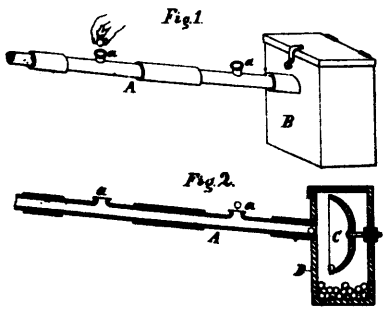


4609 Josleyn's Combined Separator and Fanning Mill.

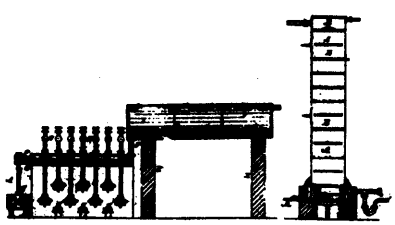


4610 Johnson's Lamp Chimney Protector.

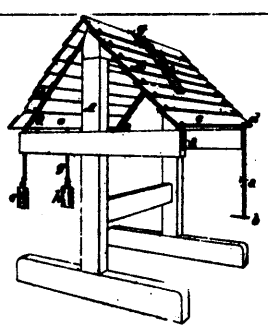
4611 Weare's Improvements on Culinary Utensils.



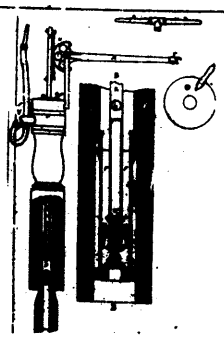
4612 Imlay's Fare Device for Street Cars.



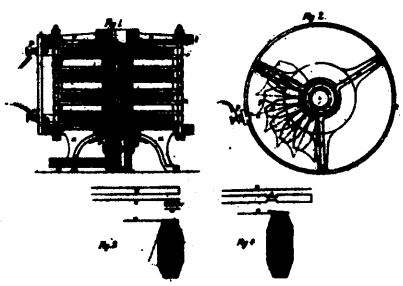
4613 Aitken's Process of making Illuminating Gas.



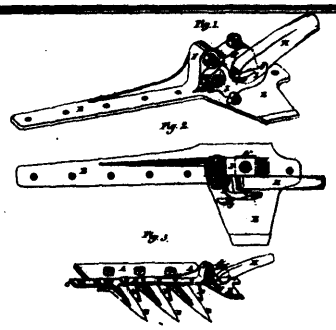
4614 Charland's Movable Roof.



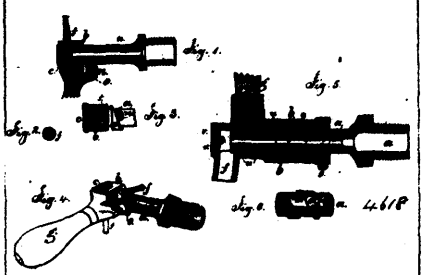
4615 Glendillen's Force Pump.



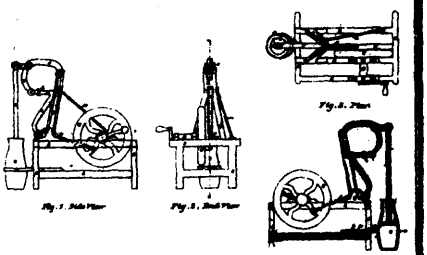
4616 Clamond's Improvements on Thermo-electric Piles.



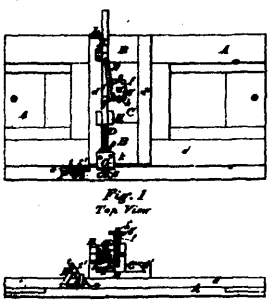
4617 Wheeler's Cutting Apparatus for Harvesting Machines.



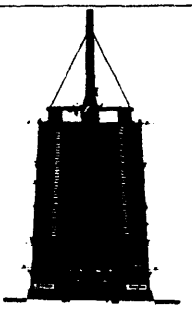
4618 Schofield's Improvements on Steam Gauge Cocks.



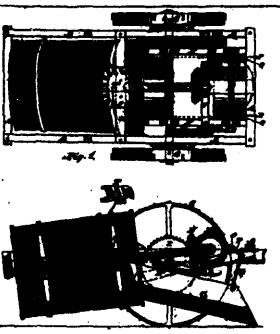
4619 Cole's Motive Power for Churns, &c.



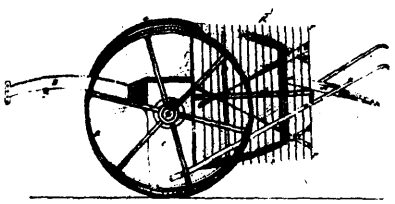
4620 Uhlinger's Improvements on Millstone Dressing Machines.



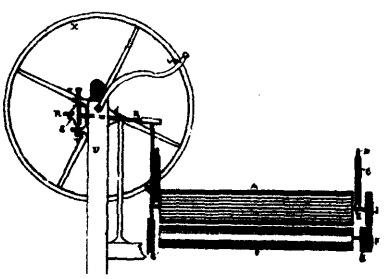
4621 Sampson's Improvements in Kilns for Calcining Lime, Burning Cement and Plaster, and Roasting Ores and similar Materials.



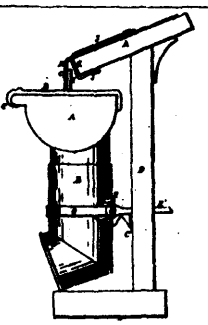
4622 Parker's Potato-digger.



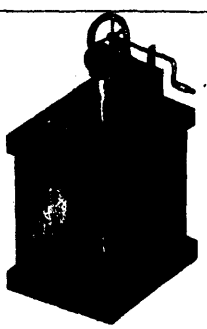
4623 Bartlett's Potato-digger.



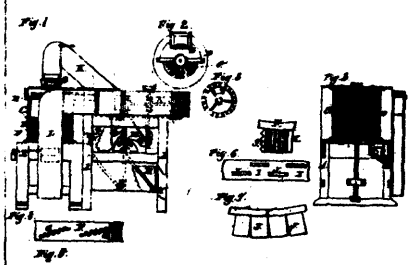
4624 Elliott's Improvements on Straw-cutters.



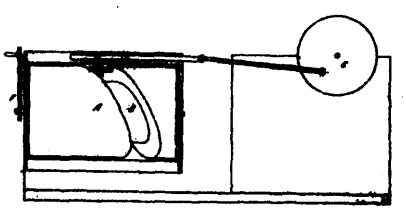
4625 Abbott's Hanging Device for Eaves Troughs, Pipes, &c.



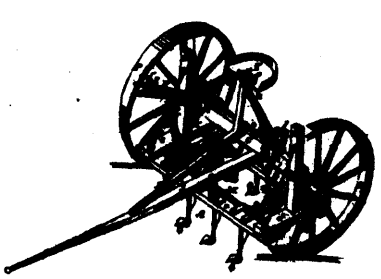
4627 McKenzie's Improvement on Churns.



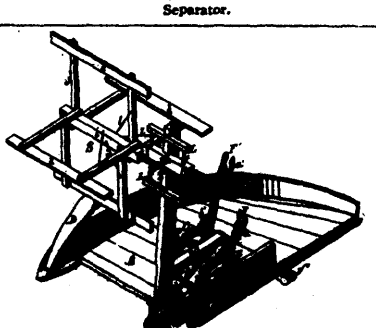
4628 Ingraham & Beard's Grain Scourer and Separator.



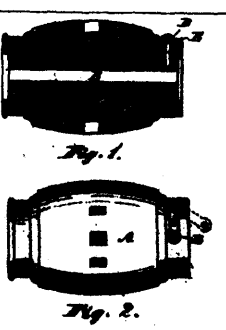
4629 Mattice's Alternating Screw Power.



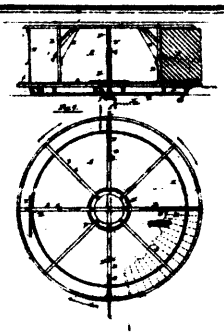
4630 Hebert's Improvements on Cultivators.



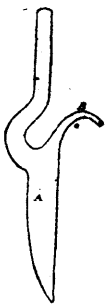
4631 Hebert's Improvements on Tables of Mowing and Reaping Machines.



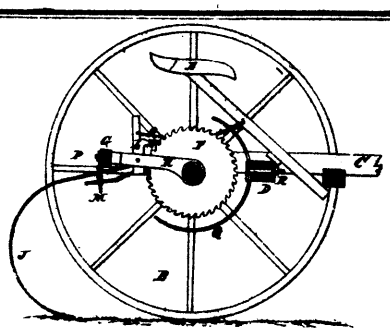
4632 McCullough's Axle Oiler.



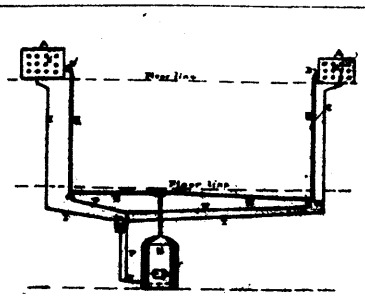
4633 Bowes' Improvements in Wind Wheels.



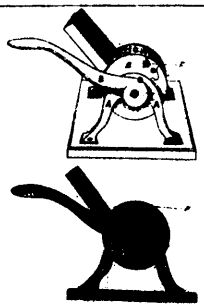
4634 DeWitt's Plough Coulter.



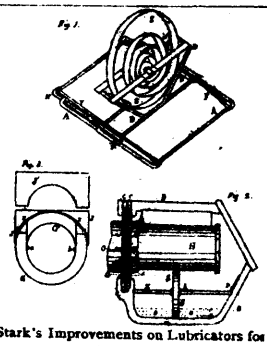
4635 Wisner's Horse Hay Rake.



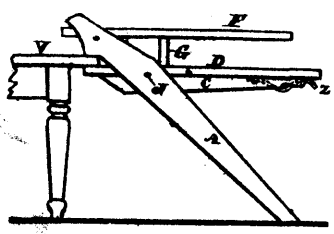
4636 Root & Wood's Improvements on Steam Radiators.



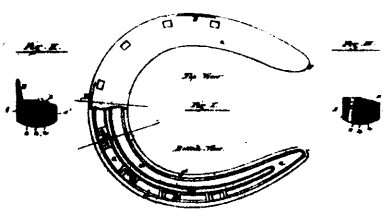
4637 Adams' Tobacco Cutter.



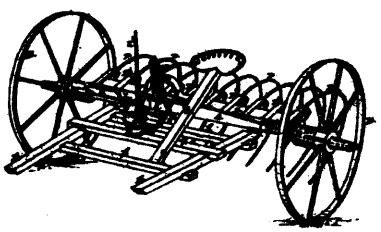
4638 Stark's Improvements on Lubricators for Car Axles.



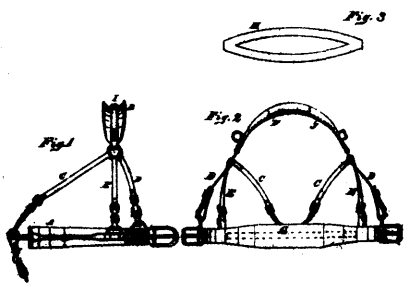
4639 Swain's Improvements on Tables for Ironing and other purposes.



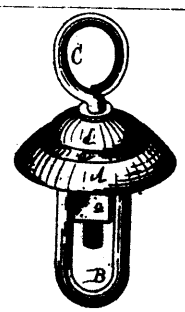
4640 Cooke's Improvements on Horse Shoes.



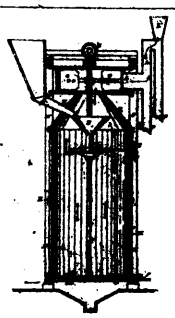
4641 Wisner's Horse Hay Rake.



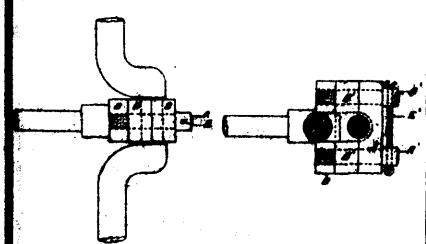
4642 Cole's Improvements in Breast Collars for Harness.



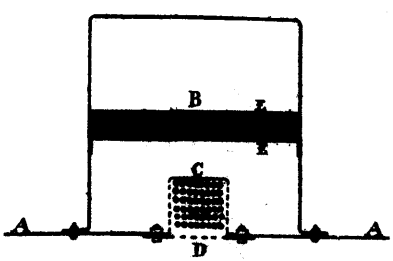
4643 Corey & Grant's Chain-pump Bucket.



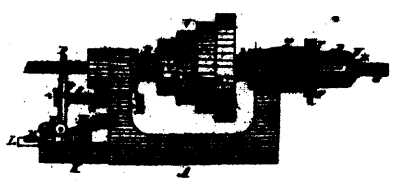
4644 Gibbs' Middlings Purifier.



4645 Jeffery's Improvements on Ranging Machines.



4646 Currie's Improvements on Steam Boilers.



4647 Webster's Improvements in Screw Machines.