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# The Canadian Patent Office

## RECORD




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### CONTENTS.

INVENTIONS PATENTED, .....	121
INDEX OF INVENTIONS, .....	CXXXI
INDEX OF PATENTEES, .....	CXXXI
ILLUSTRATIONS, .....	131

### INVENTIONS PATENTED.

No. 4899. WILLIAM T. WOOD, Mount Juliet, Ten., U. S., 28th June, 1875, for 5 years: "Lamp Extinguisher." (Éteignoir de lampe.)

*Claim.*—1st. The combination with the sectional interlocking jaws *f*, of an extinguisher-cap, and the wick tube *B*, of the slotted plate *D*, and guide rods *c*; 2nd. The combination with the guided and vertically movable extinguisher cap holder plate *D*, operated to extinguish the flame by springs *a*, of the angular vertically vibrating notched lever *r*; 3rd. The combination with the extinguisher cap plate *D*, springs *a*, and holding lever *G*, of the jointed rods *I*, *J*, having each a belt-shaped attachment *x*, *x*, and the latter a weight *u*, upon the lower end, adapted to be received within the body of the lamp.

No. 4900. ALFRED A. POST, New York, U. S., (Assignee of H. S. Maxim), 29th June, 1875, for 5 years: "Liquid Meter" (Hydromètre.)

*Claim.*—1st. A hollow shaft, made lighter than the surrounding liquid and protected from filling with water; 2nd. A hollow shaft made lighter than the surrounding liquid, and provided with two pivots, one on which it bears when a large volume of liquid is passing, and another and smaller one on which it bears when only a small volume is passing; 3rd. The combination of the plate 40, cylinder 41, and radial arms 42; 4th. The square trunk 22, having the internal, vertical webs 45; 5th. The combination of the shaft 51, air tight ground joint 54, and spring 53; 6th. The combination of the gear 34, worm-shaft 51, and the arms 49, and 50, for transmitting motion from one to the other; 7th. The gauze screen in combination with the square trunk 22, and partitions 19, and 40.

No. 4901. FREDERICK J. DAVIS, Newport, Vt., U. S., 28th June, 1875, for 5 years: "Improvements on Lasting Tools." (Perfectionnements aux outils à enformer.)

*Claim.*—1st. The combination of the articulated jaws *A*, having a slot or looped shank *a*, and jaw *B*, having a neck and loop *b*; 2nd. The combination of the articulated jaws *A*, *B*, with the strap *D*, for applying foot power to close the jaws.

No. 4902. HENRY HAGLE, Warwick, Ont., 28th June, 1875, for 10 years: "Improvements on Gates." (Perfectionnement des barrières.)

*Claim.*—The peculiar combination of lever *K*, pulley coil spring *F*, and half circle *L*.

No. 4903. JAMES S. BROOKS, Pittsburgh, Pa., U. S., 28th June, 1875, for 5 years: "Method and Device for Backing Electrotype Shells."

(Méthode et appareil d'émaillage des coquilles par la galvanoplastie.)

*Claim.*—1st. The method of producing finished electro-type books, consisting in securing the shell face downward between true and parallel plates, determining the size and thickness of the plate by adjustable straight edged metallic rules, constructed and adapted to give a true and finished edge, heating all to a uniform temperature, and then pouring the molten metal upon, or between the back of the shell and the upper or opposing truing plate, as described; 2nd. The apparatus for backing electro-types consisting of hinged and swivelled plates *B*, *B*, frame *A*, slide *C*, for heating appliance, supports *a*, *a*, cross bar *a*, arms *b*, and screw *D*, and guide rules *f*; 3rd. In combination with the pans *B*, *B*, for backing electro-types, the adjustable guide rules *f*, or their equivalent.

No. 4904. JOHN C. RORICK, Wauseon, Ohio, U. S., 28th June, 1875, for 10 years: "Improvements on Butter Workers." (Perfectionnements aux machines à apprêter le beurre.)

*Claim.*—The breaking apparatus, arranged in an inclined position, the long plunger *K*, with its operating devices attached in rear of the hopper and the removable wire screen *D*, held to duty by the clamping bolts *a*.

No. 4905. CHARLES J. EAMES, New-York, U. S., 20th June, 1875, for 5 years: "Improvements on the Art of Reducing and Smelting Silver Ores." (Perfectionnements dans l'art de réduire et fondre les minerais d'argent.)

*Claim.*—The process in which hydro-carbon vapour generated under pressure with superheated steam is combined with atmospheric air under pressure, acting in combination with a furnace in which the broken ore is fed and drawn off continuously.

No. 4906. CHARLES LUNDY, East Gwillimbury, Ont., 28th June, 1875, for 5 years: "Improvement on Hay Rakes." (Perfectionnement des râtaux à cheval.)

*Claim.*—The shafts *B*, with the combination of sheave wheels *C*, together with the combination of clutches *D*, clutch iron *F*, the quadrants *E*, and chains *H*, connected there with, the lever *M*, and the guide iron *L*.

No. 4907. JOHN HEWITT, Grimsby, Ont., 28th June, 1875, for 5 years: "Improvements on Glossing and Fluting Irons." (Perfectionnements aux fers à repasser et à tuyauter.)

*Claim.*—The combination of the wire hinge *a*, lugs *d*, *d*, and pins *b*, *b*, in combination with the detachable fluting plate *B*, and glossing iron *A*.

No. 4908. ALEXANDER BEAUDRY, Boston, Mass., U. S., 28th June, 1875, for 5 years: "Improvements on Adzes and Axes." (Perfectionnements aux herminettes et aux haches.)

*Claim.*—1st. The handle *a*, in combination with the socket *b*, having slot holes *c*, *c*; 2nd the head *f*, with its tapering hole bevelled edges *a*, *a*, and the bevelled seat *k*, *k*; 3rd. In combination with the blade *c*, the head *f*, its concave recess *m*, and nut *k*, with its tapering projection *l*.

No. 4909. JAMES FLOWER, Detroit, Mich., U. S., 18th June, 1875, for 5 years: "Street Hydrant." (Borne-fontaine.)

*Claim.*—1st. The combination with the chamber A, of the valve C, having the part C<sub>1</sub>, which is provided with studs *h*, for locking it with the valve E, 2nd. Providing the tapering end *b*, of the hydrant with a soft metal lining, 3rd. Providing the hydrant with a waste valve H; 4th. The loose collar N, in combination with the neck *a*, casing E, and bolts M.

No. 4910. ALONZO R. MORGAN, New York, U. S., 28th June, 1875, for 5 years: "Improvements on Stoves." (Perfectionnements aux poeles.)

*Claim.*—1st. The combination with the open fire box A, and expansion and combustion chamber B, of the blower D, having a register E; 2nd. A stove having an air heating chamber and a pipe for conducting air thereto from the exterior, an opening additional to said pipe for admitting the air of the interior at the same time and along with the exterior air.

No. 4911. WILLIAM C. SHOREY, Napanee, Ont., 6th July, 1875, (Extension of Patent No. 485,) for 5 years: "Improvements in Horse Hay Knives and Forks." (Perfectionnements aux élévateurs à foin.)

*Claim.*—The adjustable fork *d*, the connecting rod *a*, and the manner in which it is attached to the fork *d*, the manner in which the lever cam *e*, works the sliding bar C, and the hooks or claws B, B, and the manner in which they are worked by the sliding bar C, by the operating of the lever cam *e*, all as described.

No. 4912. SYLVANUS SPENCER, Boston, Mass., U. S., 6th July, 1875, for 5 years: "Improvements on Burial Caskets." (Perfectionnements aux cercueils.)

*Claim.*—In combination with the casket *a*, *b*, provided with the groove and space *e*, *e*, the roll top *d*, and swinging end pieces *c*, *c*, said end pieces being provided with the inner grooves *h*, *h*.

No. 4913. ALVIN GARDNER, Windsor, Que., 6th July, 1875, for 5 years: "Machine for Grinding or Reducing Pulp for making Paper." (Machine à triturer ou réduire la pâte à papier.)

*Claim.*—1st. The combination of the engine A, bevelled wheel F, and bed plate or ring H, I; 2nd. The combination of the knives K, K, and D, D; 3rd. The combination of the scraper E, with bevelled wheel F; 4th. The combination of the shaft B, and feather R, with adjustable lever N.

No. 4914. GEORGE W. WALKER, Malden, Mass., U. S., 6th July, 1875, for 5 years: "Improvements on Portable Ranges." (Perfectionnements aux landiers portatifs.)

*Claim.*—1st. The combination with the range body, its oven and the damper or plate *o*, closing the end of the flue space *f*, between the two ovens, of the flues *f*, *l*, *l*, *l*, *g*, *h*, to convey the products of combustion from the fire chamber, over the lower oven, about the elevated oven and then about the lower oven; 2nd. The combination with the range oven and the elevated oven of an oven damper for controlling the passage of heated air from one oven to the other; 3rd. The combination of the range oven with the elevated oven and its connecting pipe.

No. 4915. SAMUEL O. GREENING, Hamilton, Ont., 6th July, 1875, for 5 years: "Lightning Rod." (Paratonnerre.)

*Claim.*—A combination of galvanized iron wires *a*, *b*, *b*, *b*, *b*, *b*, and copper wires *c*, *c*, *c*, *c*.

No. 4916. JOSEPH F. GLIDDEN, Dekalb, Ill., U. S., 6th July, 1875, for 5 years: "Wire Fence." (Clôture en fil métallique.)

*Claim.*—1st. The coiled wire bar *b*, *a*, having sharp projecting points, in combination with two or more wires *b*, twisted together in such manner as to hold the bars in place; 2nd. The wires *c*, in combination with the coiled wire bars *a*, provided with projecting points, and properly secured to the longitudinal wires *c*; 3rd. A barb for a wire fence made of coiled wire having sharp projecting ends, and adapted to be placed upon and secured to one or more longitudinal wires.

No. 4917. CONRAD A. SIPE, Fairmount, W. V., U. S., 6th July, 1875, for 5 years: "Apparatus for Depositing Coffins." (Appareil à descendre les cercueils.)

*Claim.*—The combination in a coffin depositor of the adjustable pulley blocks A, A<sub>1</sub>, portable frame F, and lines *b*, *b*, adjustably attached to drum D.

No. 4918. MILAN WATERBURY, Mason City, Iowa, U. S., 6th July, 1875, for 5 years: "Lamp Extinguisher." (Éteignoir à lampe.)

*Claim.*—The combination with a lamp burner of the hinged extinguisher cap J, a weight M, attached thereto by an arm, the link I, the rod G, having arms H, F, the ball weight A, its chain and a bracket support.

No. 4919. JOHN BELLAMY, Newtonville, Ont., 6th July, 1875, for 5 years: "Bag-holder and Truck." (Camion accroche-sac.)

*Claim.*—1st. The bag frame B, consisting of the two pieces B<sub>1</sub> and B<sub>2</sub>, and the pieces B<sub>3</sub>, and having the two bottom bearing faces C, and C<sub>1</sub>, in combination with, and hinged to at *a*, *b*, the base piece A; 2nd. The sliding frame D, with lugs *d*, and ratchet bar G, in combination with the eccentric roller E, and lever E<sub>1</sub>. 3rd. The sliding frame D, with spring pawl H, in combination with the back piece B<sub>1</sub>, and notches *b*.

No. 4920. ALBERT D. WILLIAMS, Yorkville, Ont., 6th July, 1875, for 5 years: "Improvements on Dinner Pails." (Perfectionnements aux bidons à diners.)

*Claim.*—The combination of the dinner pail A, of any size or shape with the double bottom B, of tin and iron or tin and copper, and the lamp C, or a cup to burn oil or any other burning fluid.

No. 4921. RICHARD C. LAMBART, Quincy, Mass., U. S., 6th July, 1875, for 5 years: "Heel and Sole Trimming Machine." (Machine à polir les talons et les semelles.)

*Claim.*—1st. In combination with a rotary cutter for trimming the edges of boot or shoe soles or heels the gauges *j*, *j*, one or both arranged to gauge the cut of the cutters by bearing against the edge of the sole or the inner lift of the heel; 2nd. The gauges *h*, *h*, one or both arranged to gauge the cut of the cutters by bearing against the outer portion of the sole edge or the outer lift of the heel; 3rd. The two pairs of gauges *h*, *h*, and *j*, *j*, arranged to partially embrace and surround the cutters and gauge the depth of its cut by bearing upon the edges of the outer and inner lifts of the heel; 4th. The adjustable gauge bar *j*, in combination with one or more rollers or gauge wheels O, arranged to rest upon the tread surface of the heel or sole; 5th. The adjustable gauge bar *j*, and gauge wheel O, in combination with the gauges *h*, *h*; 6th. The gauges *h*, *h*, and *j*, *j*, one or more arranged to partially surround or inclose the cutter head D, and to vibrate about an axis coincident, or nearly so, with the axis of the cutter head. 7th. In combination with a rotary cutter head and its spindle, the gauge *h*, *h*, and gauge carrier *g*, provided with an annular journal surrounding the spindle, and mounted in a bearing concentric, or nearly so, with the axis of the spindle and cutter head; 8th. The combination of the gauges *h*, *h*, the gauge carrier *g*, and the bifurcated lever L, pivoted to the frame at a point coincident with the axis of the longitudinal curve of the front side of the cutters, and suitable means of adjusting the movable end thereof; 9th. The combination of the gauges *j*, *j*, the pivoted stand *i*, and the bifurcated lever M, provided with the horizontal arm M<sub>1</sub>, and pivoted to the frame at a point coincident with the axis of the longitudinal curve of the front side of the cutters, and the screw N, for adjusting the same; 10th. The combination of the vertically adjustable gauge roll or wheel O, the jack head R, carrying the last pin *m*, and mounted upon a spring; 11th. The combination upon the jack of a sole or heel trimming machine of a pivoted last or heel pin constructed with a lever arm and a spring secured to the vertical standard and adapted to press against said lever arm and hold the pin in an inclined position; 12th. In combination with the jack rod P, the forked lever U, pivoted to the stand T, the pawl S, and ratchet teeth *p*, 13th. The combination of the jack rod P, forked lever U, pawl S, ratchet teeth *p*, and lever W, provided with the pin *u*; 14th. The combination of the jack rod P, forked lever U, springs S, and V, and the treadle lever X.

No. 4922. RALPH R. OSGOOD, Troy, N. Y., U. S., 6th July, 1875, for 5 years: "Dredging Machine." (Machine à draguer.)

*Claim.*—1st. The dipper handle or pole of dredging machines passed through a support or guide which has clamps, capable of being extended transversely into the passage through which the pole moves for the purpose of controlling the handle or pole. 2nd. The oscillating trunnion forming a guide and support, and clamp,

the clamps thereof capable of being extended transversely into the passage, through which the dipper-handle or pole of dredging machine is passed, 3rd. The dipper-handle constructed of bars B, B', and passed through guide having a central partition a; 4th. The trunnion and guide for a dipper-handle or pole having adjustable friction, followers and a central partition; 5th. The combination of the trunnion, the dipper-handle, the followers E, the plungers F, and the levers, 6th. The combination of the trunnion, the dipper-handle, the followers E, the plungers F, the levers G, G, and the cords H, H, and pulleys.

No. 4923. EDWIN A. BEERS, Dekalb Centre, Ill., U. S., 6th July, 1875, for 15 years: "Draught Equalizer." (Régulateur de la tire.)

*Claim.*—In combination with the bar A, (or its equivalent,) and the pole B, the eveners C, lever D, chain F, and whistletrees G and G'.

No. 4924 WILLIAM D. PETERS, and GEORGE H. HOLT, Boston, Mass., U. S., 6th July, 1875, for 5 years: "Device for Emptying the Water out of a Vessel which has Sprung a Leak." (Appareil à vider un vaisseau qui a fait une voie d'eau.)

*Claim.*—1st. The combination with the pipe b of the conductor d, placed in the relative position shown in the drawing and provided with the valve or plug h; 2nd. The combination with the pipes b, d, of the guard c, c.

No. 4925. AUGUSTUS W. NEWELL, Bradford, Pa., U. S., 6th July, 1875, for 5 years: "Improvements on Bottles and Stoppers." (Perfectionnements aux bouteilles et bouchons.)

*Claim.*—1st. A bottle having a neck provided with radial openings a, a, at opposite sides; 2nd. The combination with a bottle having a neck provided with radial openings a, a, a stopper B, having passages b, b, which may be caused to coincide with said openings and afford communication between the same and the interior of the bottle.

No. 4926. CHARLES C. BRAYLEY, Toronto, Ont., 6th July, 1875, for 5 years: "Rotary Engine." (Machine rotatoire.)

*Claim.*—The shaft B having the hub C, perforated by the slot G, in combination with the steam cylinder A, with inlet and exhaust parts E and F, the said steam cylinder having an irregular inner face in conformation.

No. 4927. NELSON W. CLARK, Clarkston, Mich., U. S., 6th July, 1875, for 5 years: "Fish hatching Apparatus." (Appareil d'incubation pour le poisson.)

*Claim.*—1st. The water tank B, hatching troughs C, hatching boxes D, cleaning trough H, water ways b, and the separating tank I; 2nd. In combination with any suitable troughs C, the hatching boxes D provided with feet c, gauge bottom sieves E, an perforated pan cover F, arranged to receive the water in the pan on top and discharge it below; 3rd. The cross-bar G, in combination with the troughs C and hatching boxes D; 4th. In combination with hatching boxes, the perforated pan cover F; 5th. The weir tank I, in combination with the hatching troughs and boxes of a fish hatching house.

No. 4928. WILLIAM S. HARLAND, Clinton, Ont., 6th July, 1875, for 5 years: "Glue Pot." (Poele à colle.)

*Claim.*—1st. The air tubes B, 2nd. The covering with plaster of Paris of the base or vessel for holding the oil, 3rd. The combination of the base A, air tubes B, plaster of Paris J, with the cylinder F.

No. 4929. JOHN PAYNE, New-Hamburg, Ont., 6th July, 1875, for 5 years: "Compound for destroying Thistles." (Composition pour détruire les chardons.)

*Claim.*—A compound consisting of liquor potassae oleum terbithinae, and chloride of sodium, and when evaporated to a dry state, reduced to a powder.

No. 4930. ADDISON H. LAFLIN, New-York, U. S., (Assignee of A. S. Lyman) 6th July, 1875, for 5 years: "Improvement in Machines for disintegrating Fibrous Substances." (Perfection-

nement des machines à decortiquer les matières ligneuses.)

*Claim.*—1st. A fibre reducing engine in which the picker or beater roll is provided with teeth, points, angles or equivalent prominences, and is arranged in connection with the other parts of the mechanism, to operate upon the stock while it is floating, or is suspended in water, or other supporting liquid; 2nd. In combination with the picker or beater roll of a fibre reducing engine, an inclined way constructed as described so as to induce a circulation of the entire body of the stock into contact with the pickers, but without affording an opposing surface between which and the pickers, the stock may be caught and cut, ground or abraded, 3rd. In combination with the picker or beater roll of a fibre reducing engine, an inclined way so that the stock after coming in contact with the pickers may be carried directly rearward, without being lifted over a back fall, as in the ordinary pulp engine; 4th. The picker hood provided with ventilating apertures in its walls; 5th. The steam pipe entering the picker hood behind the pickers for the purpose of heating the water and aiding the circulation.

No. 4931. ARTHUR FORBRIGER, Cincinnati, Ohio, U. S., 6th July, 1875, for 5 years: "Drawing or Copy Book." (Cahier de dessin ou d'écriture.)

*Claim.*—1st. A book or tablet, composed of layers or sheets having progressive studies for copy upon them all pasted or secured on two or more sides at the edges in any manner, so that no study except the one in use can be seen by the pupil; 2nd. A book or tablet composed respectively of blank sheets and sheets with subjects for copy upon them, each copy sheet being arranged to alternate with one or more blank sheets, and the whole book or tablet pasted or otherwise secured together at two or more of its edges.

No. 4932. DEXTER A. ROOT, South Bay City, Mich., U. S., 6th July, 1875, for 15 years: "Combination Padlock." (Cadenas à combinaison.)

*Claim.*—1st. The combination in a lock-case of the dog, the tumblers, and their springs, with a permutation change wheel and a notched hasp; 2nd. The bolt H, provided with the notch a, sliding in the top of the case in combination with the clip n, and hook q, on the plate A, for securing the same to the lock case.

No. 4933. WILLIAM E. SKINNER, Milford, Mich., WILLIAM O. SPAYTH, Tiffin, Ohio, and JOHN SPAYTH, Forest Hill, Cal., U. S., 6th July, 1875 for 5 years: "Quadrant Level-Gauge." (Jauge à ongllet quart de cercle.)

*Claim.*—In combination with a bevel-square having an adjustable tongue, the movable or adjustable plate A, provided on its face and both its circular ends with indentations or marks corresponding to the degrees of a quarter of a circle or any other division or mark or marks, and fastened to the stock B, by means of the stationary hinge-part C, and pivot D.

No. 4934. WILLIAM M. CATERSON, Philadelphia, Pa., U. S., 6th July, 1875, for 5 years: "Poison Bottle." (Bouteille pour le poison.)

*Claim.*—A bottle or jar having in prominent relief the representation of the front of a skull.

No. 4935. CARL WINDRATH, Buffalo, N. Y., U. S., 6th July, 1875, for 5 years: "Cigar Bunching Machine." (Machine à lier les cigares.)

*Claim.*—1st. A cigar bunch made from a sheet of compressed tobacco cut by suitable means into a rectangular block of the longitudinal outline of the cigar to be produced; 2nd. The combination with the receiver C, of the rammer D, and cutter K; 3rd. The combination of the receiver C, rammer D, cutter K, and gauge O; 4th. The combination of the receiver C, rammer D, cutter K, gauge O, and gauge board M; 5th. The pivoted cutter K; 6th. The pivoted cutters E, E, provided with slots E, in combination with the slide F, receiver C, and a suitable rammer; 7th. The combination of the rammer D, cutters E, slide F, receiver C, cutter K, gauge O, perforated gauge-board M and gland K.

No. 4936. ROBERT PATRICK, Jr., and JOHN A. MACDONALD, Branchton, Ont., 7th July, 1875, for 5 years: "Double-Acting Reversible Rotary Pump." (Pompe rotatoire de renversement à double-action.)

*Claim.*—1st. The flanged disc or cylinder B, mounted on the revolving shaft A, and provided with the radially placed sliding blades E, in combination with the side plates C, provided with the inwardly projecting alternately arranged cams D, inlet parts F, F, and discharge parts G, G.

No. 4937. GRACE C. HILL, Danbury, Ct., U. S., (Assignee of R. A. Moore) 7th July, 1875, for 5 years: "Ironing Board." (Table à passer le linge.)

*Claim.*—The combination of the platen *a*, having taper ends *a*<sub>1</sub> and shoulders *a*<sub>2</sub>, with the springs *b*, *b*<sub>1</sub>, and the wedge-bars *c*, *c*<sub>1</sub>.

No. 4938. WILLARD M. FULLER and LOUIS T. LEHMEYER, New York, U. S., 7th July, 1875, for 5 years: "Railroad Car Heater." (Calorifère de voiture de railroute.)

*Claim.*—1st.—A rail road car heater having the fire box and boiler located below the floor of the car; 2nd. The combination of the boiler *A*, having longitudinal semi-tubes *B*, *B*<sub>1</sub>, the fire-box *C* and magazine *D*, and arranged below the floor of a car; 3rd. In combination with a car-heater arranged below the floor of the car, and provided with a magazine, the opening in the car floor with cover *K*, and the grating *J*; 4th. The combination with the heating apparatus described, of the steam-pipes *I* and *I*<sub>1</sub>, and the return-pipe *L*, all arranged as set forth.

No. 4939. ADDISON H. LAFLIN, (Assignee of A. S. Lyman) New-York, U. S., 7th July, 1875, for 5 years: "Improvement in the art of Disintegrating Fibrous Substances for Paper Pulp." (Perfectionnement dans l'art de décortiquer les matières ligneuses pour la pâte à papier.)

*Claim.*—1st. The process described of disintegrating fibrous substances, the same consisting essentially in subjecting them while held in suspension or mingled with water or other liquid to the percussive and tearing action of rapidly moving rollers or strikers, the resistance to the blows of which is furnished by the inertia of the material under treatment and of the medium in which it is moving; 2nd. A fibre reducing engine constructed with two vertical compartments or trunks which communicate at top and bottom, and one of which is provided with a series of pickers or strikers for the purpose described.

No. 4940. JOHN B. McDONALD, Tiverton, Ont., 7th July, 1875, for 5 years: "Improvements on Animal Pokes." (Perfectionnements aux carcans à bestiaux.)

*Claim.*—The Poke marked *D*, and the slats of Poke marked *E*, and the leather strap marked *B*.

No. 4941. DAVID W. DOUGLAS, Almonte, Ont., 7th July, 1875, for 5 years: "Water Filter." (Filtre à l'eau.)

*Claim.*—A filter composed of a chamber *A*, to be filled with filtering material, having a perforated partition *D*, central tube *F*, and connecting passage *G*.

No. 4942. JOHN H. CROWELL, Providence, R. I., U. S., 7th July, 1875, for 15 years: "Machine for Making Weavers Harness." (Machine à faire des harnais de tisserands.)

*Claim.*—1st. The revolving annulus *E*, furnished with the spool stands *a*, *a*<sub>1</sub>, in combination with the spools *u*, *u*<sub>1</sub>, for carrying the heddle twines with suitable devices, for crocheting or otherwise attaching the heddle to the side-bands of the harness, whereby the twines to form the heddles of the harness are laid in regular successive convolutions; 2nd. In combination with suitable heddle forming mechanism, the feeding rollers *z*, *z*<sub>1</sub>, the cutter *x*, the crimper *k*, and the dies *a*, *a*<sub>1</sub>, the same being respectively for feeding forward the wires to form the clasps for cutting the same into proper lengths, for crimping the wires to cut into rudimentary clasps for holding the latter while the heddle-twines are inserted, and finally, for closing the clasps upon the twines; 3rd. The crimping bar *h*, *h*<sub>1</sub>, arranged to move in vertical and horizontal planes in combination with a vertically moving-sutter for crimping the wires into shape, to secure the heddle-twines, and then retracting out of the path of the devices subsequently employed to insert the heddle twines in the partially formed clasps and close the latter upon the twines; 4th. The pinchers *c*, *c*<sub>1</sub>, in combination with the dies *a*, *a*<sub>1</sub>, for inserting the heddle-twines into the partially formed clasps; 5th. The oscillating pincher *e*, in combination with the leese rod *S*, for selecting the leese of the harness.

No. 4943. JOHN M. GROVER, Brockville, Ont., 7th July, 1875, for 5 years: "Combined Extension Quilting and Clothes Drying Table." (Séchoir et métier à piquer à rallonge combinés.)

*Claim.*—1st. An extension table having a removable top *M*, hinged to its frame, whereby it may be thrown over or under the frame; 2nd. Constructing the table with a removable side *b*, attached to auxiliary legs, whereby the extension of the table can be affected; 3rd. Constructing the table with extension frames *c*, having legs *c*, hinged respectively to the frame *a*, of the table and auxiliary extension frame *b*, and folding to coincide the growth; 4th. The hinged bar *E*, in combination with the auxiliary frame *b*, and main frame *A*; 5th. Providing the fixed and extension frames *A*, *b*, with pins *J*, sunk into the edges to secure the quilt; 6th. The roller bar *H* and bar *g*, in combination with the frame *a*; 7th. The manner of securing the roller *H*, in the frame removably by a hook *f*, on the frame *c*, engaging with a peripheral groove in the journals.

No. 4944. JAMES MARTIN, Jr., Toronto, Ont., 7th July, 1875, for 5 years: "Application of a direct action Engine to a Brick Machine." (Application d'une machine à action directe à une machine à brique.)

*Claim.*—The combination of the steam engine cylinder *B*, spur wheel *L*, spur pinion *H*, bevel pinion *K*, and bevel wheel *I*, or their equivalents with the pug mill shaft *M*.

No. 4945. RUSSELL PICKEL, and JAMES LEET, Plattsburg, N. Y., U. S., 7th July, 1875, for 5 years: "Railway Switch." (Aiguille de railroute.)

*Claim.*—In a railway switch *A*, the rails *B*, and *C*, of which are laid on movable sleepers *D*, *E*, *G*; having its middle rail *F*, pivoted at its centre *L*, and the stoppers *N*, in combination with an ordinary switch *P*.

No. 4946. DAN PEASE, Floyd, N. Y., U. S., 7th July, 1875, for 5 years: "Machine for Cleaning Buckwheat." (Machine à nettoyer le sarrasin.)

*Claim.*—1st. The outer cylinder of a buckwheat cleaner composed of the notched pivoted bars or links *h*, and spirally grooved plates or staves *J*; 2nd. The combination of the double inclined plane *e*, with the bars or ribs *f*, the flues *E*, *E*<sub>1</sub>, *E*<sub>2</sub>, and fan and chamber, for conveying off the dirt from the grain.

No. 4947. PARKER C. MARSH, Northampton, Mass., U. S., 7th July, 1875, for 5 years: "Improvement in Reefing Sails." (Perfectionnement dans la méthode de prendre des ris dans les voiles.)

*Claim.*—1st. In combination with the boom of a fore or aft sail the application and arrangement of worm gear *J*, and endless screw *J*<sub>1</sub>, with handle *O*, for revolving the boom *D*, for reefing fore and aft sails; 2nd. In combination with the jaws *L*, and boom *D*, the axle or wrist pin *Q*, fastened by pin *K*, for connecting the said parts; 3rd. In combination with the boom *D*, the shouldered collar *a*, provided with friction rollers *c*, *c*<sub>1</sub>, *c*<sub>2</sub>, for the boom iron *I*, to revolve upon; 4th. In combination with the boom *D*, and collar *a*, the boom iron *I*, provided with projections *b*, *b*<sub>1</sub>, *b*<sub>2</sub>, and circular traveller *g*; 5th. In combination with a fore and aft sail the application of a sliding apron *E*; 6th. In combination with mast hoops *G*, and fore and aft sails the arrangement of a fair leader *H*, attached to said hoops and sail for sliding on the bolt rope and holding the sail; 7th. In combination with the hoops *G*, the arrangement of the rollers *K*, attached thereto; 8th. In combination with the worm shaft *T*, the arrangement of the drums *J*, on either end; 9th. In combination with the boom *D*, and worm gear the arrangement of the saddle *X*, with chaffing band *m*, sheaf *n*, and brackets *p*, bolted to the mast.

No. 4948. ELISHA GRAY, Chicago, Ill., U. S., 7th July, 1875, for 15 years: "Art of Transmitting Sounds Telegraphically." (Art de transmettre les dépêches télégraphiques par des sons.)

*Claim.*—1st. The art of transmitting musical impressions or sounds telegraphically by producing musical impressions or sounds at the transmitting end of a telegraphic circuit, by causing interruptions in the electric currents of sufficient frequency to produce musical tones, transmitting said tones through an electric circuit composed in part of animal tissue and reproducing them at the receiving end of the line by means of a resonant body which is also a conductor of electricity; 2nd. The electro-harmonic telegraph apparatus set forth consisting of the combination of a telegraph circuit composed in part of animal tissue, a circuit breaker capable of producing a musical tone, and a resonant conductor of electricity capable of reproducing that tone at the receiving end of the circuit; 3rd. The combination of a telegraphic circuit composed in part of animal tissue, a resonant receiver which is also

a conductor of electricity, a series of circuit breakers capable of producing musical tones of different pitch, and a corresponding series of keys for throwing the circuit breakers into or out of operation whereby several tones simultaneously may be transmitting through a single wire.

No. 4949. ELISHA GRAY, Chicago, Ill., U. S., 7th July, 1875, for 15 years: "Apparatus for Transmitting Sounds Telegraphically." (Appareil pour transmettre les dépêches télégraphiques par des sons.)

*Claim.*—The improved apparatus for transmitting musical impressions or sounds telegraphically consisting of the combination of a telegraphic circuit, an automatic circuit breaker, capable of producing a musical tone, and an electro magnet receiver which reproduces the tone by vibrations caused by impulses generated by the circuit breaker; the combination of a telegraphic circuit, a series of circuit breakers capable of producing musical tones of different pitch, a series of keys for simultaneously or successively throwing said circuit breakers into or out of operation, and an electro magnet receiver which is thrown into operation by the transmitter, whereby tones of different pitch simultaneously or successively may be reproduced at the receiving end of the line by the employment of a single circuit.

No. 4950. CYRUS DEAN, Crowland, Ont., 7th July, 1875, for 5 years: "Improvements on Boiler Flues." (Perfectionnements aux bouilleurs des chaudières à vapeur.)

*Claim.*—1st. The provision in a boiler flue A, of one or more heat radiators A, having smoke passages in its peripheral surface; 2nd. The provision in a boiler flue of one or more heat radiators A, and a tube C, to discharge external air into the flue.

No. 4951. JOSEPH A. WILSON, Chester, Vt., U. S., 7th July, 1875, for 5 years: "Automatic Clothes Wringer and Bench Combined." (Essoreuse à linge et banc combinés.)

*Claim.*—1st. An extensible washing bench composed of two parts, one stationary A, the other sliding extending and legged B, in combination with a wringer C; 2nd. The bar D, pressure blocks L, L, connecting rods K, K, collar arm S, rod J, having a clamping screw v, the combination of ers J, and the deadweight u, in combination with a wringer C; 3rd. The combination of the counter-sinks M, with the rollers E, E, of the wringer C; 4th. The combination of the reversible water spout A, with the wringer C; 5th. The uprights of the wringer C, forming the legs of the bench A, constructed of a single piece of wood or in two parts (the upright and the leg) united by means of the socket, in combination with the washing bench A.

No. 4952. WARRAN W. PRICE, Peticodiac, N. B., 7th July, 1875, for 5 years: "Combination of a Lantern and Dinner Kettle." (Combinaison d'une lampe avec une bouilloire.)

*Claim.*—1st. The combination of lantern with a dinner kettle; 2nd. The construction of the lantern B, with the specified arrangement of tubes and hoops surrounding it, the flue tubes d, d, being provided with notched vertical slots c, c, and the whole fitted so as to be readily combined with a suitably prepared dinner kettle; 3rd. The attachment to the kettle A, of the flange a, and studs b, b, 4th. The removable cover r, fitted with studs b, b, handles h, and i, and trencher p.

No. 4953. THOMAS ELLIOTT, Smith, Ont., 7th July, 1875, for 5 years: "Improvements on Hay-loaders." (Perfectionnements aux élévateurs à foin.)

*Claim.*—1st. The combination of the apron frame D, mounted on the axle B, and endless apron E, operated by sprocket wheels H, on the axle B; 2nd. The rake head bars N, for the attachment of the teeth O, secured transversely to the frame A, vertically with the axle B, independently of the apron frame D; 3rd. The pins Q, and springs R, in combination with the teeth O, and bar P; 4th. The standard S, pivoted to the frame A, and having a sliding connection with the frame D, for retaining the latter adjustably by the ratchet and pawl device; 5th. Providing the frame A, with a drag wheel u.

No. 4954. CYRUS G. FORCE, Jr., Cleveland, Ohio, U. S., 7th July, 1875, for 5 years: "Improvements on Arches for Sewers and other purposes." (Perfectionnements aux radiers d'égouts et autres.)

*Claim.*—An oval or elliptical arch of four centres G, E, F, A, for sewers and for other purposes, made to conform to a figure constructed as shown and described.

No. 4955 WILLIAM ABERCROMBIE, Hamilton, Ont., 7th July, 1875, for 5 years: "Machine for Rebating Doors." (Machine à assembler les portes à mi-bois.)

*Claim.*—1st. The combination of the bracket frame B, provided with sliding carriage C, having a vertically adjustable stop C, and horizontally adjustable gauge C, with mandrel N, and saws D, D, D, 2nd. The combination of device P, for guiding, tightening and slackening the belt with the stands E, spindles e, e, and saws F, and F; 3rd. The combination of the bracket frame B, provided with sliding carriage C, with mandrel N, saws D, D, stands E, spindles e, e, saws F, and F, and belt guiding, tightening and slackening device P.

No. 4956. JAMES COLLINS, Guelph, Ont., 8th July, 1875, for 5 years: "Improvements on Feed Cutters." (Perfectionnements aux haches-pailles.)

*Claim.*—1st. The combination of the end wood roller A, and knives and knife head B; 2nd. The combination of a known feed roller on the same shaft to which the spur wheel D, is attached, and knives and knife head B, and the end wood roller A; 3rd. The combination of the fly wheel W, and knives and knife head B, and end wood roller A; 4th. The combination of the fly wheel W, and a stationary axle, and knives and knife head B, and end wood roller A.

No. 4957. JOHN P. CONNELL, Kensington, Ct., U. S., 8th July, 1875, for 5 years: "Door-bell." (Timbre de porte.)

*Claim.*—The combination of the pivoted hammer d, pivoted lever a, pawl h, and inclined plane k, all working together in the manner described; also the combination of the finger hold n, within the thumb lever m, arranged to operate on the bell mechanism within as described.

No. 4958. DANIEL WHITESIDE, Toronto, Ont., 8th July, 1875, for 5 years: "Carpet Cleaning Machine." (Machine à nettoyer les tapis.)

*Claim.*—1st. The position of the under roller G, as placed within a distance of five feet from the roller H; 2nd. The shifting clutch or spur pinion N, with lever P; 3rd. The brake lever Q, friction pulleys l, and m, to act upon the rollers E, and F; 4th. The brake lever Q, and friction pulley r, to act upon the beating roller I; 5th. The combination of a carpet cleaning machine as described with the shifting clutch on spur pinion N, the brake lever Q, and friction pulleys l, and m, the brake lever Q, and friction pulley r, operating as set forth.

No. 4959 JASPER BATES, Thornbury, Ont., 8th July, 1875, for 5 years: "Combined Clothes Drier, Reading Desk and Table." (Séchoir à linge, pupitre de lecture et table combinés.)

*Claim.*—1st. The hollow pedestal B, on a suitable stand A, and subdivided and receiving the arms D, and post C, for adjustment as clothes drier, and having a removable table top E, provided with a hinged part G, for use as a desk; 2nd. The table top E, on pedestal B, having an adjustable part G, for use as a desk.

No. 4960. TITUS S. CHURCH, EDWIN R. FLINT, and GEORGE W. GREGORY, Boston, Mass., U. S., 8th July, 1875, for 5 years: "Method of Cleansing Furniture, &c." (Méthode de nettoyage des meubles, &c.)

*Claim.*—The process of cleansing furniture, upholstery carpets, &c., consisting in immersing the same in naphtha or other equivalent products of distillation from petroleum or coal oil.

No. 4961. JOHN M. GILL, (Assignee of M. B. Brooks), Brockville, Ont., 8th July, 1875, for 5 years: "Improvements on Locks." (Perfectionnements aux serrures.)

*Claim.*—1st. The combination of the case A, semi-circular link B, having a pivoted extension B, and a recess b, the transverse bolt C, having a recess d, the spring e, and longitudinal bolt D; 2nd. The combination of the link B, having extension B, the bolt C, the bolt D, having studs e, e, the rings F, F, having grooves f, f, the bent pin g, and the perforated disc E; 3rd. The combination of the collar H, having extension h, and the perforated disc E, the bolt C, the bolt D, and the ring G, having longitudinal groove k; 4th. The combination of the link B, bolt C, bolt D, perforated disc E, the collar H, and the rings F, F, G.

No. 1962. JOSEPH CLARK, Greenpoint, FRANK S. SMITH, New York, N. Y., and ABEL BREAR, Sangatuck, Ct., U. S., 8th July, 1875, for 15 years: "Improvements on Furnace Grate Bars." (Perfectionnements aux barres des grilles de fourneaux.)

*Claim.*—The described grate bar or section consisting of a series of longitudinal perforated arches *a*, as set forth.

No. 4963. JOHN C. CHASE, Rutland, Ohio, U. S., 8th July, 1875, for 5 years: "Washing Machine." (Machine à laver.)

*Claim.*—1st. The combination of rollers *a*, *b*, *c*, and plates *P*, *P*<sup>1</sup>, the lugs *p*, and bottoms *K*, *K*<sup>1</sup>, with elastic bands *O*; 2nd. The stirrup *p*, brace *i*, and nut *n*, in combination with the lug *l*, and projecting arms *f*; 3rd. The rollers *a*, *b*, *c*, with corrugations extending near to their ends, and terminating in the smooth friction *A*.

No. 4964. BENJAMIN R. WAGNER, Springfield, Dakota, (Administrator of James P. Edmonds, Rochelle, Ill., U. S.,) and PHEBE EDMONDS, Widow of the said J. P. Edmonds, 9th July, 1875, for 5 years: "Improvements on Churns." (Perfectionnements aux barattes.)

*Claim.*—1st. The T-shaped cutter *M*, and T-shaped dasher *B*, set cross wise to each other and forming the dasher, in combination with the dasher rod *K*; 2nd. The top piece *H*, in combination with the standard *C*, to work the dasher rod *K*.

No. 4965. JOSEPH FILION, St. Eustache, Que., 12th July, 1875, (Extension of Patent No. 502), for 5 years: "Stumping-machine." (Arache-souche.)

*Claim.*—A roof framed construction placed on four wheels having a cog-winch and tackle-blocks.

No. 4966. ASHLEY D. COLE, Toronto, Ont., 12th July, 1875, (Extension of Patent No. 458), for 5 years: "Turbine Water-wheel." (Turbine hydraulique.)

*Claim.*—1st. The shape of the bucket which is formed by dividing the space of the inside size of the bucket into certain parts, viz. vertically twelve parts, and horizontally eleven, and from the point one in the vertical line drawing a line to the point two in the horizontal line continuing these lines as shown in the drawing by dotted black lines, and they form the exact shape of the inside of the bucket; 2nd. Having one bucket more than the number of shoots; 3rd. Having the circumference of the wheel bevelled in such a manner that the weight of the wheels is in a great measure supported by the upward pressure of the water as shown.

No. 4967. ROBERT C. HARRIS, Dalhousie, N. B., 12th July, 1875, (Extension of Patent No. 594), for 5 years: "Machine for Clearing Snow from Railway Tracks." (Machine à enlever la neige sur les voies de railroutes.)

*Claim.*—The application and use of the contrivance called the screw lift for the purpose of elevating snow; the rotary fling applied in combination with the screw-lift, each operating as shown; also the combination of the scoop car screw lift and rotary fling.

No. 4968. CICERO D. VAN ALLAN, West Farnham, Que., 12th July, 1875, (Extension of Patent No. 590), for 5 years: "Improvements on Combined Churns and Washers." (Perfectionnements aux barattes et laveuses combinés.)

*Claim.*—1st. The adjustable cream bar *D*, or its equivalent; 2nd. The dash frame with wings *E*, constructed in the manner described to support the frame *b*, *h*; 3rd. The dash-bars *a*, *a*, or their equivalent being supported as described.

No. 4969. ALBERT L. BLACKMAN, Nashville, Ten., U. S., 14th July, 1875, for 5 years: "Improvements on the manufacture of

Wheels." (Perfectionnements dans la fabrication des roues.)

*Claim.*—1st. The combination with the piston rod *D*, die *E*, and mandrel *H*, of the die *F*, anvil block *G*, and escape hole *I*; 2nd. The combination of the mandrel *H*, provided with an eye-hole *A*, and tapering ends with the dies *E*, *E*<sup>1</sup>, escape hole *I*, and anvil-block *G*.

No. 4970. ADOLPHUS DAVIS, Belleville, Ont., 14th July, 1875, for 5 years: "Machine for Lubricating the Cylinders of Locomotives and other Engines." (Machine à lubrifier les cylindres des locomotives et autres machines.)

*Claim.*—The combination of the tallow or oil-chamber *D*, plug *E*, connecting rods *F*, and *G*, levers *H*, and *J*, tallow valve *k*, outlets *L*, and *N*, valve chamber *M*, regulating-spindle *O*, check-nut *P*, springs *Q*, and washer *R*.

No. 4971. MARTIN HUBBELL, Mount-Kisco, N. Y., U. S., 14th July, 1875, for 5 years: "Improvements on Horse Collars." (Perfectionnements aux colliers de cheval.)

*Claim.*—The hames *A*, pivoted adjustably at the top and connected at the lower part by a pivoted adjustable-latch *D*, which slides with its forked end over the guide bolt *E*, and is locked thereon by a spring pawl *R*.

No. 4972. WILLIAM B. WRIGHT, Toronto, Ont., 14th July, 1875, for 5 years: "Improvements on Barber and Dentist's Chairs." (Perfectionnements aux chaises de barbiers et de dentistes.)

*Claim.*—1st. The shaft *C*, with attached pinion *E*, mounted on the back of the bin, id seat *A*, by the bracket piece *D*, and provided with the hand lever *G*, in combination with the pivoted rack bar *F*, attached to the lower stationary base *A*; 2nd. The spring hand lever *G*, attached to the shaft *C*, in combination with the flanged bracket plate *D*<sup>1</sup>, provided with the notches *d*<sup>1</sup>.

No. 4973. PATRICK BAKER, Lockport, N. Y., U. S., 14th July, 1875, for 5 years: "Sash-supporter and Lock." (Arrête-croisée.)

*Claim.*—1st. The screw *D*, having an urn *E*, for its head, said urn having a base *a*, scotia *b*, vase *c*, groove *d*, and a head *t*, in combination with the sash supporter and lock *B*.

No. 4974. GEORGE HENRY, Lennoxville, Que., 14th July, 1875, for 5 years: "Regulator for Steam Boiler Feed Apparatus." (Régulateur d'appareil d'alimentation de chaudière à vapeur.)

*Claim.*—The vapor chamber *D*, float *E*, stem *a*, valves *c*, *c*, valve chamber *F*, hr ring steam passage *d*, pipe *G*, valve seats *i*, *t*, and branch *g*, in combination with pipe *I*, and plug *K*.

No. 4975. EDWIN FULLER, Caledon, Ont., 14th July, 1875, for 5 years: "A Horse-bridle." (Une bride de cheval.)

*Claim.*—1st. The combination of head piece *B*, *B*, checkstraps *E*, *E*, overdraw and check-line *A*; 2nd. The application of the screw to the running loop *F*.

No. 4976. MORRIS FOX, New York, U. S., 14th July, 1875, for 5 years: "Reversible Cap." (Casquette à revers.)

*Claim.*—A reversible cap composed of double folded rear crown section, supplementary swinging front crown piece and double folding front piece.

No. 4977. JOHN E. FINLEY, Memphis, Ten., U. S., 14th July, 1875, for 5 years: "Hand Corn Sheller." (Egrénoir de blé-d'inde à bras.)

*Claim.*—The flexible back *D*, plates *A*, *A*, serrated as shown, the rivets *B*, *B*, *B*, and loops *C*, *C*.

No. 4978. CHARLES H. ORCUTT, Leominster, Mass., U. S., 14th July, 1875, for 5 years: "Machine for Cutting and Skiving Leather." (Machine à tailler et fendre les cuirs.)

*Claim.*—1st. The combination of the mould F, the pressure plate H, and the cutting knife E; 2nd. The combination of the mould F, the pressure plate H, cam lever I, and cross-bar H<sub>2</sub>; 3rd. The knife E, having a wave line cutting edge b, b, b, operating in conjunction with the mould F, as described.

No. 4979. CLARK ROBINSON, Eau-Claire, Wis., U. S., 14th July, 1875, for 5 years: "Trace Fastening." (Accroche-trais de harnais.)

*Claim.*—In combination with the T-shaped hook b, secured within the end of a whiffletree with its cross bar b, in a vertical position, the guard C, pivoted upon the inner portion of said hook, and having lateral arms c, and c, which engage with the ends of said cross bar.

No. 4980. JOSEPH W. BEATLEY, Brooklyn, N. Y., U. S., 14th July, 1875, for 5 years: "Process and Apparatus for the manufacture of Illuminating Gas." (Procédé et appareil de fabrication du gaz d'éclairage.)

*Claim.*—1st. A still containing a liquid hydro carbon and provided with a steam pipe, one branch of which extends directly down to a distance of twelve inches (more or less) from the maximum level of the hydro carbon liquid, while the other branch connects with a coil situated beneath the level of said liquid, in combination with a liquid supply pipe which enters the still above the maximum level of the hydro carbon liquid, and with a vapour escape pipe which enters the still between its top and the maximum level of the liquid, and which is provided with two or more elbows for retarding the escape of the hydro carbon vapour and steam, the whole being arranged as described so that the density of the hydro carbon vapours in the still, and the quantity and temperature of the steam admitted to the still are constantly under control, and thereby a mixture of steam and hydro carbon vapours of uniform density is obtained; 2nd. In combination with the still H, its liquid supply pipe I, coil K, in the still are maintained at uniform point; 3rd. The process of manufacturing an illuminating gas from a mixture of gas produced from steam and hydro carbon vapour, and gas produced from coal by simultaneously passing both gases, while in a heated state from their respective retorts directly into the hydraulic main, and thence through the condenser, washer and purifier, whereby the deposit of lamp black and of hydro carbon liquid in the condenser, washer and purifier is avoided, and a fixed and cheap gas of high illuminating power is produced; 4th. The combination of a still H, super heater N, steam pipes L, b, h, coil K, liquid supply pipe I, vapour escape pipe P, gas retort U, and coal gas retort X, hydraulic main W, condenser I, washer m, exhauster V, and purifier n.

No. 4981. CYRUS RUSS, Beamsville, Ont., 14th July, 1875, for 5 years: "Improvements on Harvesters." (Perfectionnements aux moissonneuses.)

*Claim.*—1st. The combination of the frame D, fixed to the axle C, vertically operating the slide E, and bar H, with the wheel A, having a serpentine groove A; 2nd. The combination of the lever I, with the frame D, and slide E, for the adjustment of the bar H.

No. 4982. EDWARD S. WINCHESTER, Boston, Mass., U. S., 14th July, 1875, for 5 years: "Rock Drill." (Foret de mine.)

*Claim.*—1st. A cylinder of a rock-drill engine, provided with one or more grooves or recesses d, for the reception of the packing h, in combination with a piston of such length that it will not pass out of contact with the packing, during any portion of the stroke; 2nd. A cylinder of a rock-drill engine composed of sections secured together by bolts or otherwise; 3rd. A cylinder for engines composed of sections united by means of annular grooves and flanges, and having the grooves d, for the packing rings formed by turning out the end of the section or sections; 4th. One or more channels i, formed in the interior of the cylinder and extending to the packing to allow of the passage of steam or air thereunder; 5th. The bushing or sleeve 23 in combination with the cylinder A, piston C, and packing ring 22; 6th. The semi-rotating or oscillating valve I, provided with the stem b, in combination with the parts Or, C, and piston P<sub>1</sub>; 7th. The steam chamber or space B, opening directly through the side of the cylinder upon the piston with the inlet part or supply pipe Cl, opening into said space between the valve and the piston whereby the central space around the piston is kept filled with live steam or air; 8th. The piston P<sub>1</sub>, having a cavity or cavities formed therein said cavities being filled with wooden plugs u; 9th. An oscillating valve provided with an elastic arm; 10th. The oscillating valve V, provided with the spring arm or lever composed of the two arms e, e, whereby the two shall come into operation successively; 11th. The combination of a semi-rotating valve provided with an

elastic stem and a piston having a recess for the reception of the end of the valve stem; 12th. Connecting the rod M, by which the piston is rotated with the feed screw D, by gears 17th. The coupling device G, F<sub>1</sub>, in combination with the gears a, b, c, the feed screw D, and the rod M, by which the piston is rotated; 14th. The elastic buffers B<sub>2</sub>, placed outside the cylinder in combination with the collar or enlargement A, on the piston; 15th. An elastic washer or spring w, interposed between a collar or enlargement t<sub>2</sub>, on the feed screw and its support B<sub>2</sub>.

No. 4983. WORTLEY MOORE, Pelham, Ont., 14th July, 1875, for 5 years: "Machine for Cleaning Ploughs." (Machine à nettoyer les charrues.)

*Claim.*—1st. The rod A, with the crook C, at the end; 2nd. The rod A, with any other contrivance at the end instead of the crook C.

No. 4984. CLARK W. MILLS, Montclair, N. J., U. S., 14th July, 1875, for 5 years: "Apparatus for Discharging Grain and other materials from Vessels." (Appareil à décharger les grains et autres effets des vaisseaux.)

*Claim.*—1st. The water tight well z, fitted into a vessel in combination with the permanent elevating chain or buckets i, and contiguous grain-bins; 2nd. The water tight well c, fitted into a vessel and extending below the floor of the grain-bins, in combination with the elevating buckets i, and two slides one to admit grain from the bin and the other to admit water from below the bins.

No. 4985. WILLIAM MATHEWSON, Brooklyn, Ont., 15th July, 1875, (Extension of Patent No. 513), for 5 years: "Improvement in Washing and Wringing Machines." (Perfectionnement dans les machines à laver et à essorer.)

*Claim.*—The arrangement and combination of the tub F, pivots M, handle H, wash board E, slab board D, and stationary perforated board C, as specified.

No. 4986. ROBERT DICK, Buffalo, N. Y. U. S., 15th July, 1875, for 5 years: "Machine for Addressing Newspapers." (Machine à adresser les papiers-nouvelles.)

*Claim.*—1st. The combination with the shell M, on a screw bolt N, and rollers 1, 2 and 3, of the guide bearings A, A; 2nd. The combination with the shell M, of the reel frame B, hinged thereto and provided with stop b, and catch b<sub>2</sub>; 3rd. The combination with the frame B, of the adjustable and removable bobbin J, and guides I, I; 4th. The combination with the shell M, and reel frame B, of the hinged duplex guide L; 5th. The combination with the endlers-bolt N, and stationary blade Q, of the hinged guide H; 6th. The combination with the shell M, provided with shoulder or strip g, and the stationary blade Q, of the plate G, secured to the latter, and provided with the flanges G<sub>1</sub>, G<sub>2</sub>; 7th. The combination with the shell M, movable blade P, and lever F, of the combined motor arm and spring E, E; 8th. The combination with the shell M, supporting armlet D, and endless-belt N, of the paste fountain K, provided with inclined plate k, 9th. The combination with the shell M, provided with catch c<sub>1</sub>, of the hinged handle C, provided with the locking stop c<sub>2</sub>.

No. 4987. CHAUNCEY M. MURCH, Cincinnati, Ohio, U. S., 15th July, 1875, for 5 years: "Lamp Reflector." (Réverbère de lampe.)

*Claim.*—1st. In combination with the burner or lamp the reflectors E, E, two or more in number arranged as shown, so as to produce two or more double reflecting angles; 2nd. The coil hook F, in combination with the reflectors E, E, to hold said reflectors firmly to the lamp chimney and to permit expansion and contraction under changes of temperature; 3rd. The combination of the reflectors E, E, with encircling-lips e, e, and the elastic hooks E, f.

No. 4988. HENRY CARTER, Aylmer, Ont., 15th July, 1875, for 5 years: "Machine for Stretching Carpets." (Machine à tendre les tapis.)

*Claim.*—The combination of the pulley D, with the head piece B, and the attachment and the mode in which the claw beam A, is worked by cord C, and the manner in which the claw beam A, is fastened.



No. 4989. MARIUS C. C. CHURCH, Parkersburgh, W. Va., U. S., 15th July, 1875, for 5 years: "Heating Stove." (Calorifère.)

*Claim*—1st. The vertical arc plate I, perforated and having a curved horizontal flanges, in combination with the heating chamber G; 2nd. The combination with superposed air heating chamber h, and smoke flue passing there through, of the plates or strips k, attached to the flue, with or without the vertical arc plate.

No. 4990. WILLIAM H. McMILLAN, Philadelphia, Pa., U. S., 15th July, 1875, for 5 years: "Improvements on Hydrants." (Perfectionnements aux bornes-fontaines.)

*Claim*.—1st. The chest A, at the intersection of two or more street mains combined with two or more hydrant or plug barrels K, communicating with said chest, and provided with valves; 2nd. The combination of the chest A, barrels K, and valves E, arranged to be closed upon the barrels from the chest; 3rd. The combination of the valve spindle, with the opening or openings m, in the barrel K, and with segmental spring valves q, r, for closing or inclosing the said openings; 4th. The combination of the valve spindle of a fire plug or hydrant, with the externally and internally threaded tube J, adapted to the threaded projection s, and to the threaded stem M, of the guided slide H, attached to the said spindle.

No. 4991. CHESTER R. PATTERSON, Pittston, Pa., U. S., 15th July, 1875, for 5 years: "Planing Machine." (Machine à raboter.)

*Claim*—The combination of the frame A, of a planing machine and a revolving cutter head having cutters, the curved guide E, with rollers e, independent pressure blocks D, D, springs a, bolt d, and nuts d, and the guide H, with independent spring pressure blocks G, secured by the bolts S.

No. 4992. EDOUARD DALLAIRE, St. Sébastien, Que., 15th July, 1875, for 5 years: "Auger Machine." (Tarière mécanique.)

*Résumé*.—1o La combinaison de la tarière montée d'une poulie fixe B; 2o. La combinaison du chariot sur rails, sur lequel est fixé le b s à percer et qui fait avancer le petit bout taraudé en cone tandis que la tarière opère ses révolutions sur place; 3o. La combinaison des supports mobiles I, et J.

*Claim*.—1st. The combination of the auger mounted on a fixed pulley B; 2nd. The combination of the carrier set on rails, on which is fixed the wood to be bored, moved by the conically screwed end, whilst the auger revolves in place; 3rd. The combination of the movable supports I and J.

No. 4993. JOHN MATTHEWS, Lynden, Ont., 15th July, 1875, for 5 years: "Improvements in Pump Plungers and Valves." (Perfectionnements aux pistons et aux valves de pompes.)

*Claim*.—1st. The combination with the plunger D, the arrangement of the leather packing C, secured by the ring B, with or without a thread cut on it, also the arrangement of the projections or lugs E, E, on the outside of the valve seat A, passing through the ring B, and secured by nuts N, N; 2nd. In combination with the plunger D, of a pump, the arrangement of securing and hinging the leather valve F, in the watch I, of the valve seat and the pins J, J, passing through it as shown in Fig. 3, to hold it (the valve) in its place.

No. 4994. GEORGE COLLINS, Kingfield, Me., U. S., 15th July, 1875, for 5 years: "Improvement in Saw-bucks." (Perfectionnements des chevalets à scies de travers.)

*Claim*.—The treadle H, pitman F, spring I, plate K, and coil spring C, provided with the arm E, and clutch D.

No. 4995. RAYMOND CAHUC, Toulouse, France, 15th July, 1875, for 15 years: "Mining Powder." (Poudre à miner.)

*Claim*.—1st. A mining powder composed of nitrate of potash or its equivalent, sulphur, lamp black and tanning bark, saw dust or an equivalent separating material to be ground, mixed and moistened with an aqueous solution of sulphate of iron; 2nd. The process described of treating the explosive materials without danger at a certain degree of temperature to liquefaction by the addition of separating materials and an aqueous solution of sulphate of iron, and then cooling and drying the mass, producing a powder of more or less fine texture.

No. 4996. AARON HIGLEY, Cleveland, Ohio, U. S., 15th July, 1875, for 5 years: "Railway Car Axle Box." (Boite d'essieu de waggon de railroutes.)

*Claim*—1st. The frame B, consisting of the cores D, D, enlargement e, on one side thereof arms a, E, and braces F; 2nd. The adjustable section or cap O, of a bush in combination with journal parts a, of the anti-friction rollers C, C, of a railway car axle box; 3rd. The adjustable section or cap O, of a bush, in combination with the case arranged in relations to each other.

No. 4997. GEORGE P. FARMER, Brooklyn, N. Y., U. S., 15th July, 1875, for 5 years: "Mode of putting up Yarn Bundles." (Mode d'empaquetage des fils.)

*Claim*.—1st. The mode of putting up cords, yarns, &c., that is by enclosing one or more continuous pieces in a wrapper and arranging each piece in a series of folds whereby the cord will unlap without entangling when any part is drawn from the end of the wrapper; 2nd. The bundle or package of yarn, thread, cord, or other like articles coiled and wrapped in the manner described.

No. 4998. JOSEPH JAMES, Bosanquet, Ont., 15th July, 1875, for 5 years: "Bag-holder." (Acroche-sac.)

*Claim*.—An arm or branch B, having a wedge tip a, and a projection b, the back spring F, the link D, the elliptical spring hook G, having two clasps e, and f, in combination with the catch C, and the notched catch E, having two catches e, and d, these two catches C, and E, being screwed to a fanning mill A, or any mill to hold up a bag H, whilst filling.

No. 4999. FÉLIX DOUCETTE, Yarmouth, N. S., 17th July, 1875, for 5 years: "Knife-cleaner." (Fourbisseur de couteaux.)

*Claim*.—1st. The combination of the cushion blocks B, B, covered with rubber and the emery cloth held by the wire hooks H, H; 2nd. The use of a straight flat spring, with a screw bearing upon the ends of the cushion block, causing the block to adjust itself perfectly to the thickness of the knife; 3rd. The third roll of emery cloth at the top of machine frame for rubbing fork tines, &c.

No. 5000. ALBERT E. MITCHELL, Sweetsburg, Que., 17th July, 1875, for 5 years: "A 'hurn." (Une baratte.)

*Claim*.—1st. The form, motion and combination of the dashers C, C; 2nd. The use of the thumb screws H, H; 3rd. The air pipes I, I.

No. 5001. ALFRED E. PETERS, Moncton, N. B., 17th July, 1875, for 5 years: "Combination Lock." (Serrure à combinaison.)

*Claim*—A combination lock composed of a series of spring bars l, capable of being depressed at the free ends, a sliding and toothed spring bar M, and a spring roller H, with changeable pins and recessed end; the combination of the spring bars L, capable of depressing by a pin inserted through holes B, of the face plate with a sliding and spring acted bar having teeth and recesses corresponding to the number of springs so as to lock each spring when depressed and release the same by the locking of the next spring; the face plate A, of a combination lock having a series of holes B, for the insertion of a pin for setting the lock to the combination for being opened.

No. 5002. REUBEN W. DREW, Albany, N. Y., U. S., and WINDHAM N. LLOYD, Montreal, Que., 17th July, 1875, for 5 years: "Improvements on Lubricators." (Perfectionnements aux graisseurs.)

*Claim*.—1st. The reservoir A, with an upper and lower neck provided with metallic caps B, B; 2nd. The seat D, provided with passage H, and tube G, when taken in connection with roll E, provided with the V-shaped tapering notch F.

No. 5003. CHARLES L. HOLLAND, and GEORGE W. CALDWELL, Ipswich, Mass., U. S., 20th July, 1875, for 5 years: "Laundry Polish." (Empois à linge.)

*Claim*.—The described laundry polish composed of starch flour gum arabic, glycerine, sugar and gum tragacanth, in the proportions set forth.

No. 5004. ENOCH FARNSWORTH, Paunxustawney, Pa., U. S., 20th July, 1875, for 5 years: "Improvements on Stump Extractors." (Perfectionnements aux arrache-souches)

Claim.—1st. The lever F, having a series of perforations K, and chain E, in combination with one or more pulleys and hot tire cord I; 2nd. The lever F, chain E, clevis L, and a series of pulleys I, G, in combination for extracting the stump by the rope H, and chain M.

No. 5005. WILLIAM H. SEAMAN, New York, U. S., 20th July, 1875, for 5 years: "Composition and Process for Testing the Purity of Dye in Black Silk Thread." (Composition et procédé pour essayer la pureté de teinture des fils de soie.)

Claim.—1st. A chemical liquid for testing the relative degree of purity, quantity or quality of dye in black silk thread, composed of crystallized oxalic acid dissolved in water and gum camphor and muratic acid; 2nd. The process of testing the degree of purity, quantity or quality of dye in black silk thread by immersing a given quantity of each sample of thread in a uniform quantity of liquid of which oxalic acid is the chemical base.

No. 5006. HENRY A. STEARNS Lincoln, R. I., U. S., 22nd July, 1875, for 5 years: "Churn Dasher." (Batte-beurre)

Claim.—1st. The combination in a churn dasher of the recess d, the cavity E, the conical holes B, B', and C, C', 2nd. The combination of the inclined conical and cylindrical holes B, B', having their larger diameter open to the recess d and the smaller to the recess E, with the inclined conical holes C, C', the larger diameter open to the recess F, and the smaller a, within the cavity E.

No. 5007. FRANK S BERRY, and GEORGE F. ALEXANDER, New-Haven, Ct., U. S., 22nd July, 1875, for 5 years: "Thill Loop." (Bracelet de harnais.)

Claim.—The combination with body A, strap B, and buckle C, of the perforated plate D, securing buckle to body and itself covered by strap as described.

No. 5008. GEORGE S. MCCONKEY, Toronto, Ont., 22nd July, 1875, for 5 years: "Cigar Stamping Machine." (Machine à estamper les cigares.)

Claim.—1st. The frame A, provided with the stop-plate C, and having its upper working face covered with wire cloth or gauze D, and constructed in one piece or in two pieces A', and A'', hinged together at a, a'; 2nd. The adjustable sliding blocks D, D', spring jaws G, G', and set or thumb screws H, H', in combination with the slotted side plates E, E', attached to the frame A; 3rd. The hinge, or detachable padded bar F, in combination with the spring jaws G, G', or their equivalent and frame A.

No. 5009. LEVI DAGUE, Sherwood, Mich., U. S., 22nd July, 1875, for 5 years: "Improvements in Broad-cast Seeders, Plaster Sowers and Harrows." (Perfectionnements aux semoirs à la volée, distributeurs de plâtre et aux herse.)

Claim.—1st. A single machine, the combination of a perforated agitator G, provided with terminal studs G', the spur gear E, meshing with the spur gear D, on a shaft A, the spur gear O, shaft N, rod K, bell crank J, rod I, operating the scold lever M, and the drag H; 2nd. The combination of the shaft N, having a pinion O, adapted to be thrown in or out of gear with the spur gear D, by the lever P, the said shaft moving longitudinally on one of its axle boxes, and operating the slide h, of the scold b, by means of the rod R, fastened to its inner end bell crank J, and rod I.

No. 5010. PETER H. COWPER, and FRANCIS SCHOLES, Montreal, Que., 22nd July, 1875, for 5 years: "Apparatus for the manufacture of Rubber Belting." (Appareil de fabrication des ouvrages en caoutchouc.)

Claim.—1st. The combination with a bed or table A, of one or more sets of rollers C, C', and F, for the purpose of guiding and

keeping apart the different plies, a pair of rolls L, M, to press together the filling plates and cover pieces folders H, to fold over and inwards the cover piece one or more rolls of rolls L, M, L', M', to press the belt thus folded on adjustable guide G, to direct the corner strip and a pair of rolls L, M', to completely form the belt; 2nd. The stock frame composed of standards I, I', carrying rollers P, arranged upon mandrels o, so that they may be inserted and drawn from the frame and having their motion governed by friction disc q, provided with a band or bar; 3rd. In combination with any apparatus for the manufacture of rubber belts g and either forming part of or detached from it, the frame composed of standards B, B', carrying guide rolls C, C', with discs D, D', mounted on them; 4th. The standard E, E', carrying rollers F, F', and discs G, G'; 5th. Three or more pairs L, M, L', M', G, G', the upper roll L, M, provided with a screw of vertical adjustment and suspended from cross levers R, R', R', &c., pivoted to the cross head, these levers being raised by means of a cam F', &c.; 6th. The folders H, H', secured to the bed plate A, and arranged to turn up and fold over the cover piece of the belt; 7th. The head I, I', and guide wheels K; 8th. In combination with adjustable slide blocks Y, and guide wheels K; 9th. In combination with one or more transverse recesses U, U', in the bed plate A, the guides V, V', with wheels W, W'; 9th. A guide for the cover strip, composed of slotted standard Y, slide Y', rod Y', and bell mouthed guide Z, provided with means for cleaning the strip; 10th. The receiving trough a, provided with roller b, and brushes i, i'.

No. 5011. FRANK L. POPE, Elizabeth, N. J., U. S., 22nd July, 1875, for 5 years: "Electric Signalling Apparatus for Railways." (Appareil électrique pour les signaux de railoutes.)

Claim.—1st. The combination of a visual or semaphoric signal, an electro magnet or magnets, a battery and one or more sets of rails of an insulated section of railroad tracks, so arranged relatively to each other that so soon as a metallic connection is formed between the said rails, as by the axle and wheels of a locomotive or car, the signal will be moved; 2nd. The combination of a stationary alarm or audible signal, an electro magnet or magnets, a battery, and one or more rails of an insulated section of railroad track so arranged relatively to each other that so soon as a metallic connection is formed between the said rails, as by the axle and wheels of a locomotive or car, the mechanism for actuating the alarm will be caused to operate; 3rd. The combination of the following elements: A primary circuit composed of the conductors 4, 5 and 6, arranged that a railroad track connected thereto, so arranged that the said circuit will be completed by establishing a metallic connection between two of the said rails, the same being insulated from each other; a secondary circuit operated or controlled by a relay R', placed in said primary circuit; and an electro magnet S, for operating or controlling a visual or audible signal; 4th. The combination with the rails of a railroad track of two galvanic batteries B, B', so arranged that the one neutralizes the other until metallic connection is formed between the said rails, when two independent circuits will be established; 5th. The combination of the following elements: two batteries B, B', so arranged as to oppose or neutralize each other and included in the same circuit, and placed at opposite ends of a section of railroad track; one or more galvanic magnets S, S', for actuating or controlling one or more visual or audible signals; and a circuit closer W, or W', so arranged as to bring the said batteries simultaneously into action and thereby cause said electro magnet S, or magnets, to operate said signal or signals; 6th. The combination of the following elements: An insulated section of railroad track; a relay R', placed at one or near one end of said insulated section of track; a secondary circuit controlled by said relay and a magnet S, situated at or near the opposite end of said insulated section of track, and arranged to operate or control the operation of a semaphoric or audible signal or both; 7th. The combination of the following elements: Conductors 13, 14, 15, 16, 17, 18, 19 and 20, and two independent circuit closers R, R', so arranged under the control of a locomotive or train, the whole being so arranged that the magnet S, can only be operated by the simultaneous action of both circuit closers; 8th. The combination of the following elements: An insulated section of track a', the Battery B', the relay M, the operating magnet S, and the insulated section of track a, a'; 9th. The combination of a sliding contact circuit changer I, with the movable rails c, c', of a switch; 10th. The sliding operating magnet S, battery E, and circuit of conductors 26, 27, 28, 29, 30, 31, 32 and 33 in combination with the circuit changer I, and the circuit breaker S', (either or both); 11th. The insulated section of track a', the circuit operating magnet S, and battery B', in combination with the circuit changer I, and circuit breaker S', (either or both); 12th. The combination of the insulated section of track a, a', with a branch track or siding when the latter is insulated for a proper distance by the breaks b, b', or otherwise for the purpose of connecting the electrical circuit to the main track; 13th. The combination of the insulated section of railroad track a, a', with a branch track or siding, the latter being provided with the insulating space or break b, b', for the purpose of preventing an electrical connection between the opposite lines of rails of the said insulated section; 14th. The combination of the battery B, the signal operating magnet S, the circuit closer I, and the retaining magnet F; 15th. A semaphoric signal arranged with discs or targets of different contrasting colours in combination with an electro magnet; 16th. An electro magnet actuated partially or wholly by axial magnetism in combination with a semaphoric signal; 17th. The combination of the locking magnet H, with the signal disc D; 18th. The combination of the circuit changer J, operated by the signal mechanism, with the electro magnets S, and H; 19th. The combination of the alarm bell V, electro magnet U, spring P and a galvanic battery, with an electric circuit of

which the rails of a railroad track form a part and which is closed by a locomotive or train; 20th. The combination of a suitable insulating material *g*, with the bolts *O*, *O*, and the fish-plates *Q*; 21st. The arrangement of the ends of two abutting rails of a railroad track on separate chairs or supports *U*, *U*, upon a sleeper *K*, whereby a metallic contact between the said rails is prevented and the extent of an electric circuit limited; 22nd. The combination of the fish bar *K*, composed of non-conducting or insulating material, with an insulated rail *T*, and a second rail *T*, either insulated or non-insulated.

No. 5012. WILLIAM G. SWARTZ, Fairview, Ill., U. S., 24th July, 1875, for 5 years: "Insect Gathering Machine." (Machine à prendre les insectes.)

*Claim.*—In combination with the removable control box *B*, and reels *L*, *L*, the bars *b*, *b*, provided with the removable wings or trays *M*, *M*, and handles *N*, *N*, and pivoted to the front of the machine and arranged to adjust the wings to the width of the machine.

No. 5013. WILLIAM H. MARTIN, Mobile, Ala., U. S., 24th July, 1875, for 5 years: "Toy Gun." (Fusil-jouet.)

*Claim.*—1st. The combination with slide *B*, and slotted barrel of muzzle-collar and cushion blocks arranged on a toy gun; 2nd. The combination with the barrel and stock of arrow-head slide *B*, *B*, and spring-jaws *E*; 3rd. The combination with spring jaws *E*, having divergent rear arms, of the trigger-operated slide *F*, constructed and arranged as described.

No. 5014. ALBERT S. CHAMBERLIN, and AMOS S. DOUGLAS, Franklin, N. Y., U. S., 24th July, 1875, for 5 years: "Stove-Pipe Shelf." (Tablette à tuyau de poêle.)

*Claim.*—The shelf *B*, having a semi circular recess formed in its edge upon one side and provided with a flange *C*, around its concave edge, and with a hook *D*, to adapt it to be attached to a stove pipe.

No. 5015. JONATHAN V. TAYLOR, Lacygne, Ks., U. S., 24th July, 1875, for 5 years: "Bed Bottom." (Fond de lit.)

*Claim.*—A bed bottom composed of the end frames *B*, *B*, and flexible straps or strips *C*, the bars *D*, of said frames being provided with projecting gudgeons *a*, shaped as described, in combination with the inclined seats *G*, of the side rails of the bedstead.

No. 5016. JACOB GREENEBAUM, San-Francisco, Cal., U. S., 24th July, 1875, for 5 years: "Improvements on Overall Trowsers." (Perfectionnements au pantalons-pardessus.)

*Claim.*—The overalls having the angles of the pockets and flap secured and strengthened by the reinforce lap *i*, of textile fabric extending across such angles at the points of junction, and secured to both portions of the fabric of which the overalls are composed.

No. 5017. JOHN PRENTICE, New-York, U. S., 24th July, 1875, for 5 years: "Cigar Moulds." (Moules à cigares.)

*Claim.*—1st. The stationary shear *a*, having an opening corresponding to the outline of the cigar or cigar-body, in combination with the mould and cutter *c*, and the mould *e*, within said shear; 2nd. The shear *a*, removably connected to the bed *b*, and the mould cutter *c*, removably connected to the sliding head block *k*, in combination with the mould *e* moved within the shear *a*; 3rd. The concave metallic cigar mould *v*, *v*, made of two shells hinged together and having open lattice work sides as set forth.

No. 5018. ASA G. HASKELL, North Andover, Mass., U. S., 24th July, 1875, for 5 years: "Life-Preserving Bed." (Matelas de sauvetage.)

*Claim.*—The life-preserving bed, composed of the floatable body *A*, and series of cushions *B*, *B*, hinged together and arranged as specified; The combination of the rotary mouth-piece *D*, and the series of pipes or conduits *b*, with the body *A*, and its series of inflatable cushions arranged and combined as explained; the strap or straps *i*, combined and arranged with the floatable body *A*, and series of cushions *B*, *B*.

No. 5019. WILLIAM L. PAWLESON, San Francisco, Cal., U. S., 24th July, 1875, for 15 years:

"Smoke Consumer for Steam Boilers." (Appareil fumivore pour les machines à vapeur.)

*Claim.*—The supply pipe *C*, provided with the cocks *I* and *J*, in combination with the super heating pipe *G* and *S* passing through the super heater *D*, the conducting pipe *F*, and the fan jet nozzles *H*, all of the devices being arranged in relation to each other, with the fire chamber to operate as set forth.

No. 5020. EDWARD HELY, Dublin, Ireland, 24th July, 1875, for 5 years: "Printing Machine." (Machine à imprimer.)

*Claim.*—1st. The combination of the cylindrical inking table *G*, with block *W*, and rollers *P*, *Q*, *T*, *U*, &c.; 2nd. The combination of the cylindrical inking table *G*, with vertical slide *L*, causing the block *W* to descend vertically; 3rd. The combination of the axle *J*, the pin *K*, traversing slot *L*, with the frames *M*, and *L*, so as to give to the said frames the requisite circular and vertical motion; 4th. The combination of the guides *B*, with the bed-plate *A*, and the printing block or type *W*, obliged always to descend in the same vertical line for printing envelope blanks, bill heads and other stationary previously cut to a uniform shape; 5th. The combination of the metallic inking roller *P*, the ink trough *O*, the ratchet arrangement *S*, and the roller or stop *P*; 6th. The mode of keeping the rollers *Q*, &c., continually against the inking table by means of elastic connections and pins *V*; 7th. The mode of insuring contact between the roller *Q*, and the inking roller *P*, by means of the pawl *X*, and the spring *Y*; 8th. The combination in a treadle worked printing machine of the sliding piece *E* with the lever *D*, projecting backward to connect with the treadle below so as to leave the table *A*, unimpeded to allow free range for the operators arms.

No. 5021. THOMAS HERRON, Ottawa, Ont., and JOHN DUNIGAN, Sherman, Texas, U. S., (Assignees of C. B. Sreeves), 24th July, 1875, for 5 years: "Improvements on Churns." (Perfectionnements aux barattes.)

*Claim.*—The apparatus specified, consisting of the fan *G*, fluted stem *C*, and ribbed dasher *A*, *a*.

No. 5022. SAMUEL SPICER, Goodrich, Mich., U. S., 24th July, 1875, for 5 years: "Hame Lock." (Attache-attelles.)

*Claim.*—1st. The body piece *A*, having a loop *a*, on one of its ends and a loop *b* upon its other end with lugs *a*, arranged to form bearings for the pin *c*; 2nd. The slide *B*, fitted to the body piece *A*, and a loop *x*, at one of its ends, and coars or teeth *b*. 3rd. The lever *C*, having a slotted aperture *e*, for the pin *c*, teeth *b*, arranged to engage the teeth *b* of the slide, and also its free end, fitted to engage in the notch *a*; 4th. The combination and arrangement of the body *A*, slide *B*, and lever *C*.

No. 5023. DAVID R. PROCTOR, Gloucester, Mass., U. S., 24th July, 1875, for 5 years: "Spark Arrester." (Arrête-flammèches.)

*Claim.*—The combination with the smoke-stack *b*, and its screens *d*, and *g*, the return pipe *e*, leading from an aperture below the screen *d*, to the furnace, and the return pipe *h*, leading from an aperture below the screen *g*, to the sand box or suitable receptacle.

No. 5024. STANISLAS M. BARRE, Montreal, Que., 24th July, 1875, for 5 years: "Ironing Board." (Table à repasser.)

*Claim.*—The boards *A* and *B*, claps *C*, and battens *H*, in combination with frame *G*, having notches *I*, with or without iron *K*. 2nd. The surface formed by boards *A* and *B*, in combination with pivoted frame *G*, attached with or without clasps *c*.

No. 5025. JOHN FENSOM, Toronto, Ont., 24th July, 1875, for 5 years: "Hydraulic Elevator." (Élévateur hydraulique.)

*Claim.*—1st. The combination and arrangement of the hydraulic cylinder *A*, sheaves *F*, *G*, *K*, *K*, *I*, *I*, and ropes with or without change pins *L*, *L*; 2nd. The arrangement of change pins *L*, *L*, with or without levers, by which the lifting power can be increased or diminished; 3rd. The combination and arrangement of cocks or valves *O*, and *N*, with pipe *S*, in such a manner that the waste water can be discharged into a tank below or drain, or into a tank above the machinery; 4th. Arranging the valves or cocks *O*, and *N*, in such a manner that no communication can take place between the cylinder *A* and the tank above when communication does exist between the cylinder and the water works; 5th. The arrangement of registering dials as in water meter *B*, so that the water used at any portion of the stroke can be accurately registered when the water is taken from the water works, and thrown out of gear, when the water is being used from the tank.

INDEX OF INVENTIONS.

Adze and axe, A. Beaudry..... 4908  
 Animal poke, J. B. McDonald..... 4910  
 Auger machine, E. Dallaire..... 4992  
 Bag holder, J. James..... 4998  
 " and truck, J. Bellamy..... 4919  
 Bed bottom, J. V. Taylor..... 5015  
 Bell door, J. P. Council..... 4957  
 Bench and automatic clothes wringer combined, J. A. Wilson..... 4951  
 Boiler flues, C. Dean..... 4950  
 Bottles and stoppers, A. W. Newell..... 4925  
 Brick machine, application of direct action engine to, James Martin, Jr..... 4944  
 Buckwheat, machine for cleaning, D. Pease..... 4916  
 Burlap basket, S. Spencer..... 4912  
 Butter worker, J. C. Rorick..... 4904  
 Cap, reversible, M. Fox..... 4976  
 Carpet cleaning machine, D. Whiteside..... 4958  
 " machine for stretching, H. Carter..... 4988  
 Chair, barbers and dentists, W. B. Wright..... 4972  
 Churn, B.R. Wagner and P. Edmonds..... 4904  
 " A. E. Mitchell..... 5000  
 " T. Herron & J. Dunigan..... 5021  
 " dasher, H. A. Stearns..... 5006  
 " and washer, combined, (extension), C. D. Van Allan..... 4988  
 Cigar bunching machine, C. Windrath..... 4935  
 " moulds, J. Prentice..... 5017  
 " stamping machine, G. S. McConkey..... 5008  
 Clothes drier, reading desk and table, combined, J. Bates..... 4959  
 " drying and quilting table, combined extension, J.M. Grover..... 4913  
 " wringer, automatic, and bench combined, J. A. Wilson..... 4951  
 Collins, apparatus for depositing, C. A. Sipe..... 4917  
 Corn-sheller, hand, J. E. Finley..... 4977  
 Dinner kettle and lamp combined, W. W. Price..... 4952  
 " pall, A. D. Williams..... 4920  
 Draught equalizer, E. A. Beers..... 4924  
 Drawing or copy book, A. Forbriger..... 4931  
 Dredging machine, R. R. Osgood..... 4922  
 Electric signalling apparatus for railways, F. L. Pope..... 5011  
 Electrotype shells, method and device for backing, J. S. Brooks..... 1903  
 Elevator, hydraulic, J. Fensom..... 5025  
 Engine, rotary, C. C. Brayley..... 4926  
 Feed cutters, J. Collins..... 4956  
 Fence wire, J. F. Ghdden..... 4916  
 Fibrous substances, machine for disintegrating, A. H. Lathin..... 4930  
 Fish hatching apparatus, N. W. Clark..... 4927  
 Furnace grate bars, J. Clark, F. S. Smith & A. Brear..... 4962  
 Furniture, &c., method of cleansing, T. S. Church, E. R. Flint & G. W. Gregory..... 4960  
 Gas, illuminating, process and apparatus for manufacture of, J. W. Beasley..... 4980  
 Gate, H. Hagle..... 4902  
 Gauge, quadrant bevel, W. E. Skinner..... 4933  
 Glue pot, W. S. Harland..... 4928  
 Grain, &c., apparatus for discharging from vessels, C. W. Mills..... 4954  
 Hame lock, S. Spicer..... 5022  
 Harrow, broad cast seeder and plaster sower, L. Dague..... 5009  
 Harvester, C. Russ..... 1981  
 Hay loader, T. Elliott..... 4953  
 " rake, C. Lundy..... 4906  
 Heel and sole trimming machine, R. C. Lambert..... 4921  
 Horse bridle, E. Fuller..... 4975  
 " collars, M. Hubbell..... 4971  
 " hay knives and forks, W. C. Shorey..... 4911  
 Hydrant, street, J. Flower..... 4909  
 " W. H. McMillan..... 4990  
 Insect gathering machine, W. G. Swartz..... 5012  
 Iron, glossing and fluting, J. Hewitt..... 4907  
 Ironing board, G. C. Hill..... 4937  
 " S. M. Barré..... 5024  
 Knife cleaner, F. Doucette..... 4999  
 Lamp extinguisher, W. T. Wood..... 4899  
 " M. Waterbury..... 4918  
 " reflector, C. M. Murch..... 4987  
 Lantern and dinner kettle combined, W. W. Price..... 4952  
 Lasting tools, F. J. Davis..... 4901  
 Laundry polish, C. L. Holland & G. W. Caldwell..... 5003  
 Leather, machine for cutting and skiving, C. H. Orcutt..... 4978  
 Life preserving bed, A. G. Haskell..... 5018  
 Lightning rod, S. O. Greening..... 4915

Lock, J. M. Gill..... 4901  
 " combination, A. E. Peters..... 5001  
 Locomotives, &c., machine for lubricating the cylinders of, A. Davis..... 4970  
 Lubricator, R. W. Irewe & W. N. Lloyd..... 5002  
 Meter, liquid, A. A. Post..... 4900  
 Mining powder, R. Cahue..... 4995  
 Newspapers, machine for addressing, R. Dick..... 4986  
 Padlock, combination, D. A. Root..... 4932  
 Paper, machine for grinding or reducing pulp for making, A. Gardner..... 4913  
 " pulp, disintegrating fibrous substances for, A. H. Lathin..... 4939  
 Planting machine, C. R. Patterson..... 4991  
 Plaster sower, broad cast seeder and harrow, L. Dague..... 5009  
 Ploughs, machine for cleaning, W. Moore..... 1983  
 Poison bottle, W. M. Caterson..... 4934  
 Printing machine, E. Hely..... 5020  
 Pump, rotary, double acting reversible, R. Patrick & J. A. Macdonald..... 4936  
 " plungers and valve, J. Matthews..... 4993  
 Pumping water out of a soil which has sprung a leak, device for, W. D. F. ers & G. H. Holt..... 4921  
 Quilting and clothes drying table, combined extension, J. M. Grover..... 4913  
 Railway axle box, A. Higley..... 4996  
 " car heater, W. M. Fuller & L. T. Lehmyer..... 4938  
 " locomotive and car wheels, C. G. C. Simpson..... 5027  
 " switch, R. Pickett & J. Leet..... 4945  
 " electric signalling apparatus for, F. L. Pope..... 5011  
 Range, portable, G. W. Walker..... 4914  
 Reading desk, clothes drier and table combined, J. Bates..... 4959  
 Rebatting doors, machine for, W. Abercrombie..... 4955  
 Rock drill, E. S. Winchester..... 4982  
 Rubber belting, apparatus for manufacture of, P. H. Cowper & F. Scholes..... 5010  
 Sails, reefing, P. C. Marsh..... 4947  
 Sash supporter and lock, P. Baker..... 4973  
 Saw bucks, G. Collins..... 4994  
 Seeder, broad cast, plaster sower and harrow, L. Dague..... 5009  
 Sewers, &c., arches for, C. G. Force..... 4954  
 Silk thread (black) composition and process for testing the purity of dye in, W. H. Seaman..... 5005  
 Silver ores reducing and smelting, C. J. Eames..... 4905  
 Snow, machine for clearing from railway (extension) R. C. Harris..... 4967  
 Spark arrester, D. R. Proctor..... 5023  
 Steam boiler feed apparatus, regulator for, G. Henry..... 4974  
 " " smoke consumer for, W. L. Fowleson..... 5019  
 Stove, A. R. Morgan..... 4910  
 " heating, M. C. C. Church..... 4989  
 " pipe shelf, A. S. Chamberlin & A. S. Douglas..... 5014  
 Stump extractors, E. Farnsworth..... 5004  
 Stumping machine, J. Filton..... 4965  
 Table, clothes drier and reading desk combined, J. Bates..... 4959  
 Telegraph, apparatus for transmitting sounds telegraphically, E. Gray..... 4949  
 " art of " " telegraphically, E. Gray..... 4948  
 Thill loop, F. S. Berry & G. F. Alexander..... 5007  
 Thistles, compound for destroying, J. Payne..... 4929  
 Toy gun, W. H. Martin..... 5013  
 Traco fastening, C. Robinson..... 4979  
 Trowsers, over all, J. Greenebum..... 5016  
 Turbine water wheel, (extension), A. D. Co'e..... 4966  
 Washer and churn combined, C. D. Van Allan..... 4968  
 Washing machine, J. C. Chase..... 4963  
 " and wringing machines (extension), W. Mathewson..... 4985  
 Water filter, D. W. Douglas..... 4941  
 Weavers' harness, J. H. Crowell..... 4942  
 Wheel, A. L. Blackman..... 4969  
 Wringing and washing machines, W. Mathewson..... 4985  
 Yarn bundles, mode of putting up, G. P. Farmer..... 4997

INDEX OF PATENTEES.

Abercrombie, William, machine for rebatting doors..... 4955  
 Alexander, George F., and F. S. Berry, thill loop..... 5007  
 Baker, Patrick, sash supporter and lock..... 4973  
 Barré, Stanislas M., ironing board..... 5021  
 Bates, Jasper, combined clothes drier, reading desk and table..... 4959  
 Beasley, Joseph W., process and apparatus for the manufacturing of illuminating gas..... 4980

Beudry, Alexander, adze and axe.....	4908	Hubbell, Martin, horse collars.....	4971
Beers, Edwin A., draught equalizer.....	4923	James, Joseph, bag holder.....	4998
Bellamy, John, bag holder and truck.....	1919	Lafin, Addison H., (assignee), machine for disintegrating fibrous substances.....	4930
Berry, Franks, and G. F. Alexander, thill loop.....	5007	“ “ “ “ disintegrating fibrous substances for paper pulp.....	4930
Blackman, Albert L., wheel.....	4969	Lambart, Richard C., heel and sole trimmer.....	4921
Brayley, Charles C., rotary engine.....	4926	Leet, James, and R. Pickel, railway switch.....	4945
Brear, Abel, J. Clark and F. S. Smith, furnace grate bars.....	1962	Lehmeyer, Louis T., and W. M. Fuller, railway car heater.....	4948
Brooks, James S., method and device for backing electro-type shells.....	4903	Lloyd, Whitlam N. and R. W. Brow, lubricator.....	5002
Cahne, Raymond, mining powder.....	4995	Lundy, Charles, hay rake.....	1906
Caldwell, George W., and C. L. Holland, laundry polish.....	5003	McConkey, George S., cigar stamping machine.....	5008
Carter, Henry, machine for stretching carpets.....	4988	McDonald, John B., animal poke.....	4940
Caterson, William M., poison bottle.....	1931	McMillan, William H., hydrant.....	4990
Chamberlin, Albert S., and A. S. Douglas, stove pipe shelf.....	5014	Macdonald, John A., and R. Patrick, double acting reverse sible rotary pump.....	4936
Chase, John C., washing machine.....	4963	Marsh, Parker C., reeling sails.....	4947
Church, Marlus C. C., heating stove.....	4989	Martin, James, Jr., application of a direct action engine to a brick machine.....	4944
“ Titus S., E. R. Flint and G. W. Gregory, method of cleansing furniture, &c.....	4960	“ William H., toy gun.....	5013
Clark, Joseph, F. S. Smith and A. Brear, furnace grate bars.....	4962	Mathewson, William, washing and wringing machines.....	4985
“ Nelson W., fish butchering apparatus.....	4927	Mathews, John, pump plungers and valves.....	4993
Cole, Ashley D., tubino water wheel.....	1966	Mills, Clark W., apparatus for discharging grain, &c., from vessels.....	4984
Cotlins, George, saw bucks.....	4994	Mitchell, Albert E., churn.....	5000
“ James, feed cutters.....	4956	Moore, Wortley, machine for cleaning ploughs.....	4983
Connell, John P., door bell.....	4957	Morgan, Alonzo H., stove.....	4910
Cowper, Peter H., and F. Scholes, apparatus for manufacture of rubber belting.....	5010	Murch, Chauncey M., lamp reflector.....	4987
Crowell, John H., weavers' harness.....	4942	Newell, Augustus W., bottles and stoppers.....	4925
Dague, Levi, broad cast seeder, plaster sower and harrow.....	5009	Orcutt, Charles H., machine for cutting and skiving leather.....	4978
Dallaire, Edouard, anger machine.....	4992	Osgood, Ralph R., drying machine.....	4922
Davis, Adolphus, machine for lubricating the cylinder of locomotives, &c.....	1970	Patrick, Robert, and J. A. Macdonald, double acting reverse rotary pump.....	4956
“ Frederick J., lusting tools.....	4901	Patterson, Chester R., planing machine.....	4991
Dean, Cyrus, boiler flues.....	4950	Payne, John, compound for destroying thistles.....	4929
Diek, Robert, machine for addressing newspapers.....	4986	Pense, Dan, machine for cleaning buckwheat.....	4946
Doucette, Félix, knife cleaner.....	4999	Peters, Alfred E., combination lock.....	5016
Douglas, Amos S., and A. S. Chamberlin, stove pipe shelf.....	5011	“ William D., & G. H. Holt, device for pumping water out of a vessel which has sprung a leak.....	4924
“ David W., water filter.....	1911	Pickel, Russel, and J. Leet, railway switch.....	4945
Drew, Reuben W., and W. N. Lloyd, lubricator.....	5002	Pope, Frank L., electric signalling apparatus for railways.....	5011
Dunigan, John and T. Herron, churn.....	5021	Port, Alfred A., liquid meter.....	1900
Eames, Charles J., reducing and smelting silver ores.....	1905	Powelson, William L., smoke consumer for steam boilers.....	5019
Edmunds, Phebe and B. R. Wagner, churn.....	4964	Prentice, John, cigar moulds.....	5017
Elliot, Thomas, hay loader.....	4953	Price, Warran W., combination of lantern and dinner kettle.....	4952
Farmer, George P., mode of putting up yarn bundles.....	4997	Proctor, David R., spark arrester.....	5023
Fausworth, Enoch, stump-extractors.....	5004	Robinson, Clark, trace fastening.....	4979
Fenson, Joam, hydraulic elevator.....	5025	Root, Dexter A., combination padlock.....	4932
Flion, Joseph, stumping machine.....	4965	Rorick, John C., boiler worker.....	4904
Finley, John E., hand corn sheller.....	4977	Russ, Cyrus, harvester.....	4981
Flint, Edwin R., T. S. Church and G. W. Gregory, method of cleaning furniture, &c.....	4960	Scholes, Francis, and P. H. Cowper, apparatus for manufacture of rubber belting.....	5010
Flower, James, street hydrant.....	4909	Seaman, William H., composition and process for testing the purity of dye in black silk thread.....	5005
Forbriger, Arthur, drawing or copy book.....	4931	Shorey, William C., horse hay knives and forks.....	4911
Force, Cyrus G., arches for sewers, &c.....	1951	Simpson, Charles G. C., railway locomotive and car wheels.....	5027
Fox, Morris, reversible cap.....	4976	Sipe, Conrad A., apparatus for depositing coils.....	4917
Fuller, Edwin, horse bridle.....	4975	Skinner, William E., quadrant bevel gauge.....	4935
“ Willard M., and L. T. Lehmeyer, railway car heater.....	4938	Smith, Frank S., J. Clark and A. Brear, furnace grate bars.....	4962
Gardner, Alvin, machine for grinding or reducing pulp for making paper.....	4913	Spencer, Sylvanus, burial casket.....	1912
Gill, John M., lock.....	4961	Spicer, Samuel, hinge lock.....	5022
Gidden, Joseph F., wire fence.....	4916	Stearns, Henry A., churn dasher.....	5006
Gry, Elsha, art of transmitting sounds telegraphically.....	4948	Swarz, William G., insect gathering machine.....	5012
“ apparatus for transmitting sounds telegraphically.....	4949	Taylor, Jonathan V., bed bottom.....	5015
Greenebaum, Jacob, overall trousers.....	5016	Van Allan, Cicero D., churn and washer combined.....	1968
Greening, Samuel O., lightning rod.....	4915	Wagner, Benjamin R. (administrator) and P. Edmonds, churn.....	1964
Gregory, George W., T. S. Church and E. R. Flint, method of cleansing furniture, &c.....	4960	Walker, George W., portable range.....	4914
Grover, John M., combined extension quilting and clothes drying table.....	4943	Waterbury, Milan, lamp extinguisher.....	4918
Hagle, Henry, gate.....	4902	Whiteside, Daniel, carpet cleaning machine.....	4958
Harland, William S., glue pot.....	4928	Williams, Albert D., dinner pail.....	4929
Harris, Robert C., machine for cleaning snow from railways.....	4967	Wilson, Joseph A., automatic clothes wringer and bench combined.....	1951
Haskell, Asa G., life preserving bed.....	5018	Winchester, Edward S., rock drill.....	4982
Hely, Edward, printing machine.....	5020	Windrath, Carl, cigar bunching machine.....	1955
Henry, George, regulator for steam boiler feed apparatus.....	4974	Wood, William T., lamp extinguisher.....	4899
Herron, Thomas and J. Dunigan, churn.....	5021	Wright, William B., barbers and dentists chair.....	4972
Hewitt, John, glossing and fluting irons.....	4907		
Higley, Aaron, railway axle box.....	4996		
Hill, Grace C., (assignee), ironing board.....	4937		
Holland, Charles L., and G. W. Caldwell, laundry polish.....	5003		
Holt, George M., and W. D. Peters, device for pumping water out of a vessel which has sprung a leak.....	4924		

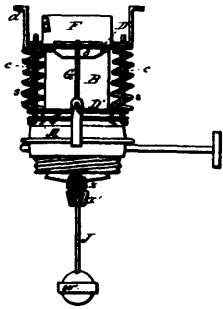
THE  
CANADIAN PATENT OFFICE RECORD.

ILLUSTRATIONS.

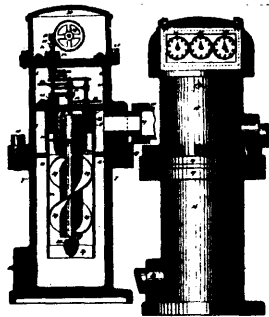
Vol. III.

SEPTEMBER, 1873.

No. 9.



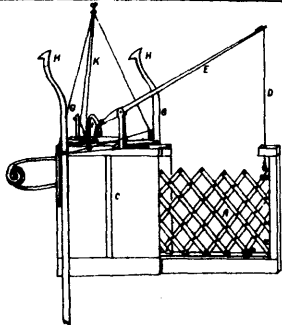
4899 Wood's Lamp Extinguisher.



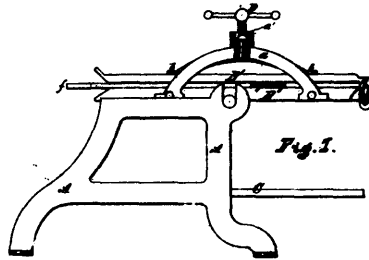
4900 Maxim's Liquid Meter.



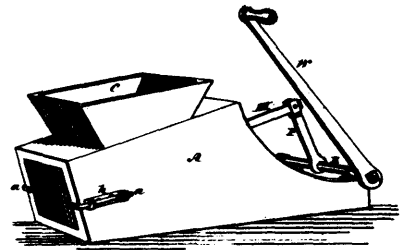
4901 Davis' Improvements on Lasting Tools.



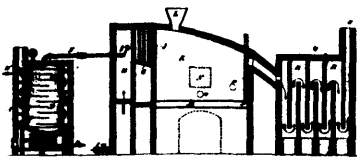
4902 Hagle's Improvements on Gates.



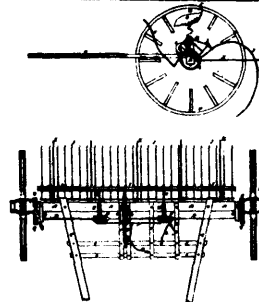
4903 Brooks' Method and Device for Backing  
Electrotpe Shells.



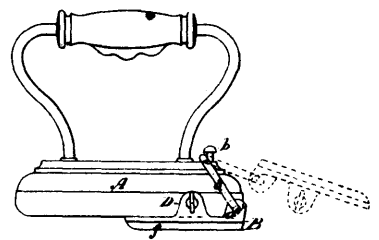
4904 Rorick's Improvements on Butter Workers.



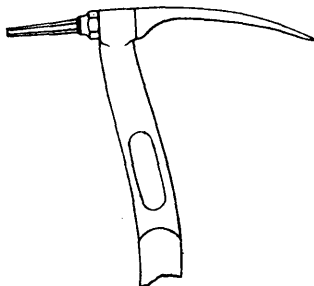
4905 Ean.es' Improvements on the Art of Reducing  
and Smelting Silver Ores.



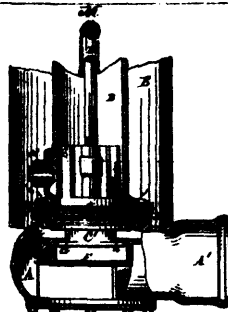
4906 Lundy's Improvement on Hay Rakes.



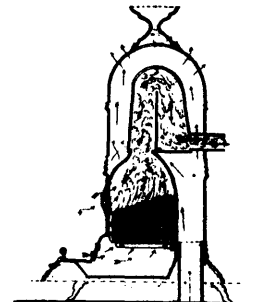
4907 Hewitt's Improvements on Glossing and  
Fluting Irons.



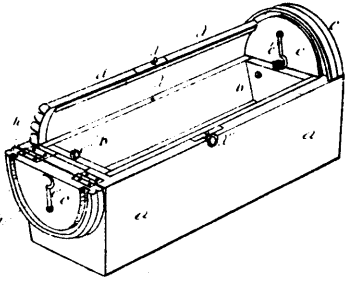
4908 Beaudry's Improvements on Adzes and  
Axes.



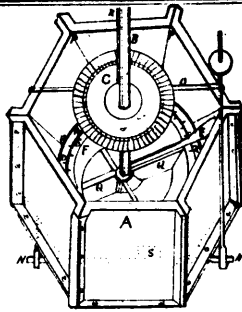
4909 Flower's Street Hydrant.



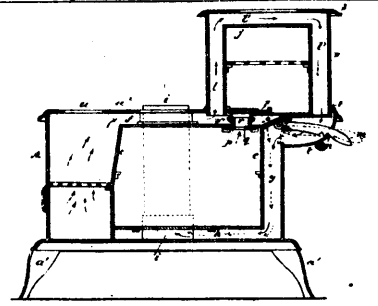
4910 Mergan's Improvements on Stoves.



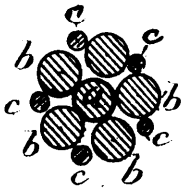
4912 Spencer's Improvements on Burial Caskets.



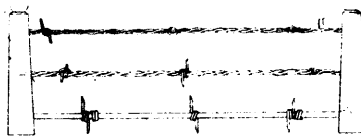
4913 Gardner's Machine for Grinding or Reducing Pulp for making Paper.



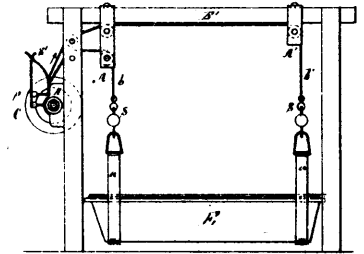
4914 Walker's Improvements on Portable Ranges.



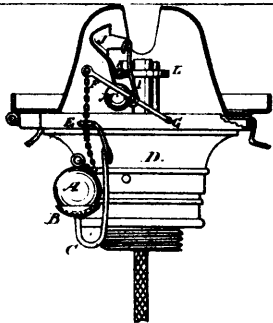
4915 Greening's Lightning Rod.



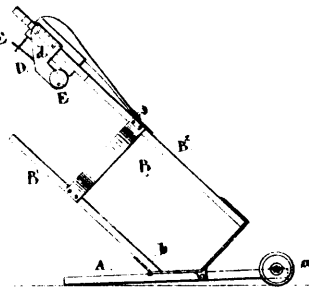
4916 Glidden's Wire Fence.



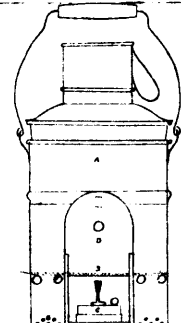
4917 Sipe's Apparatus for Depositing Coffins.



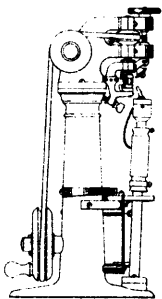
4918 Waterbury's Lamp Extinguisher.



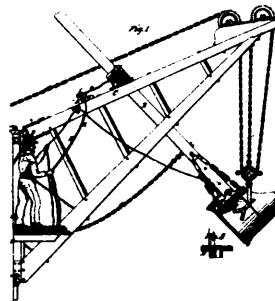
4919 Bellamy's Bag-holder and Truck.



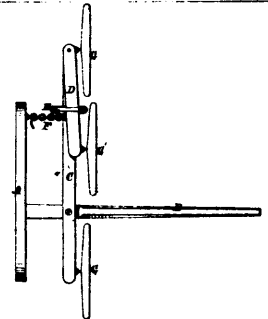
4920 Williams' Improvements on Dinner Pails.



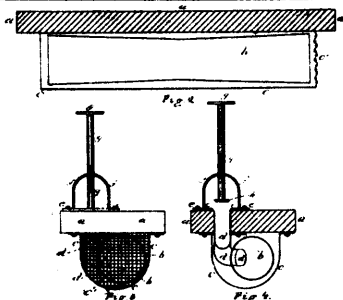
4921 Lambart's Heel and Sole Trimming Machine.



4922 Osgood's Dredging Machine.



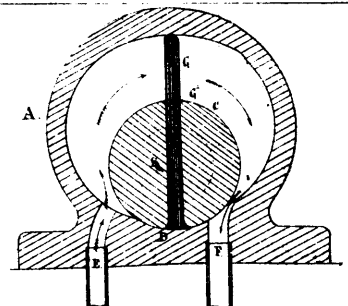
4923 Beers' Draught Equalizer.



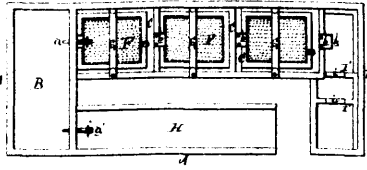
4924 Peters & Holt's Device for Emptying the Water out of a Vessel which has Sprung a Leak.



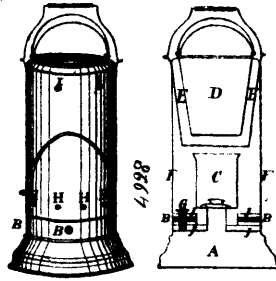
4925 Newell's Improvements on Bottles and Stoppers.



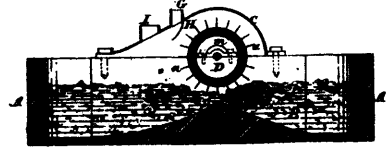
4926 Brayley's Rotary Engine.



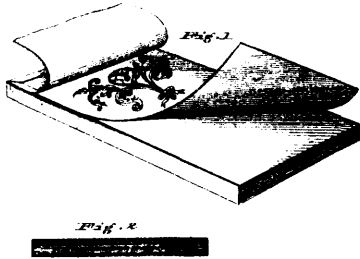
4927 Clark's Fish-hatching Apparatus.



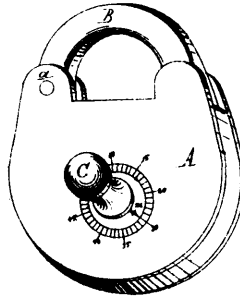
4928 Harland's Glue Pot.



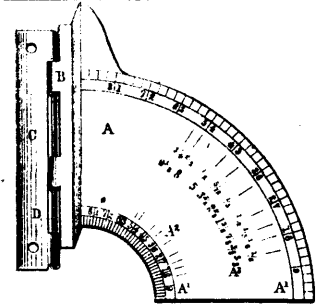
4930 Lyman's Improvement in Machines for Disintegrating Fibrous Substances.



4931 Forbriger's Drawing or Copy Book.



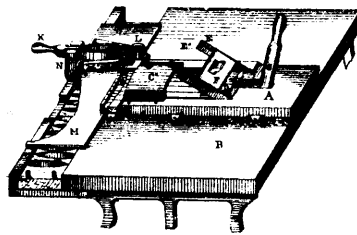
4932 Root's Combination Padlock.



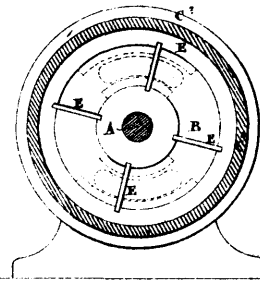
4933 Skinner & Spayth's Quadrant Bevel-Gauge.



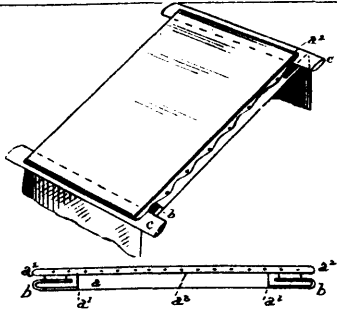
4934 Caterson's Poison Bottle.



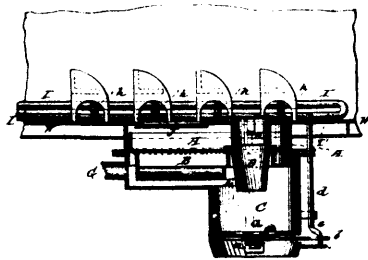
4935 Windrath's Cigar Bunching Machine.



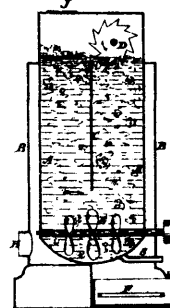
4936 Patrick & Macdonald's Double-acting Reversible Rotary Pump.



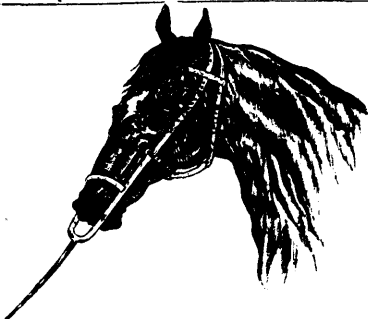
4937 Moore's Ironing Board.



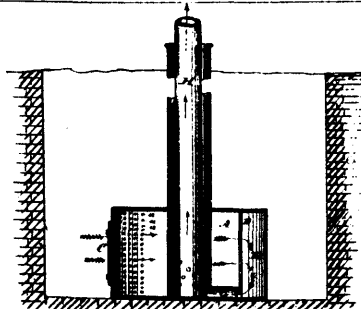
4938 Fuller & Lehmeyer's Railroad Car Heater.



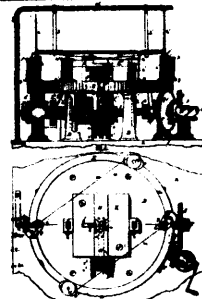
4939 Lyman's Improvement in the Art of Disintegrating Fibrous Substances for Paper Pulp.



4940 McDonald's Improvements on Animal Pokes.

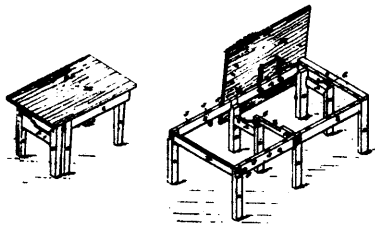


4941 Douglas' Water Filter.

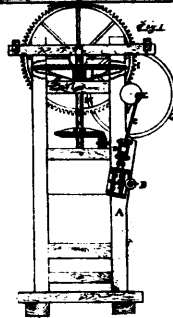


4942 Crowell's Machine for making Weavers' Harness.

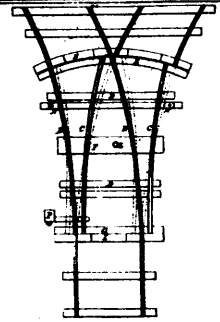




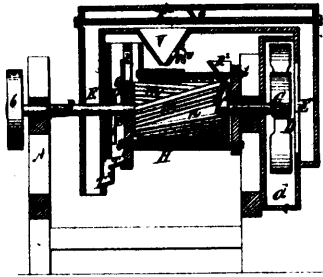
4943 Grover's Combined Extension Quilting and Clothes Drying Table.



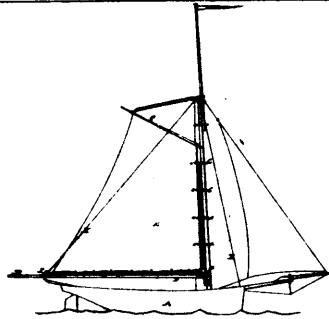
4944 Martin's Application of a Direct Action Engine to a Brick Machine.



4945 Pickel & Leet's Railway Switch.



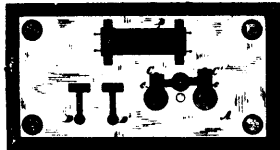
4946 Pease's Machine for Cleaning Buckwheat.



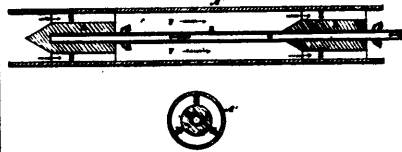
4947 Marsh's Improvement in Reefing Sails.



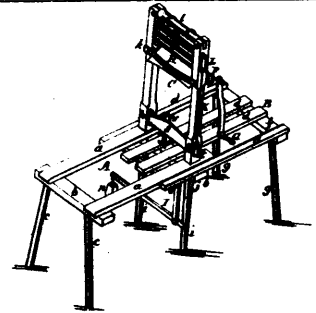
4948 Gray's Art of Transmitting Sounds Telegraphically.



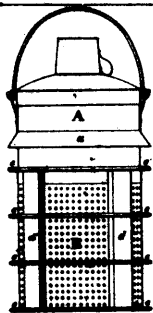
4949 Gray's Apparatus for Transmitting Sounds Telegraphically.



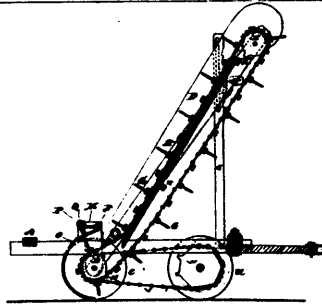
4950 Dean's Improvements on Boiler Flues.



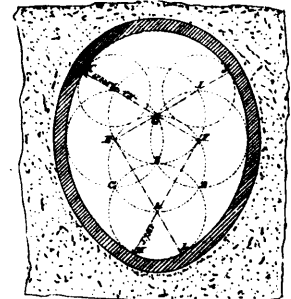
4951 Wilson's Automatic Clothes Wringer and Bench Combined.



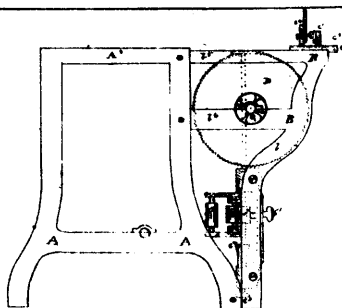
4952 Price's Combination of a Lantern and Dinner Kettle.



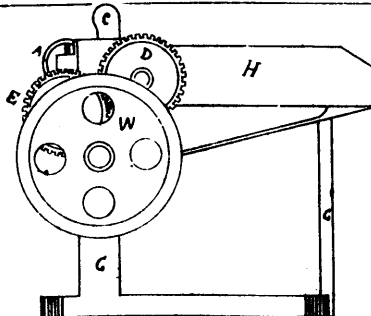
4953 Elliott's Improvements on Hay-loaders.



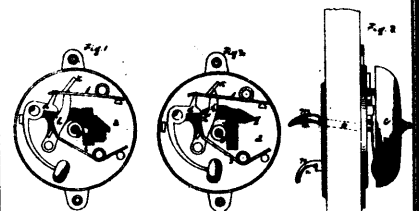
4954 Force's Improvements on Arches for Sewers and other purposes.



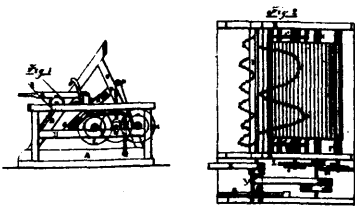
4955 Abercrombie's Machine for Rebating Doors.



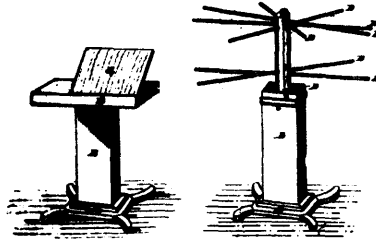
4956 Collins' Improvements on Feed Cutters.



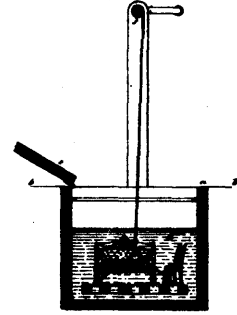
4957 Connell's Door-bell.



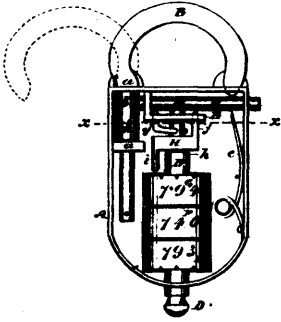
4958 Whiteside's Carpet Cleaning Machine.



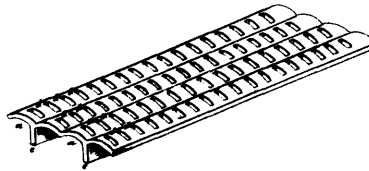
4959 Bates' Combined Clothes Drier, Reading Desk and Table.



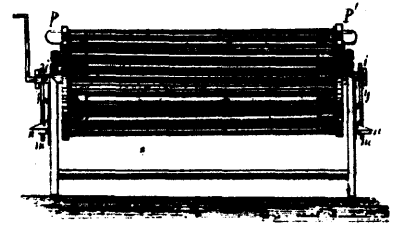
4960 Church, Flint & Gregory's Method of Cleansing Furniture, &c.



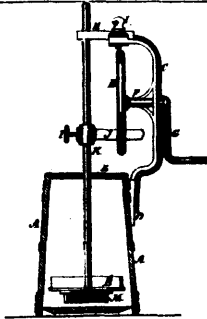
4961 Brooks' Improvements on Locks.



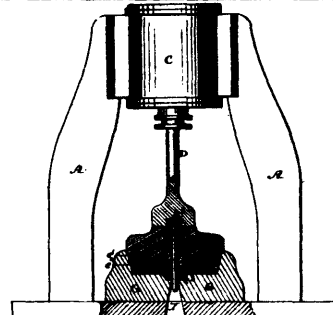
4962 Clark, Smith & Brear's Improvements on Furnace Grate Bars.



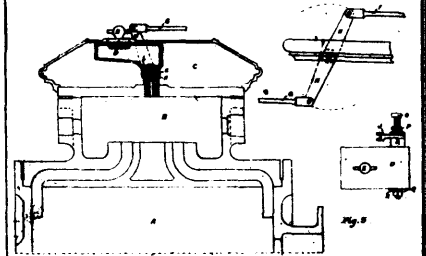
4963 Chase's Washing Machine.



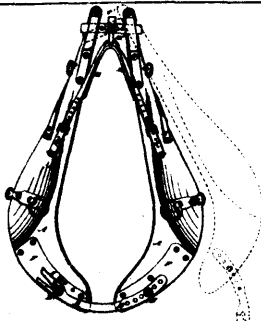
4964 Edmonds' Improvements on Churns.



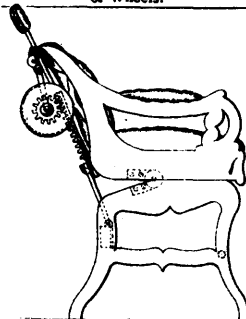
4969 Blackman's Improvements on the Manufacture of Wheels.



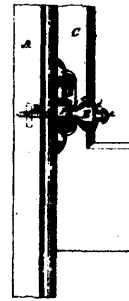
4970 Davis' Machine for Lubricating the Cylinders of Locomotives and other Engines.



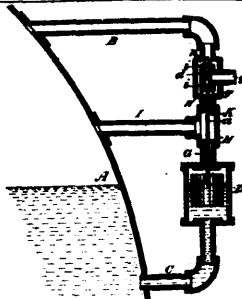
4971 Hubbell's Improvements on Horse Collars.



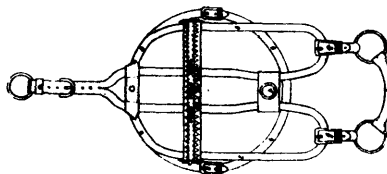
4972 Wright's Improvements on Barber's and Dentist's Chairs.



4973 Baker's Sash-supporter and Lock.



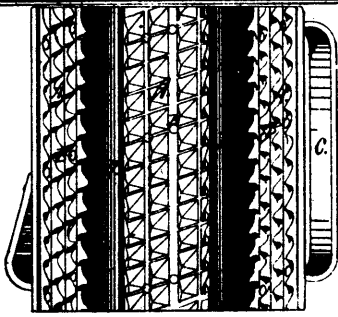
4974 Henry's Regulator for Steam Boiler Feed Apparatus.



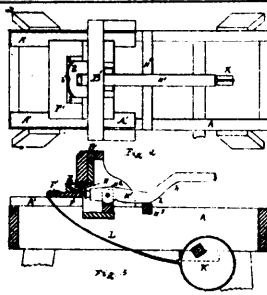
4975 Fuller's Horse-bridle.



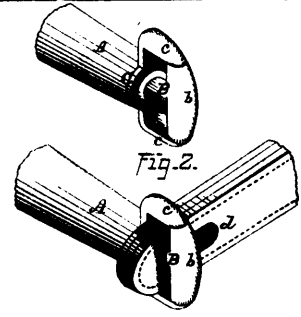
4976 Fox's Reversible Cap.



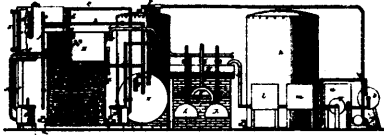
4977 Finley's Hand Corn Sheller.



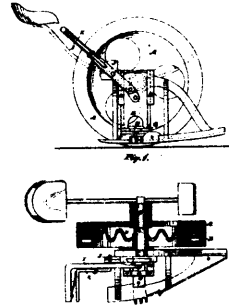
4978 Orcutt's Machine for Cutting and Skiving Leather.



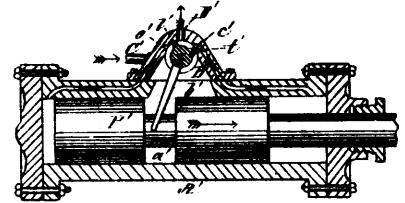
4979 Robinson's Trace Fastening.



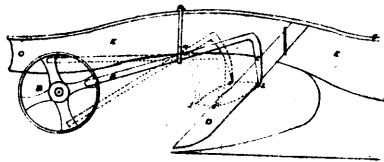
4980 Beatley's Process and Apparatus for the Manufacture of Illuminating Gas.



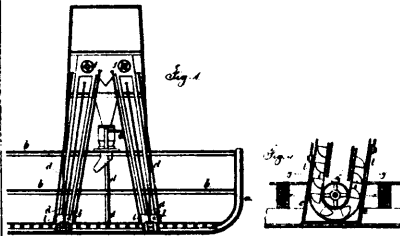
4981 Russ' Improvements on Harvesters.



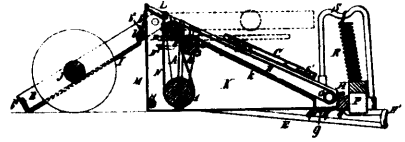
4982 Winchester's Rock Drill.



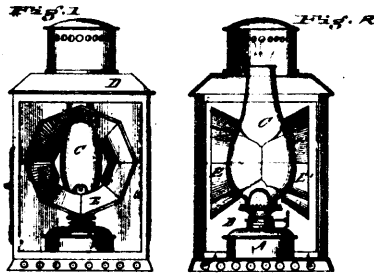
4983 Moere's Machine for Cleaning Ploughs.



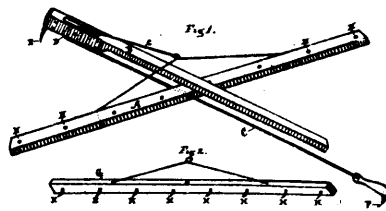
4984 Mills' Apparatus for Discharging Grain and other Materials from Vessels.



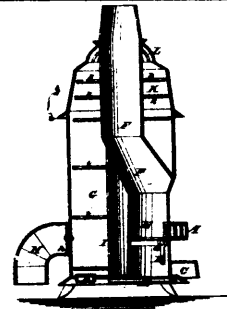
4986 Dick's Machine for Addressing Newspapers.



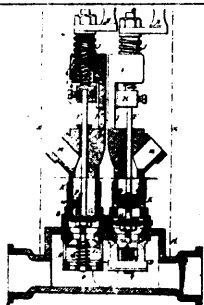
4987 Murch's Lamp Reflector.



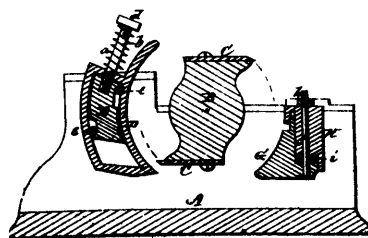
4988 Carter's Machine for Stretching Carpets.



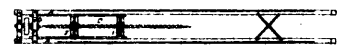
4989 Church's Heating Stove



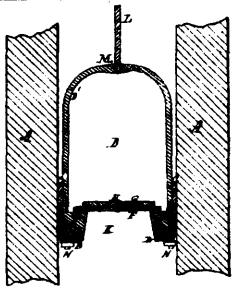
4990 McMillan's Improvements on Hydrants.



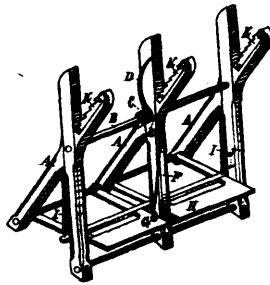
4991 Patterson's Planing Machine.



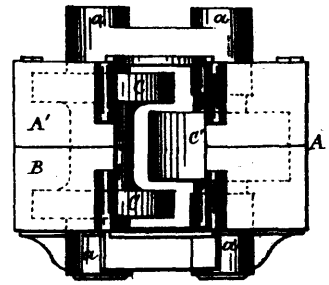
4992 Dallaire's Auger Machine.



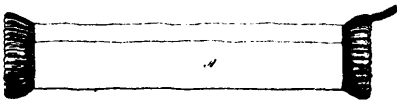
4993 Matthews' Improvements in Pump Plungers and Valves.



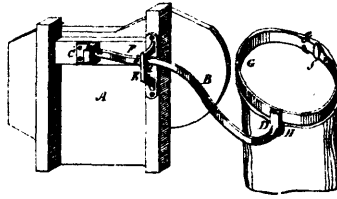
4994 Collins' Improvements in Saw-bucks.



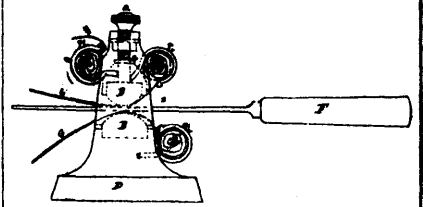
4996 Higley's Railway Car Axle Box.



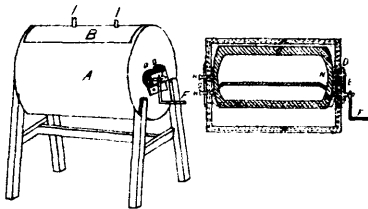
4997 Farmer's Mode of Putting up Yarn Bundles.



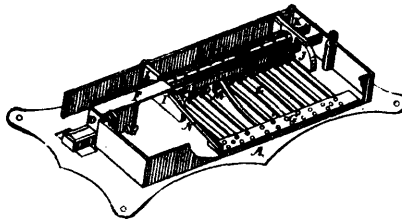
4998 James' Bag-holder.



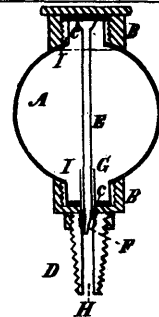
4999 Doucette's Knife-cleaner.



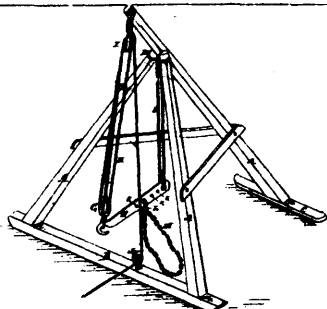
5000 Mitchell's Churn.



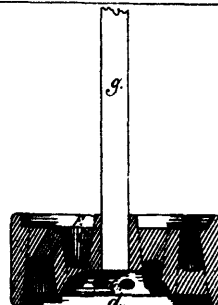
5001 Peters' Combination Lock.



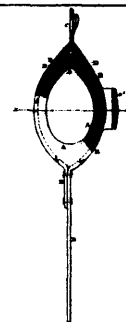
5002 Drew & Lloyd's Improvements on Lubricators.



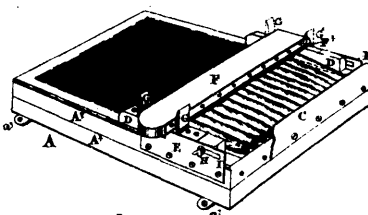
5004 Farnsworth's Improvements on Stump Extractors.



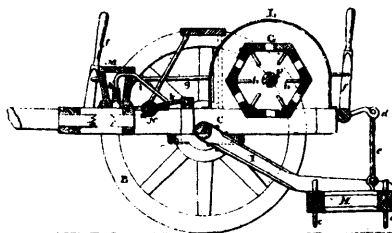
5006 Stearns' Churn Dasher.



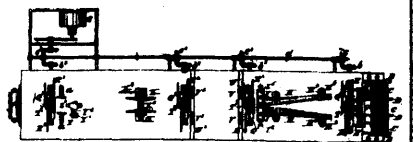
5007 Berry & Alexander's Thill Loop.



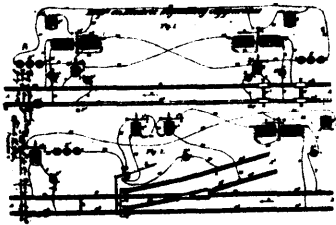
5008 McConkey's Cigar Stamping Machine.



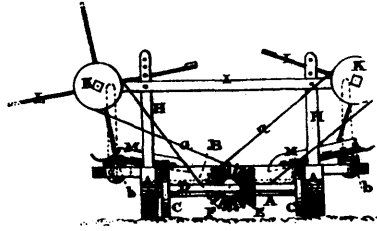
5009 Dague's Improvements in Broad-cast Seeders, Plaster Sowers and Harrows.



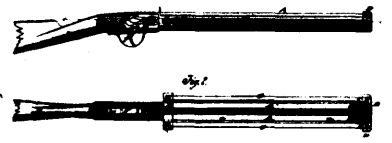
5010 Cowper & Scholes's Apparatus for the Manufacture of Rubber Belting.



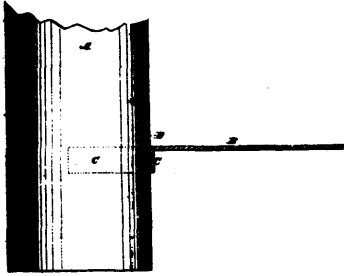
5011 Pope's Electric Signalling Apparatus for Railways.



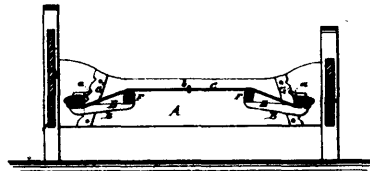
5012 Swartz's Insect Gathering Machine.



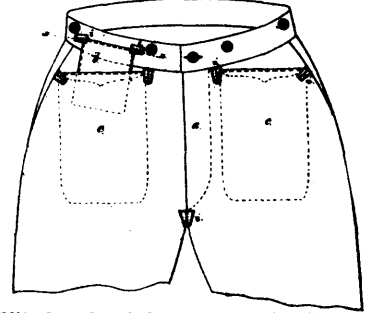
5013 Martin's Toy Gun.



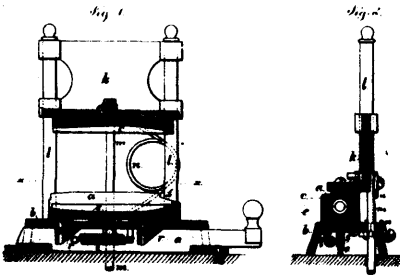
5014 Chamberlin & Douglas' Stove-pipe Shelf.



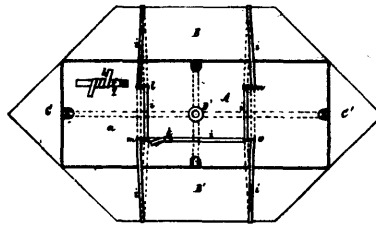
5015 Taylor's Bed Bottom.



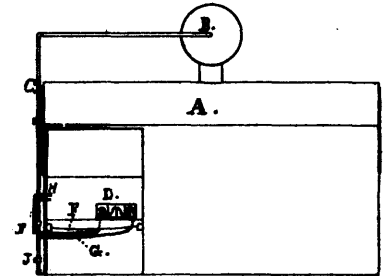
5016 Greenebaum's Improvements on Overall Trousers.



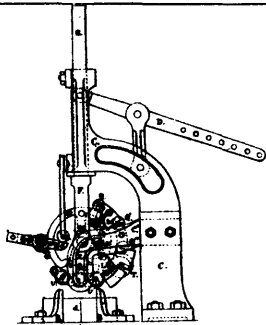
5017 Prentice's Cigar Moulds.



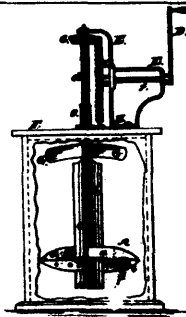
5018 Haskell's Life-preserving Bed.



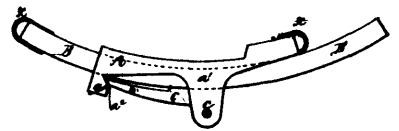
5019 Pawleson's Smoke Consumer for Steam Boilers.



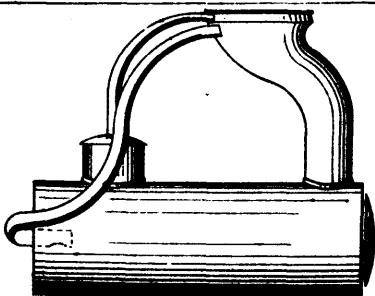
5020 Hely's Printing Machine.



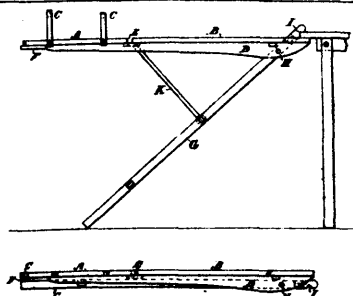
5021 Sreoves' Improvements on Churns.



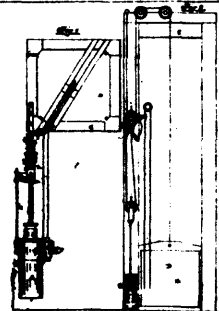
5022 Spicer's Hame Lock.



5023 Proctor's Spark Arrester.



5024 Barré's Ironing Board.



5025 Fensom's Hydraulic Elevator.