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INVENTIONS PATENTED.

No. 9349. Improvements on Sash Holders.
(Perfectionnements aux arrêt-croisées.)

John Grant and John H. Beaumont, Gananoque, Ont., 18th November, 1878, for 5 years.

Claim.—1st. The bracket C, having slot and provided with thumb screw D passing through the slot. 2nd. The combination of the bracket C, having slot and thumb screw D, with the locking bar E.

No. 9350. Improvements on Sleighs.
(Perfectionnements aux traîneaux.)

Thomas Quickfall, Floradale, Ont., 18th November, 1878, for 15 years

Claim.—1st. A sled or sleigh having the raves C forward of the front knees B bent downwardly to runners A, foreshortened at the nose end to meet the same. 2nd. The king bolt I constructed with a spherical head socketed in a recess in the sand bar P and held to have pivotal motion therein by the plate L, for securing the bolster J.

No. 9351. Method of Generating Carbonic Acid Gas in Fire Extinguishers.
(Méthode de production du gaz acide carbonique dans les extincteurs d'incendie.)

Joseph W. Connelly Pittsburgh, Pa., U. S., 19th November, 1878, for 5 years.

Claim.—1st. The combination of granulated bicarbonate of soda and porous sulphate of alumina free from water of crystallization. 2nd. The combination of granulated bicarbonate of soda, porous sulphate of alumina, water and steam.

No. 9352. Improvements in Chemical Fire Extinguishers.
(Perfectionnements dans les extincteurs chimiques d'incendie.)

Thomas E. Connelly, Pittsburgh, Pa., U. S., 19th November, 1878, for 5 years.

Claim.—1st. In combination with a receiver or generating chamber a diaphragm or receiving plate, either perforated or movable, within the chamber, so as to form an opening or openings through or past the same whereby its contents can be discharged into or mixed with the liquid contents of the receiver or generating chamber. 2nd. In combination with a receiver or generator a receiving plate or diaphragm and a stem or rod passing through the receiver and adapted to operate the plate or diaphragm from the exterior.

No. 9353. Improvements in Boot and Shoe Heels.
(Perfectionnements dans les talons des chaussures.)

Frederick Richardson, Providence, R.I. U. S. 19th November, 1878, for 5 years.

Claim.—1st. In a metallic heel, the combination with the shell d arranged to receive a renewable tap of the base plate e provided with the holes f f and the screw boss h arranged to secure the heel shell to the boot or shoe and the tap to the shell. 2nd. In a metallic heel shell arranged to receive a renewable tap, the combination with the shell d of the plate e provided with the screw boss h and holes f f made in one piece. 3rd. In a metallic heel the combination with the heel shell d made in one piece with the plate l of the rim g arranged to support and protect the counter. 4th. In combination with a metallic heel shell provided with the plate e arranged to secure the

shell to the boot or shoe, of the renewable tap l and screw i; 5th. In combination with the heel shell d and plate e, the reversible top arranged with two wearing surfaces and the screw i. 6th. In a reversible heel tap, the combination with the frame n provided with the diaphragm m forming shoulders on the outer side of the frame and the central boss O, of the laterally compressed wooden wearing surface presenting the end of the grain; 7th. The combination with the metallic heel shell made in one piece with the plate e, of the double and reversible heel tap l filled with laterally compressed wood. 8th. A reversible heel tap arranged to regulate the height of the heel; 9th. The combination with the heel shell d provided with the plate e, of a reversible heel tap provided with a rim to rest against the lower edge of the shell and arranged to be secured to the same when the two sides of the tap are of different thicknesses and the heel can be raised or lowered by reversing the tap. 10th. A boot or shoe heel extending upward to support the counter and downward to receive a renewable tap made in one piece of metal with a plate arranged to secure the heel to the boot or shoe and also to secure the tap to the heel.

No. 9354. Machine for Measuring and Weighing Skins.
(Machine pour mesurer et peser les peaux.)

David T. Winter and Charles E. Teague, Peabody, Mass., U. S., 19th November, 1878, for 5 years.

Claim.—1st. The combination of the foot treadle, a stop for limiting its downward movement, and lever m, the consequent upward movement of the table the perforated lifting table B and its guide rollers and the adjustable upper table D, the table being closely perforated. 2nd. The lower table B provided with guide tracks or ways t. In combination with the treadle and with the compound levers or hazy tongs e s n n and weights s, s, s. 3rd. The suspended perforated table D, in combination with its supporting levers d d d d d, suspended rod or axis d and hank s m. 4th. The combination of the upper table D, its described system of supporting levers, the lever M, registering index or pointer and its down pulling spring m, 5th. In combination of the system of long thin pins pinned closely together, the table B having the described system of countersunk holes, the countersinks merging nearly or quite into each other and the suspended table D adjustably hung and balanced on the compound system of levers d d d d d, 6th. In combination with the table D hung and balanced horizontally and with the hangers m, a double scale one for size and one for weight, and a single indicator for both scales, and whereby without any change or adjustments of the mechanism the skins, after being singly measured may be weighed in lots by the same machine, and the weight of such lots indicated by the same pointer or index; 7th. The combination of the following parts, namely: the under table B, its weighted levers foot treadle and stop y the upper suspended table D and its hangers m and levers d d d d d, the system of closely placed long pins, lever M, the single registering index pointer and the compound scale.

No. 9355. Hair Shedder. *(Etrille.)*

John H. Fenton, Indianapolis, Ind., U. S., 19th November, 1878, for 5 years

Claim.—A hair shedder made of india rubber, having corrugations or uneven edges.

No. 9356. Improvement on Steam Radiators.
(Perfectionnement aux calorifères rayonnants.)

Harvey E. Light, Rochester, N.Y., U. S., 19th November, 1878, for 5 years.

Claim.—1st. The pipes A A and ends At At forming circuits, constructed with the enlarged openings or spaces p p at the front for the purpose of inserting nipples and allowing the use of ordinary pipe tongs for operating the nipples without throwing the radiator too far apart. 2nd. The pockets a a and diaphragms b b located at the front end of the radiators, with right and left nipples c c connecting the radiators on alternate sides of the diaphragms and the enlarged openings or spaces p p at the ends of the radiators; 3rd. In pipe radiators, the combination with the pipes A A of the quadrangular or segment flanges, provided with the bevelled shoulders r r resting one upon another. 4th. A series of radiators each consisting of a complete pipe circuit provided with pockets and diaphragms forming water traps at one end connected by right and left nipples on opposite sides of the diaphragms and the flanges of the several radiators interlocking or resting upon each other to prevent displacement of any one of the radiators. 5th. A steam radiator section, consisting of a complete circuit constructed with the depressed pocket a in the lower pipe, with a single diaphragm or wing b extending from the top of the pipe downward to the level of, or below the bottom of the steam passage.

No. 9357. Improvements on Stove Grates.*(Perfectionnements aux grilles des poêles.)*

Samuel Smyth, Pittston, Pa., U. S., 19th November, 1878, for 5 years.

Claim.—The prismatic grate-bar having surfaces that support the fuel and composed of cross pieces projecting above the body of the bar sufficiently to allow the air to enter laterally from either side, and which cross pieces also project at the angle of the bars.

No. 9358. Improvements on Venetian Blinds.*(Perfectionnements aux jalousies.)*

Samuel Brillinger, Markham, Ont., 19th November, 1878, for 5 years.

Claim.—1st. The combination of the spring catch A and the metal disc or semi-circle B. 2nd. The combination with the indentations of the metal disc or semi-circle B.

No. 9359. Improvements on Wheel Hubs.*(Perfectionnements aux moyeux des roues.)*

George Bartlett, Gananoque, Ont., 19th November, 1878, for 5 years.

Claim.—The flanged inner half A of the hub cast in one piece with the threaded axle box D, in combination with the spokes C, the loose collar G, the nuts F E, the ring block H of wood and the flanged hollow outer half B of the hub secured to the spokes and the inner half.

No. 9360. Cement.*(Ciment.)*

Ebenezer Willis, Ayer, Mass., U. S., 19th November, 1878, for 5 years.

Claim.—Particles of iron in combination with plaster clay, or some like substance, to hold them temporarily in position, and some mild acid to cause oxidation of the particles of iron, by means of which oxidation the cement shall become hardened and solidified without the action of fire or heat.

No. 9361. Improvements on Shovel Handles.*(Perfectionnements aux manches des pelles.)*

Henry M Myers, Beaver Falls, Pa., U. S., 19th November, 1878, for 10 years.

Claim.—A socket and handle straps combined for securing the wooden handle B to the blade A of a scarp, shovel or spade, said socket and straps being formed of two pieces of sheet or plate metal.

No. 9362. Machine for Elongating and Straightening Horse-Shoe Nail Blanks.*(Machine à élargir et redresser les ébauches de clou à cheval.)*

Randolph Hersey, Montreal, Que., 19th November, 1878, for 5 years.

Claim.—1st. The combination of the rolls C' and D', straightener C and straighteners I H; 2nd. The combination of the straighteners I H, bar N; 3rd. The combination of the die I having recess L, bar F' having head H, rock shaft and arm C, E and elastic cushions S; 4th. The combination of the die I and head H with the elastic cushions S whereby the pressing action of the said die and head are controlled by the yielding of the said cushion; 5th. The combination of the rolls A, B, C' and D', with the tube G having door A' and spring catch C; 6th. The combination of the straightener C pivoted on I and screw T.

No. 9363. Improvements on Ironing Boards.*(Perfectionnements aux planches à repasser.)*

Antoinette M. S. Goldschmidt, Hamilton, Ont., 19th November, 1878, for 5 years.

Claim.—The combination of the boards 1 2 and 3 hinged together, whereby either of the three boards, sized for different garments, can be adjusted to a horizontal position, when two are in position, clamping the projecting edge of a table.

No. 9364. Fluting and Plaiting Machine.*(Machine à tuyauter et plisser.)*

Antoinette M. S. Goldschmidt, Hamilton, Ont., 19th November, 1878, for 5 years.

Claim.—1st. The combination of the frame A and the rotating grooved cylinders F H removable therefrom by endwise movement; 2nd. The combination of the removable grooved cylinders F H, frame A, sliding journal block G, spring M and pressure screw J.

No. 9365. Fishing and Wharf Lamp.*(Lampe de pêche et de quai.)*

Leonidas L. Wilson and Levi S. Keagle, Centre Point, Iowa, U. S., 22nd November, 1878, for 5 years.

Claim.—1st. The cage H formed of wires F or a wire gauge covering and heads I, in combination with the perforated tube D for containing the asbestos wick or filling G; 2nd. A burner composed of a cage formed of parallel wires filled with asbestos and provided with a supply tube and extinguisher; 3rd. The combination in a wharf lamp, of the wire gauze safety attachment e and the feeding tube D; 4th. The reservoir A, perforated tube D having the stop cock E, the wire cage H, the extinguisher K and the asbestos filling G, in combination as described.

No. 9366. Improvements on Clothes Dryers.*(Perfectionnements aux séchoirs à linge.)*

John H. D. Everett, Hawkesbury, Ont., 22nd November, 1878, for 5 years.

Claim.—1st. The combination of upper standard A, lower standard G and sliding bar D, having circular holder F and circular collar I; 2nd. The combination of upper standard A having swivelled rubber head A', ratchet bar B and clasp B'; 3rd. The combination of the lower standard C having triple fluted swivel stop C' and clasp C' furnished with a ratchet pawl C'; 4th. The combination of the circular holder F having arms G and supports K, circular collar I and clasp H, with pin and chain M and handle L.

No. 9367. Vessel for Measuring Liquids.*(Vaisseau pour mesurer les liquides.)*

William F. Sherman, Lowell, Mass., U. S., 22nd November, 1878, for 5 years.

Claim.—1st. The vessel A in combination with the reservoir B and wall a. 2nd. The reservoir B combined with a vessel A to receive the overflow.

No. 9368. Self-Weighing Machine.*(Appareil de pesage automatique.)*

Thomas Ford, Plattsville, Ont., 22nd November, 1878, for 5 years.

Claim.—1st. The combination of the receiving hopper A, having a hinged bottom B, provided with a counterbalanced arm or level C, and a weighing hopper E hung on a scale beam F, whereby the hinged bottom is opened and closed automatically; 2nd. The combination of a hinged bottom weighing hopper E, trunnioned between jaws on a scale beam F and a weighted lever K, adjusted to hold the hinged bottom B securely while receiving the grain, and be released by the gravity of the grain causing the hopper to fall and the bottom to drop, to discharge the contents of the hopper; 3rd. The combination of a weighing cylinder E, having a hinged bottom H provided with a spring detent J and a lever K engaging therewith; 4th. The weighing cylinder E provided with a spring I, curving under the hinged bottom H, to close the same when the cylinder is emptied; 5th. The combination with the lever K of a registering device operated by the pawl N and ratchet O.

No. 9369. Improvements on Fanning Mills.*(Perfectionnements aux tarares-cribleurs.)*

John Dickieson, North-Bedeque, P. E. I., 22nd November, 1878, for 5 years.

Claim.—1st. The fan-wheel constructed of a pentagonal or polygonal hub F of plate or cast iron, having flanges G to which the spokes are bolted, and flanges H for retaining the spokes laterally; 2nd. The fan-wheel having triangular fans N, 3rd. The shoe D having projecting eyes K as bearings in lieu of grooves, for changing the inclination of the screens and for fastening the same by a rod M.

No. 9370. Improvements on Liquor Registers.*(Perfectionnements aux registres à liqueurs.)*

Samuel H. Moffett, Harrisonburg, Otis Dean, Richmond, and Fontaine D. Johnson, Culpeper, Va., U. S. A., 22nd November, 1878, for 5 years.

Claim.—1st. The shaft G with flange e and pawl and ratchet p. s. striker D with lug d and springs a, b, the bell or gong C and the registering mechanism with pointers and dials, all enclosed within a box; 2nd. The combination of the box A having lugs b, the lid B having hooks at d and the spring-latch A'; 3rd. The combination of the lock box B', plate C' and the slide F' provided with the projecting lip e.

No. 9371. Improvement on Fanning Mills.*(Perfectionnement aux tarares-cribleurs.)*

Arthur J. Hartwell, Brockport, N. Y., U. S. A., 22nd November, 1878, for 5 years.

Claim.—1st. In a fanning mill having double fans, the combination with the fans B B' and their cases C, of the hinged valves m m' and the upper and lower edges of said fan cases and the double hinged valves n n' at the centre next the screws, and arranged to be adjusted to different positions to modify and regulate the blasts; 2nd. The combination with a set of screens for separating grass-seed, of screens 3 and 7, covered with a coat of paint for the purpose of separating plantain and other similar seeds of a furry nature; 3rd. The hinged screen-door H covering the discharge end of the mill, leaving the dead space u and throat v between it and the end of the shoe, for the discharge of chaff into a receptacle below.

No. 9372. Machine for the Manufacture of Hoops.*(Machine pour la fabrication des cercles.)*

David H. Burrell, James H. Ives, Rodney S. Whitman, Walter W. Whitman and David H. Burrell, Little Falls, N. Y., (Assignees of John B. Dougherty and James Naylor, Jr., Rochester, N. Y.,) U. S. A., 22nd November, 1878, for 5 years.

Claim.—1st. The machine for compressing and compacting the fibres of wooden hoops and giving form to their exterior surface, consisting essentially in the pair of compressing rolls operating upon the material passing between them; 2nd. The compressing rolls, in combination with the rotary cutters for removing the corners from the hoops; 3rd. The rolls H H' operating as feed-rollers, in combination with the rotary cutters I I' for removing the corners from the hoop; 4th. The compressing and forming rolls, in combination with the crimping roll; 5th. The combination of the compressing rolls, the rotary corner cutters and the crimping roll; 6th. The arrangement of the rotary cutters I, so that each arbor with its cutters dress both the inside and outside of the hoop simultaneously; 7th. A wooden hoop having compacted fibres and finished compressed form imparted to it.

No. 9373. Combined Clover Thresher, Huller, Separator and Cleaner.*(Batteur, épilateur, séparateur et nettoyeur de trèfle, combinés.)*

John C. Birdsall, South Bend, Ind., U. S. A., 22nd November, 1878, for 5 years.

Claim.—1st. The combination of the screen I and the bottom board I' shorter than the screen, both delivering upon the riddle K of the shoe, the shoe, the fan and the adjustable deflector; 2nd. The combination with the fan and the riddle K of the screen I and bottom I', the said screen projecting beyond the bottom and having its movement independent of the riddle, and delivering directly upon it; 3rd. The combination with the wind-board, of the vertical rack and pinion in the shaft carrying the index arm; 4th. The combination with the wind-board N, rack-bar N' and pinion N"; 5th. The combination with the wind-board N, adjustable at its heel, of the rack-bar N', pinion and actuating index arm N";

6th. The combination with the fan and shoe, of the wind-board N, connecting rack and pinion and index arm N₁, 7th. The combination with the hulling cylinder of the pocket F₁ and hinged door F₂, 8th. The combination with the hulling cylinder of pocket F₁ the latter formed in the lower front-side of the cylinder casing and provided with h₁ f₁, 9th. The combination with the fan, shoe and screw I of the wind-board N, vertical rack-bar N₁ and pinion on the shaft carrying index-arm N₁, 10th. The combination with the wind-board N, of the vertically adjustable pivotal support n, the angularly curved arm provided with slot and clamping screw or pin m, 11th. The combination with the fan and vibrating upper riddle K, of the wind-board N, rack-bar N₁, pinion N₂ and index arm N₁, 12th. The combination with the fan and vibrating shoe, of the vertically adjustable wind-board N pivoted at n, and the supporting angular arm provided with curved slot and clamp n, 13th. The band wheel q on shaft, said shaft gearing with, and having a concentric adjustability about the crank-shaft operating the bolts, whereby said band-wheel may serve at once as a belt tightener and to transmit motion to the bolts, 14th. The combination with the frame A of the shoe, located with its upper edge beneath the main sills A₁ and limited to vibrate crosswise of the machine, without either edge passing out from beneath the sills.

No. 9374. Improvements on Stove-Pipe Ventilators. (*Perfectionnements aux ventilateurs des tuyaux de poêles.*)

Angus McKay, John McDonald and John Wilson, Sheboygan, Mich., (Assignees of Thomas B. Way, Springfield, Ohio.) U. S. A., 22nd November, 1878, for 5 years.

Claim.—1st The internal rings c, c, applied as described, 2nd. The internal grooves or seat having the round rings seated therein.

No. 9375. Improvements on Sad Irons. (*Perfectionnements aux fers à repasser.*)

John Taylor, St. George, David B. Phillips and James F. Kincaid—Branford, Ont., 22nd November, 1878, for 5 years.

Claim.—1st. The combination of the hollow-base or body A of the sad iron and the hinged cover or top C, 2nd. The combination of the spring-latch or plate F constructed with non-conducting knob G and latch-spring H on the cover or top C, with the notch on post I; 3rd. The formation of the air-chamber K, between the cover or top C and the spring-latch or plate F.

No. 9376. Improvements on Coin Packages. (*Perfectionnements aux enveloppes à monnaie.*)

Charles H. Carpenter, Syracuse, N. Y., U. S. A., 22nd November, 1878, for 5 years.

Claim.—1st. The prismatic envelope forming a coin package; 2nd. The soft metal rivet x for fastening a coin package, by which the package is so fastened that it cannot be opened without destroying the envelope 3rd. The combination of the index with the opening b in a coin package, by which the coin can be seen and readily counted; 4th. A prismatic coin holder, the contents of which are secured against removal with free access to the coin therein for counting or inspection.

No. 9377. Improvements on Locks. (*Perfectionnements aux serrures.*)

Alfred C. Hawley, Chicago, Ill., U. S. A., and Lorenzo U. C. Titus, Belleville, Ont., 22nd November, 1878, for 5 years.

Claim.—1st. The hasp with a hollow socket and lock mechanism therein; 2nd. The combination of the hasp, socket lock mechanism and cap F, plate A, plate W, stud Y, rivet Z, spring S, socket N, bolts T, key O, studs P P and socket plate e.

No. 9378. Improvements on Steam Gauges. (*Perfectionnements aux manomètres.*)

James Morrison, Toronto, Ont., 22nd November, 1878, for 5 years.

Claim.—1st. A vacuum steam or other pressure gauge in which the index figures or plates are made moveable and adjustable so that the gauge may be adjusted to indicate the true pressure, independently of the spring and movement; 2nd. The combination with the indicating needle of a vacuum-steam or other pressure gauge, of moveable index plates or figures attached to any part of the gauge, such as the case, ring dial or glass, whichever may be found most suitable for the purpose.

No. 9379. Improvement in Drain Pipes. (*Perfectionnements dans les tuyaux d'égouts.*)

Alexander G. E. Westmacott, Toronto, Ont., 22nd November, 1878, for 5 years.

Claim.—In making the pipes in halves with longitudinal joints A of any material, of any size and of any form of cross section for sewerage, water or other purposes, to facilitate the inspection and cleaning off said pipes.

No. 9380. Improvements on Boot and Shoe Soles. (*Perfectionnements aux semelles des chaussures.*)

Harry C. Goodrich, Chicago, Ill., U. S. A., 22nd November, 1878, for 5 years.

Claim.—A boot or shoe sole filled with plugs shorter than the sole is thick inserted from the inside thereof and retained in place by the closing of the material, over and around the heads of the plugs.

No. 9381. Improvements on Pulleys. (*Perfectionnements aux poulies.*)

Herbert Lond, Boston, Mass., U. S. A., 22nd November, 1878, for 5 years.

Claim.—1st. A sheave made of metal and of wood, 2nd. A sheave made of metal with an attached metal rim H; 3rd. A sheave made of metal and of wood with the wood projecting at the sides of the metal; 4th. A sheave made of metal with an attached metal rim H, and wooden blocks E, 5th. A sheave made of metal, with an attached metal rim H and wooden blocks E projecting at each side of the sheave.

No. 9382. Nickel Grain Anodes for Plating.

(*Anodes à grains de nickel pour plaquer.*)

Adolph C. Wenzel, N. Y., U. S. A., 22nd November, 1878, for 5 years.

Claim.—1st. The nickel anode constructed of the perforated plates A and A₁ with the strips B and C and their space D between, and combined for detachment for cleansing and provided for suspension, 2nd. The combination of the perforated plates A and A₁ and the strips B and C, with the space D between, and the bolts F with their nuts and the staple H, its screw I and the hooks F.

No. 9383. Improved Miller's Paint Staff.

(*Règle d'épave des meules, perfectionnée.*)

Jacob Austine Huntsville Ohio, U. S. A., 22nd November, 1878 for 5 years

Claim.—A miller's paint staff made in the form of an equilateral triangle with the faces of the same brought to a true plane.

No. 9384. Improvements on Clasps. (*Perfectionnements aux crochets.*)

Francis B. Brown, Boston, Mass., U. S. A., 22nd November, 1878, for 5 years.

Claim.—The three levers a a₁ and b hinged together by the pin d, one end of b acting with a to form one pair of gripping-jaws, and the other end of b acting with a₁ to form a second pair of gripping-jaws.

No. 9385. Improvements on Steam Boiler Cleaners. (*Perfectionnements aux nettoyeurs des chaudières à vapeur.*)

James E. Thomas, West Bay City, Mich., U. S. A., 22nd November, 1878, for 5 years.

Claim.—The combination of the deflector B provided with the raised part C, and the pipe D with the pipe E, the reservoir F and the pipe H.

No. 9386. Improvements on Water Conductors. (*Perfectionnements aux conduits d'eau.*)

Robert Moore, Simcoe, Ont., 22nd November, 1878, for 5 years

Claim.—The combination of the valve E and the two pipes C and D joined on to the enlargement B, of the main pipe A.

No. 9387. Improvements on Canal Boats.

(*Perfectionnements aux bateaux pour les canaux.*)

John W. Melzer, Ottawa, Ont., 22nd November 1878, for 5 years.

Claim.—The arrangement of the diagonal timbers G G combined with the ribs H and the keels A D D, floor-timbers E and tie-beam F

No. 9388. Improvements on a Mill-Stone Dress. (*Perfectionnements dans le rabattage des meules.*)

Adolph Frobenhagen, St. Charles, Ill., U. S. A., 22nd November, 1878, for 5 years.

Claim.—1st. A shallow depression b, contiguous to the furrows on the skirt or grinding surface of the stone; 2nd. The furrows a in combination with the shallow depressions b and the narrow grinding faces c 3rd. The furrows a, in combination with the level depressed surfaces b and the narrow grinding faces c.

No. 9389. Improvements on Cocks. (*Perfectionnements aux robinets.*)

John Deurance, London, England, 22nd November, 1878, for 5 years.

Claim.—1st. The construction of cocks having packing surrounding the passages in such manner that the inner end of the plug abuts on and compresses the portion of the packing contained in the bottom of the plug cavity at a; 2nd. The construction of packed cocks represented in the drawings.

No. 9390. Improvements on Threshing Machines. (*Perfectionnements aux machines à battre.*)

Levi Pinkerton, Schomburg, Ont., 22nd November, 1878, for 5 years

Claim.—1st. The shaft E, bracket G and spur bevel wheel E, in combination with the bevel pinion G and the cylinder shaft B₁, 2nd. The cylinder shaft B₁ with bevel pinion C and pulley D, between which is placed the bearing B; 3rd. The combination of the spur bevel wheel E, shaft B₁ and fan pulleys D and D₁ with connecting belt; 4th. The concave plate provided with the lateral bars or ridges H₁, and forwardly extended, as shown in connection with the delivery board I, 5th. The open conveyor formed by the bars J, placed at intervals apart, and the lapping-teeth k arranged for the purpose of carrying off the straw and permitting the grain to pass through the receiving board; 6th. The combination of the conveyor teeth with the fixed teeth L.

No. 9391. Improvements on Weighing Scales. (*Perfectionnements aux balances.*)

Charles Onslow, Port Ewen, N. Y., U. S. A., 22nd November, 1878, for 5 years

Claim.—1st. The rollers A, provided with flexible bands on their opposite sides, in combination with the suspended and stationary frames 2nd. The arms C C that connect the rollers, and their connection at m, 3rd. The combination of the scale beam D and its connecting rod d₁ with the bands m, the arms C, the rollers A and their flexible bands B.

No. 9392. Mill Stone Driver. (*Chassoir de meule de moulin.*)

William Johnson, John Kerner and George W. Marling, Milwaukee, Wis. U.S.A., 22nd November, 1878, for 10 years.

Claim.—1st. The link E with dogs FFFF pivoted to the same, so as to rock up and down. 2nd. The lower plate of the driver A with raised rim C and projections B B, in combination with link E and dogs FFFF. 3rd. The link E, with dogs FFFF pivoted so as to oscillate up and down in combination with flueings HHHH and yielding substances I to prevent vibrations. 4th. The lower plate B and rollers N, in combination with link E.

No. 9393. Improvements on Shirts. (*Perfectionnements aux chemises.*)

Alfred L. Edwards, New York, U.S.A., 22nd November, 1878, for 5 years.

Claim.—1st. The detachable neck band for a shirt, provided with a skirt. 2nd. A woollen shirt having the lower ends of its sleeves made with the wrist bands, or cuffs of linen or cotton, and detachable. 3rd. The woollen shirt provided with the detachable neck band, with shirt bosom and sleeve ends.

No. 9394. Improvements on Hoisting Machines. (*Perfectionnements aux elevateurs.*)

John Fensom, Toronto, Ont., 22nd November 1878 for 5 years

Claim.—1st. A hydraulic hoist in which the discharge water from the cylinder is forced or pumped into a high level tank, or against pressure, when lifting light loads or by the weight of a descending load. 2nd. In hydraulic hoists, the combination of appliances whereby the surplus power of the pressure of the water over that required for elevating the load or the weight of a descending load is utilized for the purpose of elevating the discharge water from the cylinder, or for pumping water to a high level tank or into an accumulator or for forcing a portion of it back into the water main. 3rd. A hydraulic hoist in which the discharge water when the hoist is lifting light loads, is forced or pumped into a high level tank against pressure, by the surplus power of the water over the load, and so arranged that when heavy loads, requiring the full pressure of the water, are to be elevated the discharge water will be passed into a low level tank, the change of the discharge being governed either automatically from the weight of the load or by the operator. 4th. A hydraulic hoist in which the weight of the load in connection with a tilting lever, or its equivalent, placed on the hoist rope automatically, governs the lifting power of the hoist and the consumption of water. 5th. A tilting lever or its equivalent, placed in connection with the hoist rope and adjusted to operate in proportion to the load on the hoist car, in connection with the discharge valve or valves of the water cylinder, which valve or valves and connections are arranged to permit the discharged water to be forced to a high level tank or against pressure when the load on the hoist is light, or to permit the discharge water to pass into a low level tank or to waste when the load on the hoist is sufficient to operate said tilting lever. 6th. In hydraulic hoists, the combination of appliances whereby the discharge water is introduced behind the working face of piston. 7th. A tilting lever, or its equivalent, placed in connection with the hoist rope of an elevator, in combination with a valve or valves on the discharge pipe of the water cylinder. 8th. A working valve for hydraulic hoists, having independent inlet and discharge valves, which valves are placed in water chambers which communicate, and which valves are operated from a cam shaft connected to the check rope. 9th. The combination of appliances whereby the discharge water of a hydraulic hoist may be passed in whole or part to a high or low level tank, either by the automatic action of a tilting lever, or its equivalent, from the weight on the hoist or by the movement of valves by an operator.

No. 9395. Improvements on Safety Valves. (*Perfectionnements aux soupapes de sûreté.*)

Charles McWilliam, Stanstead, Que., 22nd November, 1878, for 5 years.

Claim.—1st. The combination of valve K, casing L and pipe U, with the lever R and weight T. 2nd. The combination of the valve K, lever F and weight O with the casing L and pipe U. 3rd. The combination of the valve K, levers F and R, weights O and T, with the casing L and pipe U.

No. 9396. Vessel for Heating Liquids. (*Vaisseau pour chauffer les liquides.*)

William H. Bennett, New York, and Willard C. Vail, Poughkeepsie, N. Y., U.S., 22nd November, 1878, for 5 years.

Claim.—A vessel for heating liquids, the bottom whereof consists of a plate of metal formed so as to provide the bearing surface A and hollow chamber F projecting therefrom into the interior of the body of the vessel.

No. 9397. Improvements on Fire Engines. (*Perfectionnements aux pompes à incendie.*)

Hiram H. Hill, and Frank Moorten, Augusta, Me., U.S., 22nd November, 1878, for 5 years.

Claim.—A vertically-working steam fire engine the half walking beam F the links E, the piston rod C and cross head D, in combination with pistons of the steam cylinder A and the water cylinder B, and with the connecting rod G and the cranks H of the eccentric shaft I.

No. 9398. Improvements on Steam Generators. (*Perfectionnements aux generateurs de vapeur.*)

Thomas F. Butterfield, De Witt, Iowa, U.S., 22nd November, 1878, for 5 years.

Claim.—1st. The barrel A, the cast metal head thereof provided with the circular flange h, and the suspended furnace B attached to the underside of the head. 2nd. The cast metal head for the barrel A, the same having the circular flange h formed in one piece therewith, and a central opening or aperture.

No. 9399. Improvements on Sewing Machines. (*Perfectionnements aux machines à coudre.*)

Nathan Hayden, Chicago, Ill., U.S., 22nd November, 1878, for 5 years.

Claim.—1st. In a double neck attachment for sewing machines, the collar B provided with set screw c, in combination with the needle bar A having grooves for the reception of the needles a. 2nd. The combination of the needle bar A, the adjustable collar B having apertures b b, with the needles a. 3rd. The needle plate D having the elongated opening d, in combination with the needles a.

No. 9400. Improvements on Car Axles. (*Perfectionnements aux essieux des wagons.*)

Samuel McGee, Madison and Thomas Nugent, Whippany, N. J., U.S., 22nd November, 1878, for 5 years.

Claim.—1st. The axle or line of shafting, divided lengthwise into two or more parts, having collars mounted on the journals, and all or the inner ends carried in bushing boxes contained in oil-preserving cases. 2nd. In combination with the axle A provided with the collars C, the bushing boxes F having braces f.

No. 9401. Improvements in Vapour Burners. (*Perfectionnements aux becs à gaz.*)

Henry S. Belden, Canton, Ohio, U.S., 22nd November, 1878, for 5 years.

Claim.—1st. A heating orifice and an illuminating orifice arranged as described, so that the gas jets can be regulated independently of each other and can be supplied from a mixing chamber. 2nd. A retort composed of a horizontal tube B having an annular flange c, in combination with a vertical gas feed tube D; 3rd. In combination with the horizontal tube B and vertical gas tube D, the orifice I contiguous to said tubes B D, and the screw valve N passing horizontally through the mixing chamber. 4th. The retort tube B formed with a flange C and vertical feed tube D, in combination with a mixing chamber G having a horizontal orifice I adapted to supply a flame against all of said parts. 5th. A vapour burner provided with the vertical mixing chamber G and the vertical feed tube D connected at their lower ends by the throat E, in combination with the vertical screw plugs K L, which serve to regulate the flow of oil and the flow of gas into chamber G.

No. 9402. Improvements on Grates. (*Perfectionnements aux grilles.*)

Walter M. Shanks, Denmark, Mich., U.S., 22nd November, 1878, for 5 years

Claim.—1st. A self righting pivoted grate having the centre of gravity below the axis and constructed in sections, whereby an automatically determined opening is always made at the top of the grate. 2nd. A pivoted grate having a horizontal axis and constructed of independent movable sections forming an incomplete cylinder, said sections being movable concentrically about the axis. 3rd. The combination of two pivoted end plates d rigidly connected, and a number of independent horizontal segments b pivoted thereto, the whole constituting a revolving grate and smoke consumer. 4th. The combination of segments b having the pins c with the pivoted end plates d provided with a circular series of openings or bearings for the pins. 5th. The combination of segments b having the pins c with feathers f, with the pivoted end plate d having bearings with the concentric recesses g.

No. 9403. Process of Producing Sulphate of Ammonia. (*Procédé de production de sulfate d'ammoniaque.*)

William Growen, Leipsic, Germany, 22nd November, 1878, for 10 years.

Claim.—1st. The mixture of moor or bog with a certain quantity of meadow chalk, for conversion of the sulphur contained in the moor in considerable quantities to sulphuret of calcium during reduction to ashes and gasification, of the moor or bog in the cineriferous furnace. 2nd. In combination with the above mentioned preparation of the moor mass, the regulation of the amount of moisture in the moor mass, for the purpose of obtaining such a quantity of water vapour as is necessary for this procedure. 3rd. In combination with the above named preparation of the moor mass, its complete reduction to ashes in the cineriferous furnace without a vestige of disengaged nitrogen gas being thereby formed or produced. 4th. The composition, production and application of the contact mass, its periodical generation as described. 5th. In combination with the processes of reducing the ashes and gasification of the moor mass in the cineriferous furnace, the total conversion of the azotic organic vapours by means of the contact mass and the other conditions of the ammonium furnace into carbonate of ammonia, carbonic acid, oxide of carbon and hydrogen gas. 6th. The pyrometer composed of a porcelain tube closed at one end with a cork and filled to any desired extent with powdered charcoal, having interposed in the mass pieces of alloy of copper and antimony, varying in proportion as used in ammonium and cineriferous furnaces and an asbestos stopper. 7th. The separation of the produced carbonate of ammonia in the refrigerator into a condensed and a gaseous part, in combination with the conversion of both products into sulphate of ammonia. 8th. The composition and production of the chalk gypsum balls, or marbles, and their application for the conversion of the portion of not condensed carbonated ammonia gas derived from the gasification of the moor mass into sulphate of ammonia in certain degrees of temperature, in quantities, proportions, &c. 9th. The utilization of chalk gypsum marbles, composed as described and saturated with sulphate of ammonia in the process of converting carbonate of ammonia into sulphate of ammonia. 10th. The process of gathering nitrogen from moor mass and producing sulphate of ammonia from the same base, by excavating and treating the moor mass, converting the same into ashes, steam, gas and vapours, excluding the air therefrom meanwhile; decomposing the said steam in combination with the gases by the use of a contact mass subjected to different degrees of heat, thereby forming carbonate of ammonia in a gaseous form, the condensation of the ammonia gas and its conversion into a solution of sulphate of ammonia, the filtration and evaporation of the solution and the production of dry sulphate of ammonia. 11th. The cineriferous furnaces for reducing the moor mass to ashes and gasifying the same, constructed as described and having any suitable number of cylinders a b c d e with covers a', slides b', burning space c', accumulation space d', horizontal

partition *et*, reservoir *f* and agitator *g*, in combination with burning gas supply pipe *V* and education pipe *IX* for burnt gas. 12th. The ammonium furnaces for the decomposition of the organic vapours, and for the formation of carbonate of ammonia, constructed as described, in combination with burning gas supply pipe *V* and education pipe *IX*, and having therein preferably six cylinders provided with top and bottom covers and intermediate sieve like bottoms, these cylinders being connected separately with inlet gas pipe *h* and one of pipe *XII*. 13th. In an apparatus for manufacturing sulphate of ammonia from moor mass, the combination of the cineriferous furnace *I* II III, ammonium furnaces *VI* VII VIII, preheater *IV*, gas supply pipe *V*, education pipes *IX*, regenerators *Xa* *Xb*, crystallizing pan *XI*, refrigerator *XIII*, education pipe *XIV*, gypsum digestors *XV* and *XVI*, reservoir *XVII* and filter press *XIX*, with chalk gypsum cylinders and chamber *XXI*, drain pipe press *XXIX* and any suitable gas engine and exhaustor 14th. In the manufacture of sulphate of ammonia from moor mass or meadow land, the utilization of the burning gas arising therefrom for supplying heat to the different vessels and furnaces, driving engines and heating chambers employed in operating the process.

No. 9404. Improvements in Baling Presses. (*Perfectionnements aux presses d'emballage.*)

Peter K. Dederick, Albany, N. Y., U. S., 22nd November, 1878, for 5 years.

Claim.—1st. The toggle *B* connected to and operated by a crank, eccentric or cam and adjustable screw or horse lever. 2nd. The screw or horse lever *C* adjustably connected to the crank, eccentric or cam, and in combination with the toggle connected and vibrated laterally.

No. 9405. Improvements in Car Bumpers. (*Perfectionnements aux buffers de wagons.*)

Charles C. Neimeister, Chicago, Ill., U. S., 22nd November, 1878, for 5 years.

Claim.—A wrought metal rail car bumper and draw-head forged in two parts, the part *A* extended and curved laterally, and the edges welded along the lines *a* *x* lengthwise of the bumper to form a coupler-socket and the parts *B* extended longitudinally to form the shank or draw bar.

No. 9406. Improvements on Acoustic Telegraphs. (*Perfectionnements aux télégraphes acoustiques.*)

John H. Irwin, Philadelphia, Pa., U. S., 22nd November, 1878, for 15 years.

Claim.—1st. In an acoustic telegraph, a transmitter composed essentially of two pencils or needles *e* *f*, one or both of which are pointed and brought

into contact and interposed in the line wire of a battery current; 2nd. In an acoustic telegraph a receiver provided with two pencils or needles *e* *f*, one or both of which are pointed and provided with suitable mechanism for vertical adjustment of the same; 3rd. In an acoustic telegraph transmitter, two pencils or needles *e* *f*, one or both of which are pointed and one of said needles freely suspended with its end adjustably in contact with the opposite needle; 4th. In an acoustic telegraph transmitter the combination at the point of variable resistance of a pointed needle of platinum and a pencil of carbon; 5th. In an acoustic telegraph transmitter, the combination at the point of variable resistance of a pointed needle suspended by an elastic support over and in contact with a stationary pencil of carbon; 6th. In an acoustic telegraph transmitter a pointed needle suspended by an elastic support combined with an adjusting device, whereby said needle may be adjusted as to pressure of contact at its point; 7th. In an acoustic telegraph transmitter, a pointed needle suspended by an elastic support combined with a protecting tube or jacket to prevent disturbance by atmospheric currents; 8th. In an acoustic telegraph transmitter a pointed needle freely suspended in a vertical position and in contact at its point with another pencil combined with fixed guides, whereby the needle is retained in a vertical position; 9th. In an acoustic telegraph transmitter, a movable needle combined with fixed guides to restrict the movement of the needle to a direction convenient with its axis; 10th. In an acoustic telegraph transmitter provided with a movable needle guides of hard polished anti-friction material, such as rubber, &c.; 11th. In an acoustic telegraph transmitter combined with a non-resonant jacket to enclose the same; 12th. In an acoustic telegraph transmitter a stationary sensitive apparatus provided with a non-resonant jacket combined with flexible tubes having suitable mouth pieces; 13th. An acoustic telegraph transmitter combined with an electro-magnetic regulator to control the contact resistance in said sensitive plate; 14th. An acoustic telegraph transmitter combined with a sound producing apparatus permanently attached for the purpose set forth.

No. 9407. Improvements in Horse Hoes. (*Perfectionnements aux hoes a cheval.*)

Joshua Henshaw, St. Hyacinthe, Que., 22nd November, 1878, for 5 years.

Claim.—1st. The shovel *D* fixed to the standard *B* projecting obliquely forward at lower end, convex in front and with wings extending outwards and rearwards and adapted to receive the point *E*, bolted thereto, the lower edges of the shovel being on or nearly on a line horizontally with the lower edges of the point. 2nd. In combination with the frame composed of the plow beam *A*, standard *B*, handles *C* *C'* and bolts *b* *c* constructed substantially in the manner specified, the plough or shovel *D* and removable point *E* the whole combined in the manner set forth.

List of Patents issued up to 12th December, 1878, but not yet Officially published in the Patent Office Record.

No. 9419. G. Bartholomew, Chicago, Ill., U. S. A., "Beer Brewing Process," 2nd December, 1878.

No. 9420. E. Fisher, Worcester, Mass., U. S. A., "Leather Cutting Machine," 2nd December, 1878.

No. 9421. C. D. Marshall and H. D. Taisey, Fitch Bay, Que., "Axle Trimmer and Wheel Adjuster," 2nd December, 1878.

No. 9422. S. M. Denniston, Silver City, Idaho, U. S. A., "Stop Cock Attachment," 2nd December, 1878.

No. 9423. C. H. Augel, Rochester, N. Y., U. S. A., "Blacking Box," 2nd December, 1878.

No. 9424. J. G. Malcolm and J. Pelton, Innerkip, Ont., "Fanning Mill Elevator," 2nd December, 1878.

No. 9425. E. Robinson, Chatham, and A. F. Holmes, Napanee, Ont., "Hot Air Furnace," 2nd December, 1878.

No. 9426. W. F. Flagg, Bloomington, Ill., U. S. A., "Mode of Heating and Ventilating Buildings," 2nd December, 1878.

No. 9427. E. de Zuccato, Charterhouse Street, London, Eng., "Method of Producing Writings, Drawings and Delineations," 2nd December, 1878.

No. 9428. J. N. Ellis and R. W. Rule, Aylmer, Ont., "Mechanical Movements," 2nd December, 1878.

No. 9429. J. Darling, Newark, and J. N. Poe, Toledo, Ohio, U. S. A., "Wash Board," 2nd December, 1878.

No. 9430. T. S. Lewis, Saco, Me., U. S. A., "Ore Separator," 2nd December, 1878.

No. 9431. W. D. C. Pattison and N. S. Woodward, Sherbrooke, Que., "Dairy Can," 2nd December, 1878.

No. 9432. A. Kerr and I. Silberman, Montreal, Que., "Valve Spindle," 2nd December, 1878.

No. 9423. W. G. Flanders, Newport, N. H., U. S. A., "Steam Cooking Kettle," 2nd December, 1878.

No. 9434. Jno. Kimball, Boston, Mass., U. S. A., "Anti-friction Compound," 3rd December, 1878.

No. 9435. J. B. West, Genesee, N. Y., U. S. A., "Water Pressure Regulator," 3rd December, 1878.

No. 9436. M. H. Strong, Brooklyn, N. Y., U. S. A., "Illuminating Gas," 3rd December, 1878.

No. 9437. T. Dark, Buffalo, N. Y., U. S. A., "Receivers and Stench Traps," 3rd December, 1878.

No. 9438. H. Frash, Cleveland, Ohio, U. S. A., "Oil Distilling Apparatus," 3rd December, 1878.

No. 9439. W. C. Sillar, London, R. G. Sillar, Lec, and C. Rawson, London, Eng., "Improvements in Decolorizing, Purifying and Utilizing Sewage, Urine &c." (Extension of Patent No. 2889), 5th December, 1878.

No. 9440. Jas. Cannon, Allanburg, Ont., "Dredge Shovel," 5th December, 1878.

No. 9441. Jno. Carr, Minneapolis, Minn., U. S. A., "Thill Coupling," 5th December, 1878.

No. 9442. F. W. Schroeder, N. Y., U. S. A., "Laminated Railway Cushion," 5th December, 1878.

No. 9443. D. Brooks, Philadelphia, Pa., U. S. A., "Method of Insulating Telegraph Wires and Laying Telegraph Cables," 5th December, 1878.

No. 9444. Jno. Harley, Wallaceburg, Ont., "Hook Headed Carpet Tack," 5th December, 1878.

No. 9445. J. Kinney, London, Ont., "Instrument for Designing and Cutting Scrolls and Curved Lines," (Extension of Patent No. 2954), 5th December, 1878.

No. 9446. E. R. Whitney and H. J. Beemer, Montreal, Que., "Fog Horn," 6th December, 1878.

No. 9447. C. Burgess, Portsmouth, Ohio, U. S. A., "Iron and Steel Manufacturing Process," (Extension of Patent No. 2927), 10th December, 1878.

No. 9448. M. T. Bort, Battle Creek, Mich., U. S. A., "Wood Working Machine," (Extension of Patent No. 2941), 10th December, 1878.

No. 9449. F. W. Schroeder, N. Y., U. S. A., "Car Truck," 10th December, 1878.

No. 9450. C. C. Barton, Rochester and J. B. West, Genesee, N. Y., U. S. A., "Water Meter," 10th December, 1878.

No. 9451. W. H. Van Wormer and G. W. Hayes, Pierceton, Ind., and C. A. Veago, Chicago, Ill., U. S. A., "Boot Counter Support," 10th December, 1878.

No. 9452. D. H. Ferguson, Montreal, Que., "Method of Finishing Tobacco Plugs," 10th December, 1878.

No. 9453. W. Eberhard and R. Miller, Akron, Ohio, U. S. A., "Grain Granulating Machine," 10th December, 1878.

No. 9454. W. McNamara and L. Mertens, Erie, Pa., U. S. A., "Non-Freezing Hydrant," 10th December, 1878.

No. 9455. R. S. Whitman, D. H. Burrell and W. W. Whitman, (Assignees of D. H. Burrell and G. L. Freeman,) Little Falls, N. Y., U. S. A., "Milk Vat," 10th December, 1878.

No. 9456. E. A. Telf, Toronto, Ont., "Uterine Medicator," 10th December, 1878.

No. 9457. Rev. R. Dick, Buffalo, N. Y., U. S. A., "Folding Chair," 10th December, 1878.

No. 9458. G. A. Westhaver, Mahone Bay, N.S., "Washing Machine," 10th December, 1878.

No. 9459. Jas. G. Batley, Guelph, Ont., "Carriage Spring Coupling," 10th December, 1878.

No. 9460. F. Kortick, San Francisco, Cal., U.S.A., "Link or Hook Connection," 10th December, 1878.

No. 9461. Jno. Besanson, Titusville, Pa., U.S.A., "Processes for Cleaning Plush and Cloth," 10th December, 1878.

No. 9462. L. N. Wisewell and J. F. Hanrahan, Ottawa, Ont., "Potato Vase Sprinkler," 10th December, 1878.

No. 9463. E. Roos, Galt, Ont., "Boot," 10th December, 1878.

No. 9464. W. Keane, Stratford, Ont., "Flax Scutching Machine," 10th December, 1878.

No. 9465. Jno. C. Ward, Albany, N. Y., U. S. A., "Hernia Truss," 10th December, 1878.

No. 9466. Rev. B. Foltz, Rockford, Ill., U. S. A., "Neck Yoke Attachment," 10th December, 1878.

No. 9467. J. H. Stanton, Jordan Station, Ont., "Cultivator," 10th December, 1878.

No. 9468. E. Stewart, Fort Madison, Iowa, U.S.A., "Movable Bottom Sieve," 10th December, 1878.

No. 9469. A. V. M. Sprague, E. Oumpaugh, G. W. R. Lewin, Rochester, N. Y., and J. Ruddy, Philadelphia, Pa., (Assignees of A. Burbank, Rochester, N. Y.,) U.S.A., "Hydro-Carbon Heater," 10th December, 1878.

No. 9470. M. T. Buchanan, Dorchester, Ont., "Hay Pitching Machine," 10th December, 1878.

No. 9471. R. H. Woodward, Fort Wayne, Ind., U. S. A., "Vaginal Syringe," 10th December, 1878.

No. 9472. G. W. and H. F. Roberson, Salem, N. Y., U. S. A., "Combined Harrow and Seeding Machine," 10th December, 1878.

No. 9473. A. H. Brintnell, Colborne, Ont., "Carriage Spring," 10th December, 1878.

No. 9474. D. Cummins, Mount Forest, Ont., "Farm Gate," 10th December, 1878.

No. 9475. Jno. B. and A. M. Miller, Parkhill, Ont., "Fence," 10th December, 1878.

No. 9476. W. Russell, Dundas, Ont., "Table Lifter for Reapers," 10th December, 1878.

No. 9477. E. Town, Wilmington, Del., U.S.A., "Screw Propeller," 12th December, 1878.

No. 9478. A. R. Scobie and D. S. Adams, Toronto, Ont., "Check Hinge," 12th December, 1878.

No. 9479. M. A. B. Shipman, Ottawa, Ont., "Machine for Sprinkling and Dusting Roots, &c.," 12th December, 1878.

No. 9480. E. Gray, Chicago, Ill., U. S. A., "Gray's Electro-Harmonic Telegraph," (Re-issue of Patent No. 4949,) 12th December, 1878.

No. 9481. E. Gray, Chicago, Ill., U. S. A., "Gray's Electro-Harmonic Telegraph," (Re-issue of Patent No. 4949,) 12th December, 1878.

No. 9482. E. Gray, Chicago, Ill., U. S. A., "Gray's Electro-Harmonic Telegraph," (Re-issue of Patent No. 6101,) 12th December, 1878.

No. 9483. E. Gray, Chicago, Ill., U. S. A., "Gray's Electro-Harmonic Telegraph," (Re-issue of Patent No. 6101,) 12th December, 1878.

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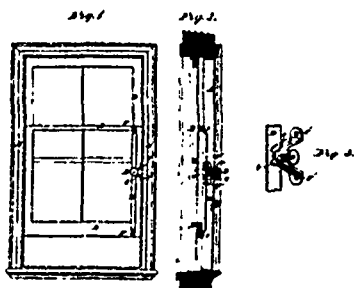
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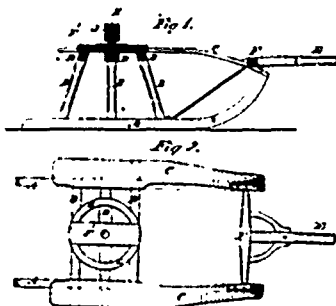
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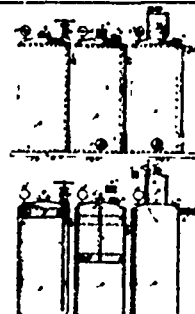
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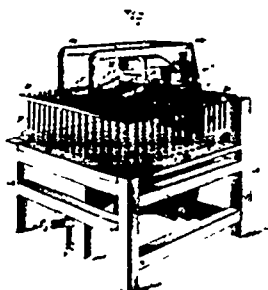
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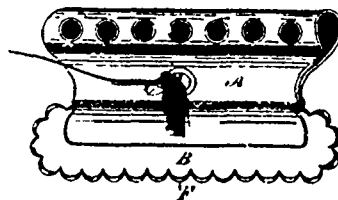
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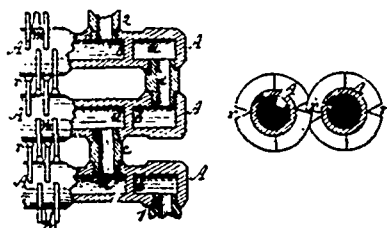
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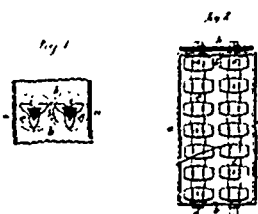
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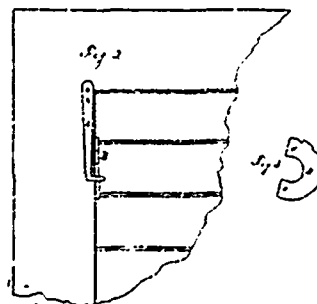
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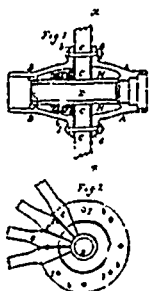
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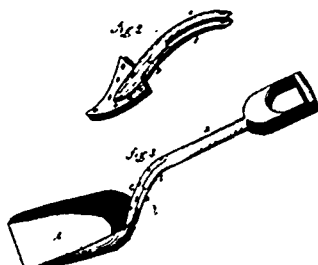
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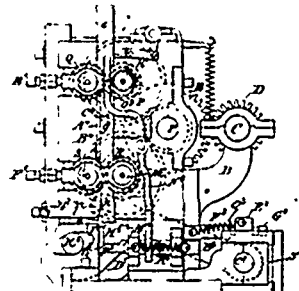
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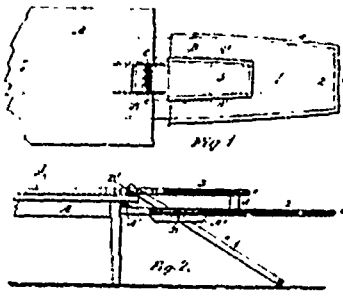
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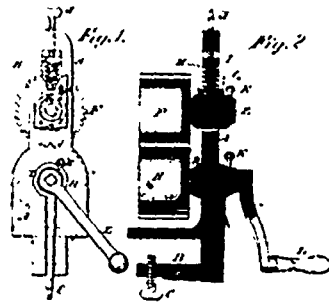
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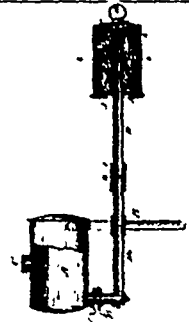
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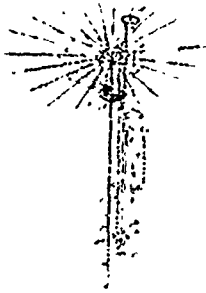
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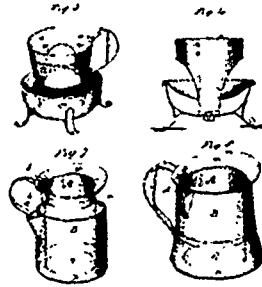
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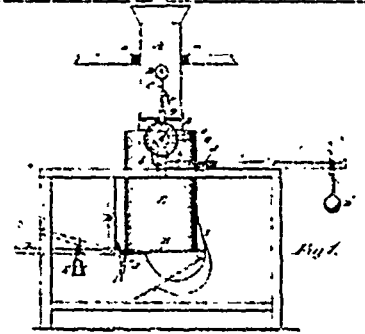
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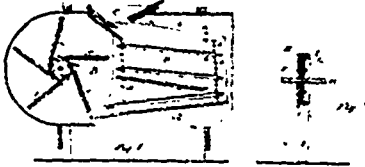
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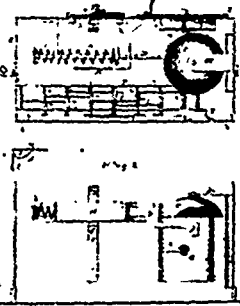
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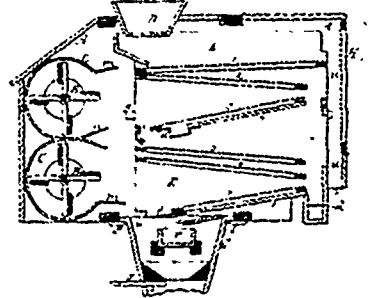
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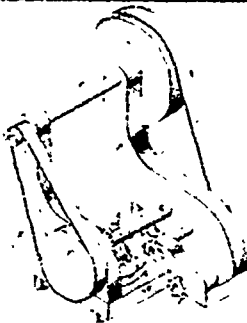
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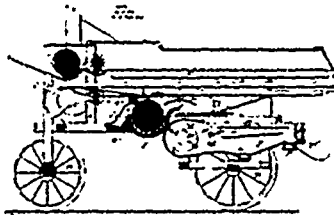
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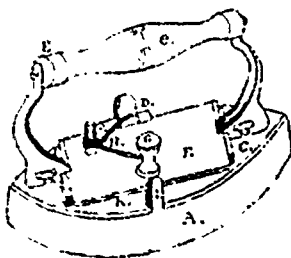
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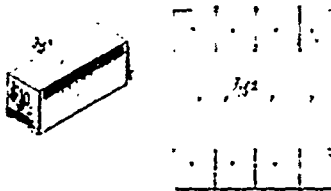
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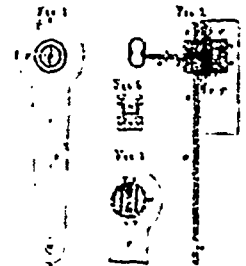
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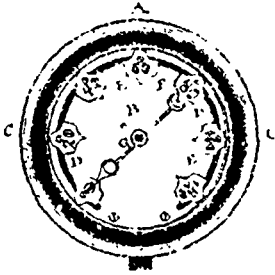
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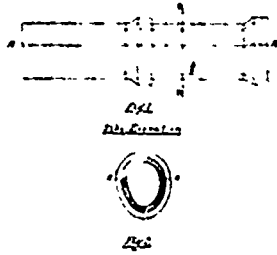
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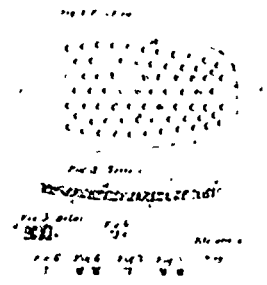
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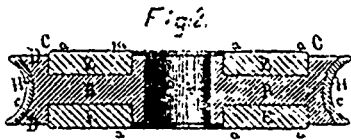
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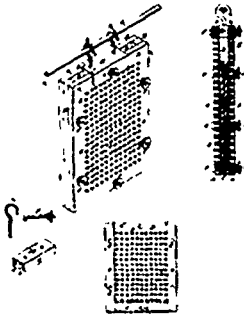
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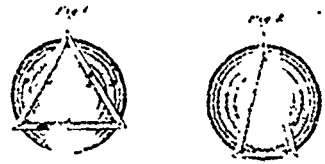
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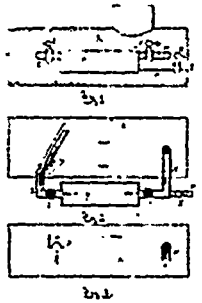
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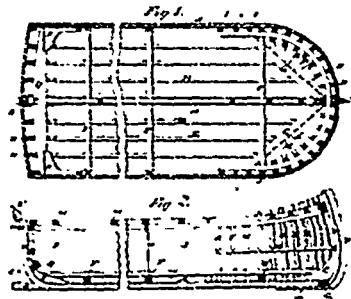
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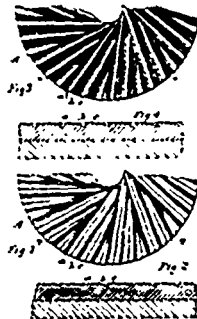
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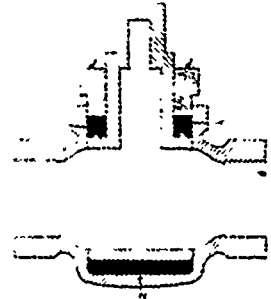
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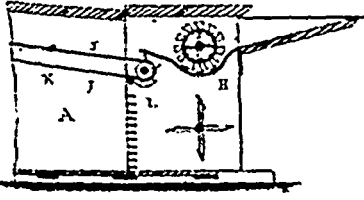
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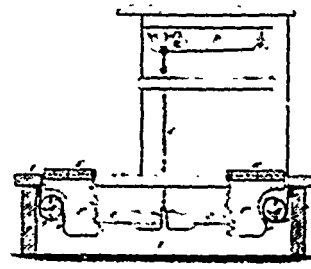
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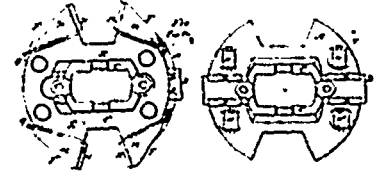
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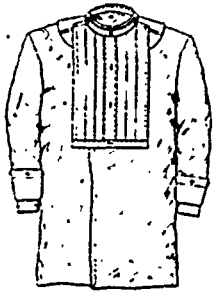
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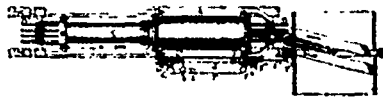
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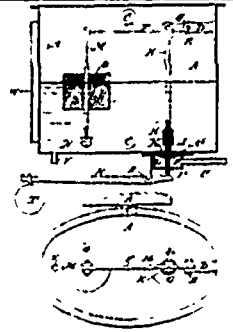
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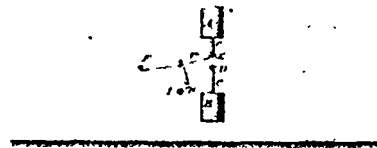
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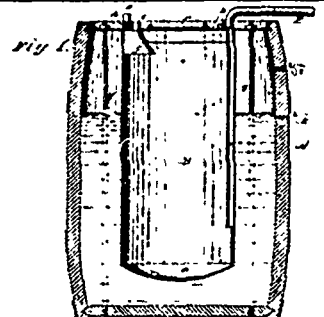
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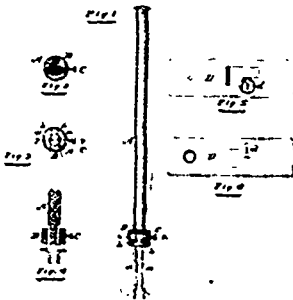
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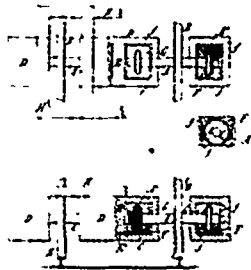
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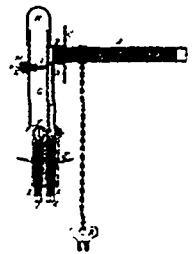
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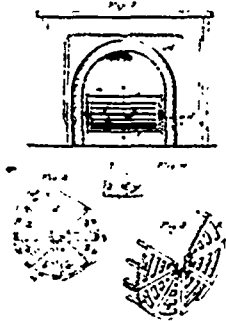
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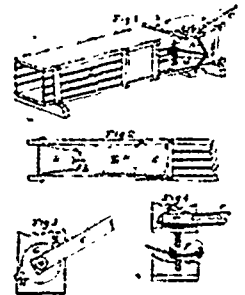
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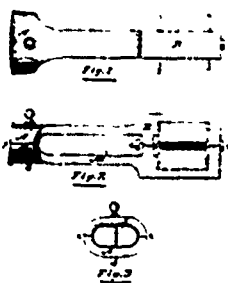
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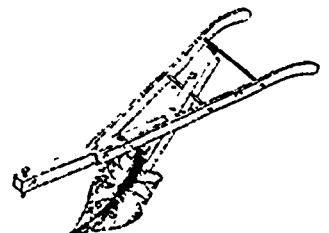
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