

applied to the drum wheel H having pins C; 4th. The bolts M, having bent ends engaging with the posts and operated by a lever N, for securing the doors L; 5th. The rod P, secured to the door O, having bent ends to prevent the spreading of the posts. 6th. The clevis fastenings R, engaging with the bar Q for securing the door O.

No. 8712. Machine for Making Circular Saws.

(Machine à faire des scies circulaires.)

William E. Nickerson, Somerville, Mass., U. S., 30th April, 1878, for 5 years.

Claim.—1st. In a punching machine the combination of the inner dies A B, and a suitable clamping device with the outer die E. 2nd. In a punching machine, the outer die E, having its cutting edge so formed as to act with a shearing cut.

No. 8713. Instrument for Curing Piles. (Instrument pour guérir les hémorroïdes.)

Robert Strange, Point Edward, Ont., 30th April, 1878, for 5 years.

Claim.—A pierced cone-shaped instrument A having perforated dome shaped detachable cap B at one end, and a suitably shaped stop D at the other.

No. 8714. Cash Recording Machine. (Machine à contrôler la caisse.)

John Moss, New York. John H. Smith and George J. Hill, Buffalo, N.Y., U.S., 30th April, 1878, for 5 years.

Claim.—1st. The combination of a registering machine of the type wheel C, racks g₂, spring levers h₂, and means for lifting off and stopping the said racks and wheels; 2nd. The combination with the racks g₂ of the guide bar m₂, having the nib r₂ and pin p₂, the hook c₃, spring catches w₂ and disengaging pins b₄; 3rd. The block g₃, having spring pins i₃, having L-shaped head b₃ and the slide levers n₃, in combination with the wheel operating racks g₂, having the spring catches e₁; 4th. The combination of the returning rod z, with the guide bars n₃; 5th. The combination of the levers m₃, spring actuated pins i₃, hook c₃, guide bar n₃, spring catch n₂ and disengaging pins b₄; 6th. The combination of the figured indicating strips o₃, with the wheels actuating racks g₂; 7th. The lever handle G having the roller t, the arm F carrying the platen g₁, in combination with the figure wheels C; 8th. The type wheels C, and the wheel adjusting devices mounted in the movable frame B, the arm F carrying the platen g₁ and the table H, in combination, for giving a double impression by a single stroke of the lever G. 9th. The forked lever m carrying the rod l, and having cams c₂, in combination with the wheel C having notches k and the arm F having the pin d; 10th. The combination of the movable spring-pressed roller s, the stationary roller g, the ratchet k, pawl i, sliding bar m and lever arm u, 11th. The ribbon rolls p, q, and the guides s t u in combination, for carrying the inking ribbon r around the printing wheels C. 12th. The combination of the ratchet a, pawl b and bar m, with the ribbon roll p, 13th. The casing A having the slotted table d, and a portion elevated above the end of the table, for receiving the operating lever G, and the platen g₁. 14th. The casing A, having a movable slide s secured by a locking device, 15th. A type wheel having radial slots for receiving type; 16th. A type wheel provided with radial slots and having the type secured thereon by swaging the metal of the wheel into the neck of the type; 17th. A type wheel having the registering notches k, 18th. The combination in a cash recording machine, of a series of printing wheels, a movable frame, a movable platen and stationary table and devices for operating the platen and movable frame, whereby an impression may be taken simultaneously from opposite sides of the printing wheels.

No 8715. Improvements on Fruit Dryers.

(Perfectionnements aux séchoirs à fruits.)

William S. Plummer, Portland, Oregon, U. S., 30th April, 1878, for 5 years.

Claim.—The case A provided in its lower part with a lining B, set at a little distance from its wall, the large door G, the small door H, the cleats or slides J, to receive the fruit frames or trays, and the cover and cap L M to allow the moisture-laden air to escape.

No. 8716. Improvements on Temporary Binders. (Perfectionnements aux reliures volantes.)

Henry E. Thompson, Jr., Pittsfield, Mass., U. S., 30th April, 1878, for 5 years.

Claim.—The combination of the semi-tubular plate C, semi-circular perforated end plates D D, hinged arms F F and detached rod E with each other, and with the back B and sides A A of the case.

No. 8717. Improvements of Burial Caskets.

(Perfectionnements aux cercueils.)

James Chittock, Cleveland, Ohio, U. S., 30th April, 1878, for 10 years.

Claim.—The combination of a glass top or cover having a flange c to be inserted, with the edge of the glass, into the groove B of the body A, and secured in a bed of lead and oil, and with a packing d by a band D, screwed or bolted thereto.

No. 8718. Improvements on Evaporating Pans. (Perfectionnements aux chaudières évaporatoires.)

Ernest T. Genuert, New York, U.S., 30th April, 1878, for 5 years.

Claim.—1st. An evaporating pan A provided with detachable cross-bars B, held in place by uprights C attached to the bottom of said pan; 2nd. The gates E constructed to adapt them for use, for closing the lower part of the gateways and thus regulating the depth of the stratum of liquid left in the pans; 3rd. The downwardly projecting flanges attached to the pans at their gate ways, to adapt them to be connected in a continuous series.

No. 8719. Improvements in Fish Traps.

(Perfectionnement dans les pièges à poisson.)

James M. Lasater, Manchester, Ten., U. S., 30th April, 1878, for 5 years.

Claim.—1st. The glass vessel A provided with the funnel-shaped top a, the slide b, the bait hook B suspended on the cord D; 2nd. The combina-

tion of the glass vessel A provided with the funnel shaped top a, the slide b, the cord D and the bait hook B, with any suitable vessel for the reception of the fish. 3rd. The combination of the glass vessel A provided with the funnel-shaped top a, the slide b, the cord D and the bait hook B, the perforated vessel E provided with the flange top or rim H, the slide c and the ball I, and the bucket G provided with the bail F.

No. 8720. Mode of Heating With Steam.

(Système de chauffage à la vapeur.)

Birdsill Holly, Lockport, New York, U. S., 30th April, 1878, for 5 years.

Claim.—In combination with steam tight ship jointed sections of a street main, saddles placed near the middle of their length, for confining the respective sections from longitudinal displacement, at or near the points where the service pipes leading from the mains are located, and thereby preventing very great lateral deflection of said service pipes.

No. 8721. Improvements on Garden Implements. (Perfectionnements aux instruments de jardinage.)

John Kinleyside, Matthew Wilson and Charles Schoonmaker, Hamilton Ont., 30th April, 1878, for 5 years.

Claim.—1st. The reversible blade N M in combination with the notched stud A. 2nd. The spindle B, in connection with the screwed sleeve G, in connection with the notched stud A and the pin E, for retaining the handle K in position on the blade N M.

No. 8722. Improvements on Band Saws.

(Perfectionnements aux scies à ruban.)

William H. Doan and George W. Bugbee, Cincinnati, Ohio, U.S., 30th April, 1878, for 5 years.

Claim.—1st. A band saw in which the support of the bearing of the upper saw pulley arbor is adapted for adjustment, whereby the upper saw pulley can be set to rotate in a plane, either coincident with, or obliquely intersecting the plane of rotation of the lower saw pulley; 2nd. The combination of the column provided with vertical ways, the bearing of the upper saw pulley arbor, and the two sets of anti friction rollers, one set being arranged near the top of the bearing to run on the interior side of the ways, and the other set near the bottom of the bearing to run on the exterior side of the ways; 3rd. The combination of the column provided with vertical ways, the bearing of the upper saw pulley arbor provided with fixed pins or studs f₁ f₂, the two sets of anti friction rollers arranged as set forth, and the adjusting screw; 4th. The combination of the two saw pulley arbors the outside sleeve bearings on the overhanging ends thereof, and the straining rod adjustable in length; 5th. The combination of the two saw pulley arbors the outside sleeve bearings on the overhanging ends thereof, and the straining rod adjustable in length and adapted to automatically change in length to a limited extent to compensate for the contraction and expansion of the saw; 6th. The combination of the upper and lower saw guides, and an independent and permanently fixed supporting standard common to both guides; 7th. The combination of an independent and permanently fixed supporting standard the vertically adjustable slide, the guide proper riding on a horizontal way or ways on the slide, and means for adjusting the guide proper horizontally; 8th. The combination of the upper saw guide and the lever for adjusting it vertically from the front side of the machine; 9th. The combination of the movable feed rolls, the sliding rack connected with the frame thereof the pinion the weighted lever, the hinged pawl thereof, and the ratchet wheel on the arbor of the pinion; 10th. The combination of the fixed friction pinion, the friction disc the rod connected by knuckle joint at one end to the shaft O, and adapted to be swung laterally for shifting the friction disc it carries at the other end and the internally adjustable bearing of the rod, 11th. The combination of the shaft O, the rod connected thereto by a knuckle joint and carrying the friction disc, the laterally adjustable bearing of said rod, the rock shaft, the arm thereon, and the lever for operating the rock shaft.

No. 8723. Machine for Engraving and Chasing Metals, and for Engraving and Cutting Stone and Wood. (Machine à graver et ciseler les métaux, et à graver et tailler la pierre et le bois.)

Harvey K. Flagler, (Assignee of Robert B. Atchison), Boston, Mass., U. S., 30th April, 1878, for 5 years.

Claim.—The combination with the rotating hollow shaft e and cam groove l of chisels or tools and slide rods provided with rigid arms extended into the cam groove, the rotating hollow shaft e with its slide rods h and tools, and mechanism to reciprocate the tools, in combination with a vertically movable slide c and mechanism to lower the head B into working position in the head carrying slide c, and the rotating hollow shaft e with its slide rods h and tools i adapted to be reciprocated as described, in combination with the lever to move the slide and an adjusting device u to change the position of the slide, with reference to the end of the arm v to govern the descent of the head and tools according to the thickness of the material and the depth of the cut required thereon, the rotating hollow shaft e and reciprocating tools carried thereby, in combination with a support for the material and mechanism to raise and lower the head; the rotating hollow shaft e and reciprocating tools, in combination with a pipe, to conduct air to discharge the cuttings from the face of the material, the rotating hollow shaft e and reciprocating tools, in combination with a supporting surface, and a guide o and pattern plate.

No. 8724. Apparatus for Constructing Sewers.

(Appareil à construire les égouts.)

Mason G. Field and James Finegan, Syracuse, N.Y., U.S., 30th April, 1878, for 5 years.

Claim.—The elevator A composed of main frame provided with wheels r and ways a, blocks b provided with hook h, pulleys b₂ b₃ b₄, carriage c provided with pendant swivel hook e, line F and bucket B, and of the material lowerer A composed of main frame provided with wheels r and ways a, carriage C provided with pulleys b and hook y, blocks b₂ provided with pulleys b₁, bucket B, lines d d', windlasses w and brakes v.