turned to the bolting shaker; 2nd. The return chambers I, provided with the sliding covers I2, and discharge valve *i*, contained within the close chamber B, in combination with the exhaust fan C, and bolting shaker D; 3rd. The openings B_1, cut in the ceiling of the close chamber B, and provided with the regulating valves *b*, in combination with the return chambers I, and bolting shaker D.

No. 5943. Improvement on Bed Bottoms.

(Perfectionnement des fonds de lits.)

Charles W. Purcell and Samuel Purcell, Lundy's Lane, Pa., U. S., 8th April, 1876, for 5 years.

Claim.—1st. The spiral springs B, having the loops D, formed on the top and forming a part thereof in combination with the slats A, and links E., said links E, connecting the loops D, and rigidly preventing any lateral displacement; 2nd. The springs B, having loops D, slats A, links E, and cord *a*, connecting the frame *c*, and end loops D, in combination with the staples *b*.

No. 5944. Manufacture of Sulphate of Copper.

(Fabrication du sulphate de cuivre.)

James H. Dennis, Liverpool, Eng., 8th April, 1876, for 5 years.

Claim.— Passing through amongst or in contact with metallic copper mixed *sulphurous acid gas*, air and water vapour, in the manufacture or production of *sulphate of copper*.

No. 5945. Straw-cutter. *(Hache-paille.)*

Levi Cossitt, Guelph, Ont., 8th April, 1876, for 5 years.

Claim.—The upper feed and knife bed roller C, consisting of one or more centrally perforated discs of paper C1, mounted on the shaft E, and compacted under pressure to form a close solid roller; the said disc, or discs being retained in a compressed state by the washers F, and pins G, or their equivalent.

No. 5946. Railway Flange Cleaner.

(Chasse- pierre de railroute,)

Thomas Temple and James H. Miller, Fredericton, N. B., 8th April, 1876, for 5 years.

Claim.—The combination of the two blades D, and E, with the hinges A. A, and the springs C, C.

No. 5947. Improvements on Boot and Shoe Sewing Machines.

(Perfectionnements aux machines à coudre les chaussures.)

Lyman L. Barber, Boston, Mass., U. S., 10th April, 1876, for 5 years,

Claim.—1st. A sewing machine trimmer adapted to be sewing in a horizontal plane into or out of its operative position and be thereby connected with or detached from the device that gives it motion, 2nd. The shank B, having the orifice F, combined with the pin E, 3rd. The shank B, of the knife A, combined with the adjustable plate H; 4th. The lever K, having the pin E, and adapted to be oscillated horizontally by the motive power of the machine in combination with the shank B, and knife A.

No. 5948. Improvements on Furniture Dusters. *(Perfectionnements aux époussettes de meubles.)*

Lauritz Hobolth, Montreal, Que., 10th April, 1876, for 5 years.

Claim.—A duster composed of the tail of an animal and mounted on the handle and core, in combination with the spiral spring.

No. 5949. Apparatus for dessicating Gelatine.

(Appareil de dessication de la gélatine.)

John S. Rogers, Gloucester, Mass, U. S., 10th April, 1876. for 5 years.

Claim.—1st. The rotary drum A, provided with means for heating it in combination with the liquor pan or reservoir I, arranged with such drum in manner so as to operate therewith as explained, 2nd. The rotary drum A, provided with mechanism for revolving it and with pipes or means of heating it by steam in combinntion with the liquor pan I, and its mechanism for successively moving it relatively to the drum while the latter may be in revolution; 3rd. The combination of the pipes D, B, H, and G, provided with the perforations *a*, *b*, *c*, *d*, 4th. The pipes D, B, H, G, having the perforations *a*, *b*, *c*, *d*, in combination and arranged with the drum A.

No. 5950. Improvements on the Manufacture of Screws.

(Perfectionnements dans la fabrication des vis.)

John Frearson, Bermingham, Eng., 10th April, 1876, for 5 years.

Claim.—1st. Forming heads upon screws or screw blanks and impressing cavities, depressions or nicks in the said heads by first upsetting the ends of the wire, rod or blank, and making thereon a preparatory head and afterwards subjecting the prepared head to a second operation whereby the cavity, depression or nick or nicks are impressed in the head and the external form of the head completed; 2nd. Forming heads upon screws or screw blanks by first upsetting the end of the wire, rod or blank in a cone-shaped recess or cavity in the face of the die block by means of a punch chamfered externally to correspond to the wall of the said recess and having at its extremity a conical or conoidal cavity so as to produce in the end of the wire, rod or blank, a conical or conoidal-shaped head, and afterwards subjecting the said head while still in the die or in another similar die, to the action of a second punch which entering by its point or projections into the apex of the said conical or conoidal head forces the metal laterally outwards all round to and against the wall of the conical die block recess, and also compressed the metal thereby impressing the nick or cavity in at the same time completing the external figure of the head; 3rd. Subjecting the prepared conical or conoidal head to the action of a punch which entering by its point or projection into the apex of the said conical or conoidal head forces the metal laterally outwards and against the wall of a recess in a die the said punch at the same time compressing the metal of the head whereby the cavity, nick or nicks are impressed in and the external form of the head completed; 4th. The combination of the split die B, B, with the punch A, for forming the prepared head on the rod wire or blank; 5th. The construction of the punch and its arrangement or combination with the split die B, B.

No. 5951. Improvements on Moulding Machines. *(Perfectionnements aux machines de moulage.)*

Daniel Cameron and John Ballantine, Galt, Ont., 10th April, 1876, for 5 years.

Claim.—A rotary bed for moulding or sticking machine composed of an arrangement of slats J, connected together in a flexible manner by lugs L, and links N, or their equivalent, and supported by the rollers C, D, and ledges K, on the table B, in combination with the spur wheels, E, F, G, and links H, and I, or their equivalent.

No. 5952. Boot and Shoe Lasting Machine.

(Machine à enformer les chaussures.)

Charles M. Hinckley, Boston., Mass., U. S. (Assignee of F. S. Hunt), 10th April, 1876, for 5 years.

Claim.—1st. The combination with a jack movable in required directions of a vibratory stroking head which moves to and from the work in the arc of a circle at the times and in the manner stated; 2nd. The vibrating stroking head provided in its acting face with rubber or analogous material in combination with the jack or work support; 3rd. The combination with an adjustable jack or work support of a stroking head having an up and down and to and fro movement; 4th. The stroking head vibrating upon an axis so as to move to and from the work in the arc of a circle in combination with the tack or nail driving mechanism and jack or work support.

No. 5953. Improvements on Shears for Cutting Sheet and Plate Metal.

(Perfectionnements aux cisailles à tailler les feuilles et les plaques de métal.)

Thomas Berridge, Sturgis, Mich., U. S., 10th April, 1876, for 15 years.

Claim.—The cutter A, with solid point and plane or concave upper surface and a rectangular slot B, in which the cutter operates thereby making a double cut.

No. 5954. Improvements on Bird Cages.

(Perfectionnements aux cages d'oiseaux.)

Alexander F. Dunlop, Montreal, Que., 10th April, 1876, for 5 years.

Claim.—The body A, of a bird cage having its lower part B, made of wire cloth, perforated sheet metal or other material of fine mesh.

No. 5955. Apparatus for forming Heel Counters.

(Appareil à faire les contreforts des chaussures.)

Joseph Kieffer, Montreal, Que., 11th April, 1876, for 5 years.

Claim.—1st. In combination with a mould or recess for forming a heel counter arranged on the periphery of a disc, a tooth or moulding die corresponding in shape to the mould; 2nd. In a machine for the formation of heel counters the arrangement of a disc carrying on its periphery teeth or moulding dies working into moulds or recesses formed in the periphery of another disc; 3rd. The ledge or up turn f_2, having serrated surface; 4th. In combination with the mould G, the flanges *g*, g_1; 5th. In combination with any mould for heel counters the arrangement of a rod or pin pressed outward by any spring so as to force from the mould the completed counter; 6th. In combination with the moulds G, and arms H, the arrangement of the rods I, springs I_1, rollers K, and segment L; 7th. In combination with the disc F, having recesses or moulds formed in its periphery, the feeding device consisting of the rollers R, R, having roughened surfaces one or both being hung in yielding bearings and driven by the rotation of the disc F. 8th. In combination with the disc F, and moulds G, the knife P, operated by the rotation of the disc F.

No. 5956. Machine for Removing Broken Drills. *(Machine à traire les forets cassés.)*

John W. Platt, Mineral City, Nev., U. S., 11th April, 1876, for 5 years.

Claim.—1st. The jaws A, tapered and bevelled in combination with the stem C, case D, handle F, and operating nut E; 2nd. The transverse cylindrical head *b*, of the jaws A, fitted to slide into a hole in the lower end of the stem C, and retained in place by the case D.

No. 5957. Machine for Finishing Horse Shoe Nail. *(Machine à finir le clou à cheval.)*

Daniel Armstroog, John A. Hutchison, Chicago, Ill., and Edmund Kingsland, Keeseville, N. Y., U. S., 21st April, 1876, for 15 years.

Claim.—1st. The belt L, provided with carriers M, N, and arranged to place nails at the dies and to stop during the finishing operation and to move forward; 2nd. The pointing die b_1, formed of two pieces and combined with the adjusting wedge f_1; 3rd. The roller die *e*, formed of three pieces and combined with the carriage C1, and roller e_1, moved on the arc of a circle by the yoke 1, 5, and with the carrying devices L, M, N; 4th. The die b_1, combined with spring *f*, *g*, and punch Z; 5th. The combination of the yokes 1, 5, and 3, cams 6, and 8, carriage C1, lever K, pawl *a*, with feed wheel B; 6th. The nail holder X, a_1, combined with the carriage C1, rock shaft A, spring W, cam U, and plate V.