

tuated pawl J. 3rd. The combination, with the cam c, drill-bar H, the sleeve H' provided with the collar H₁, and the tappet F, of the ratchet g and the adjustable spring actuated pawl J. 4th. The combination, with the drill bar H and the bracket or shoulder a, of the ratchet k and spring pawl l. 5th. The combination, with the ratchet k and its engaging pawl l, of the disk c₂, having the segmental slots f₂ and pins or screws g₂ working therein, and spring mechanism bearing on said pins. 6th. The combination of the drill-bar, the ratchet wheel having the bar working through its centre and provided with a circular recess b₂, the pawls l₂, the disk c₂ having a central opening, adapted to the cross section shape of the drill-bar and provided with the segmental slots, the pins or screws g₂ working in the latter, and the elastic or spring mechanism bearing against the pins. 7th. The threaded sleeve H' and the threaded drill-bar H, in combination with the cams C, pawl J, ratchet g and the cogged wheel I, bent pawl S and movable collar N. 8th. The cogged wheel I and the bent pawl S, in combination with the movable bevelled collar N upon the sleeve H. 9th. The combination, with the threaded sleeve H' provided with the kerf e and the bevelled wheel C₁ provided with the feather c, of the bevel-wheel K, the crank shaft L, the sleeve L', and the set screw t, whereby the sleeve is adapted to be prevented from turning. 10th. The combination, with the shaft B, the wheels D adapted to turn upon the said shaft, and the body M provided with slots q, of the adjustable legs Q. 11th. The combination, with the bar A and the body M, of the slotted curved arm T and set-screw t.

No. 15,781. Improvements on Washing Machines. (*Perfectionnements aux machines à laver.*)

Russell S. Morse, of East Dixfield, Me., U. S., 13th November, 1882; for 5 years.

Claim.—1st. The combination of the metallic flanged and toothed shoe, with the tub, the stationary spindle, the reciprocating dasher and the series of radial bars. 2nd. In combination with the tub, the stationary spindle and the series of radial bars of the bottom of the tub, the metallic flanged and toothed shoe fixed to, and resting on the said bottom and having its flange extended between such bottom, and the series of radial bars fastened thereto and disposed at their inner ends between the teeth of the shoe.

No. 15,782. Improvements on Methods of Preserving Eggs. (*Perfectionnements aux méthodes de conservation des œufs.*)

Amos M. Bailey, of Marlborough, Alansom B. Williams and Christopher G. Williams, of Cleveland, Ohio, U. S., 13th November, 1882; for 5 years.

Claim.—The process for the preservation of eggs consisting of the following steps: first, heating the eggs and the substance in which they are to be packed to a blood heat; second, packing the eggs in the substance in a close container; third, hermetically sealing the container; fourth, immersing the container with its contents, in a hot bath; fifth, venting the container; sixth, closing the vent.

No. 15,783. Improvements on Type Writing Machines. (*Perfectionnements des machines à écrire en caractères d'imprimerie.*)

Albert G. Shannon, Santa Rosa, Cal., U. S., 16th November, 1882; for 5 years.

Claim.—1st. A type consisting of a body provided on its face with a series of puncturing points representing a letter or character, said type being movable and adapted to fit into a recess in the operating arm of a type-writer, whereby paper may be punctured with said letter or character. 2nd. A puncturing type in combination with the operating arm of a type writer, said arm being provided with a recess adapted to receive the rear end of said type, and provided also with a set screw, which works in a side threaded opening and engages the side of said type, thereby firmly securing it in the arm. 3rd. In a type writer, the combination of the following elements: arm D having recess G, opening F, set screw E and type A provided with puncturing points B. 4th. The method of producing printed impressions in duplicate, consisting in impressing upon paper, types in succession, each of which has a surface of points, so as to perforate the paper and then forcing ink through the perforations upon the sheet to be printed.

No. 15,784. Improvements on Root-Cutters. (*Perfectionnements aux coupes-racines.*)

Herbert W. Fleury, Aurora, (assignee of Richard Field, of King,) Ont., 13th November, 1882; for 5 years.

Claim.—In a root-cutter in which a cone cylinder revolves within a hopper, the pulper knives D fastened to the said cone cylinder, in combination with the slicer knives E also fastened to the cone cylinder, but set so that their cutting edge points in an opposite direction to that of the knives D.

No. 15,785. Improvements in Boots and Shoes. (*Perfectionnements dans les chaussures.*)

Jean L. Pelletier, Montreal, Que., 17th November, 1882; (Extension of Patent No. 8119.)

No. 15,786. Improvements in Car-Couplings. (*Perfectionnements aux accouplages des chars.*)

Francis M. Hazleton, Duncan's Mills, Cal., U. S., 17th November, 1882; for 5 years.

Claim.—1st. The combination, with the draw-head A provided with the recess a, the coupling pin E and the link M, of the sliding block B provided with the downwardly projecting lug b and a rear-

wardly projecting stem b, the spring c surrounding the said stem and the plate or abutment d contained in the said recess, whereby the link pin is supported when uncoupled and prevented from jolting out of place when coupled. 2nd. The combination, with the draw-head A and the coupling link m, of the spring actuated sliding block B provided with the downwardly projecting lug b₂, and the side springs L provided with the projections l.

No. 15,787. Improvements in Sewing Machines. (*Perfectionnements dans les machines à coudre.*)

Edward Stern, Boston, Mass., U. S., 17th November, 1882; for 5 years.

Claim.—1st. A hemmer composed of two overlapping flat plates of metal, longitudinally adjustable with respect to each and containing coinciding slots for reception of a common clamp-screw, by which they are secured to a sewing machine, the upper-plate being formed with the ordinary lips in roll for turning the edge of the material. 2nd. The lower plate of the hemmer bevelled upon the edge adjacent to the roll or lip of the upper plate. 3rd. The lower plate of the hemmer with its corner nearest the outlet of the hemmer cut away, to prevent fulling or gathering of the material. 4th. In combination, the plates C D adapted to be secured in place by a screw passing through them, and with the lower plate C formed with a bevelled edge b and the oblique corner d.

No. 15,788. Improvement in Farm Fences. (*Perfectionnement des clôtures de champ.*)

Charles Laufer and Charles H. Zimmer, Lee, N. Y., U. S., 17th November, 1882; for 5 years.

Claim.—The fence consisting in the combination and arrangement, with the posts A, of the rails B arranged at opposite sides of the post and in line with the rails of the adjacent panel, and secured to the post independently of the attachment of the rails of the adjacent panel by a separate wire a, wound completely around each rail and hung on the pins c driven in the side of the post facing the end of the rails.

No. 15,789. Improvements on Thill Couplings. (*Perfectionnements aux joints des limonnières.*)

Charles L. Ferguson, Toronto, Ont., 17th November, 1882; for 5 years.

Claim.—1st. In a thill coupling in which the end of the thill is journalled on a bolt passing through the thill socket, the combination of a hooked finger former on the head of the thill bolt, so that, when the bolt is pressed home, it will fit over the edge of one side of the socket for the purpose of holding the bolt in position. 2nd. In a thill coupling in which the end of the thill is journalled on a bolt passing through the thill socket, a hooked finger formed on the head of the thill bolt, so that, when the bolt is pressed home, the hooked end of the finger will fit over one side of the socket, in combination with a plate pivoted on the side of the bolt head, opposite to that upon which the finger is formed and operated. 3rd. In a thill coupling in which the end of the thill is journalled on a bolt passing through the thill socket, a hooked finger formed on the head of the thill bolt so that, when the bolt is pressed home, the hooked end of the finger will fit over one side of the socket, in combination with a spring plate pivoted on the side of the bolt head opposite to that upon which the finger is formed and provided with a lip arranged to spring over the edge of the socket, to prevent the plate turning upon its pivot.

No. 15,790. Improvement in Combined Rein and Whip-Holders. (*Perfectionnement des porte-guides et porte-fouets combinés.*)

Frank C. Ayer, Columbus, Ohio, U. S., 17th November, 1882; for 5 years.

Claim.—1st. The mode of securing the lock socket by metal bands, or otherwise attaching same to lugs on post C forming of the socket a bearing surface for the reins in conjunction with spring B. 2nd. The washer F, the claws G (I) and the continuous spring B forming a part of the rein and whip-holder and operating the lock. 3rd. The rein and whip holding device consisting of a post C having lugs D and flanges C₁, the lock socket with clamping claws. 4th. The combination of the post, the whip and rein holding spring and the lock socket constructed and applied to connect the rein holder, the whip and lock socket to the dash frame. 5th. As a new article of manufacture, a whip-holder including provisions by which it is attached to, and forms a part of the rein-holder. 6th. As a new article of manufacture, a lock socket including provisions by which it is attached to, and forms a part of the rein-holder and whip-holder.

No. 15,791. Improvements in the Process for Lining Car Axle Boxes. (*Perfectionnements dans le procédé pour doubler les boîtes à graisse des essieux des chars.*)

Isaac Joseph, Toronto, Ont., 17th November, 1882; for 5 years.

Claim.—The process for lining car-axle boxes in which a lining of sheet lead, after being formed into shape under pressure, has its back surface roughened by the action of a steel brush and then covered, when hot, with a thin coating of solder, the said lining, when thus prepared, being placed in position in the axle box and submitted to pressure, the said axle box having been previously heated and coated with solder.

No. 15,792. Improvement on Steam Boilers. (*Perfectionnement des chaudières à vapeur.*)

The Babcock and Wilcox Company, New York, (assignee of George H. Babcock, Plainfield, N. J., Stephen Wilcox, Nathaniel W. Pratt, Brooklyn, N. Y., and Edwin H. Bennett, Bayonne, N. J.), U. S., 17th November, 1882; for 15 years.