port the chair on the sprocket-wheel, substantially as and for the purpose set forth.

No. 25,775. Knotting Device for Grain Binders. (*Appareil à Nouer pour Engerbeuses.*)

The Massey Manufacturing Company, Toronto, Ont. (assignee of William N. Whiteley, William Bayley and Samuel Dyer, Springfield, Ohio, U.S), 17th January, 1887 ; 5 years.

Claim.—1st. The stripper J. made in two parts, capable of adjustment as to each other, whereby the position of the free or stripping end of said lever may be adjusted, substantially as set forth. 2nd. The stripper J made in two parts, both pivoted upon the bolt *e*, and provided with intersecting slots *f*, *h*, *d*, and the connecting bolt *i*. 3rd The combination of the pivoted lever E, carrying the pawl D, whereby the disc is actuated, connected with the sleeve *l* by a slot *k* in its end, said sleeve *l* fitted upon the plunger rod F, having a screw thread thereon, and provided with a nick *m* at its outer end, whereby a tool may be applied to revolve said rod and thereby change the position thereon of the sleeve *l*, for the purpose set forth. 4th. The lever E pivoted at *k* to the frame, and jointed at its front end to the pawl D, and provided at its rear end with a sliding pivotal connection with the sleeve *l*, combined with said sleeve, provided with the set-screws *q*, and the screw-threaded plunger-bolt provided with the groove *p* to receive the set-screw *q*, as set forth, whereby the lever E may be adjusted by rotating the plunger-rod, and the correct position for pause determined, as set forth. 5th. The disc B, with the notches *b*, combined with an elastic U-shaped holder C, which incloses the edge of said disc, as and for the purpose set forth. 6th. The folded U-shaped holder C, constructed from a single piece of sheet metal, as and for the purpose set forth. 7th. The elastic U-shaped holder C, constructed from a single piece of sheet metal, pivoted to the frame by pin *r*, combined wtth the spring *t* and the notched disc B. 8th. The revolving knotting-hook G, and its hinged jaw *d*, provided with the roller U, combined with an arm I pivoted at its lower end to the frame, and at its upper end fashioned to act as a closing cam for the jaw *d* and the adjustable tension spring, substantially as set forth.

No. 25,776. Button Fastener Setting Instrument. (*Machine à Poser les Boutons.*)

The American Button Fastener Company, New Britain, Conn., (assignee of Francis H. Richards, Springfield, Mass.), U. S., 17th January, 1887 ; 5 years.

Claim.—1st. In a button-fastener setting instrument, the combination, with a member provided with a prong bending die, and with a member which carries a presser slide, and has a fixed driver next to said slide, of a guide plate in front of said driver and slide, and adapted to be moved with said slide, said members being arranged to be moved toward and from each other, and said plate having an opening through which to put fasteners above the driver, all arranged substantially as set forth. 2nd. In a button-fastener setting instrument, the combination, with a member having a driver fixed thereon, of slide F, and a guide plate elastically held to said slide, substantially as described, said plate having an opening through which to put fasteners above the driver, and at its upper end a prong-guiding notch, substantially as set forth. 3rd. The combination of slide F, driver G, plate H having opening J, notch 18, and lips 19, 20, and means substantially as described, for operating said slide, substantially as set forth. 4th. The combination of jaw C having a space for the reception of spring 3, slide F, driver G having wings 7 and 8, springs 3, and a screw 9 arranged to hold in place both the driver and spring, substantially as set forth. 5th. The combination of slide F, driver G and plate H, secured at its lower end to said slide, and having on its upper end the side guides 24, 26, substantially as set forth and for the purpose specified.

No. 25,777. Wire Coiling Machine.

(*Machine à Rouer le Fil de Fer.*)

D. W. Thompson & Co., (assignees of Thomas Allen), Toronto, Ont,, 17th January, 1887 ; 5 years.

Claim.—A spindle A having a helical coil *a* cut about two times around it, the said spindle A being rigidly held within and to the sleeve B and bracket C, in combination with the feed rollers D, substantially as and for the purpose specified.

No. 25,778. Hydro-Carbon Safety Lamp and Lantern. (*Lampe et Lanterne de Sûreté à Hydro-Carbures.*)

Stefan Siemang, Vienna, Austria, 17th January, 1887 ; 5 years.

Claim.—1st. The application of an armature E, with canal suited to the shape of the wick R and reaching nearly to the bottom of the bowl, where it is somewhat bent around Fig. I, II, III, substantially as and for the purpose set forth. 2nd. The contrivance of a bowl cap K closing up the bowl-opening O, with a tube deposit R enclosing the wick-capsule of the burner, and a bayonet-joint for the fixation of the burner Fig. I, substantially as and for the purpose set forth. 3rd. The enclosing of the lamp-vessel, with a sort of basket for guarding against breaking to pieces in case of falling, substantially as and for the purpose set forth. 4th. The application of a pneumatic apparatus in the foot of the lamp for the fixation of the same on its resting place, substantially as and for the purpose set forth. 5th. The use of a capsule *h* surrounding the wick, the former being introduced into the armature tubes R, substantially as and for the purpose set forth. 6th. The arrangement of a spring, which in a position of quiet is in a state of tension, while in case of shaking of the lamp is released and in case of falling of the lamp drags with it the wick-capsule so that the lamp is extinguished, substantially as and for the purpose set forth.

No. 25,779. Switch Lamp. (*Lampe d'Aiguillère.*)

Henry A. Black and A. Henry Milliken, Chicago, Ill., (assignees of Oswald F. Jordan, St. Thomas, Ont., and Lewis M. Curry, Chicago, Ill., U.S.), 17th January, 1887 ; 5 years.

Claim.—1st. A switch-lamp case having guards A5, provided with flanges a^2 and lugs a^3, substantially as and for the purposes described. 2nd. The combination, with a switch-lamp case having guards A, of lenses seated in said guards, and springs to hold the lenses firmly to their seats, said guards being provided with lugs te engage the springs, substantially as described. 3rd. The combination, with a switch-lamp case having guards A1, of lenses seated in said guards, and springs of greater circumference than the inner periphery of the guards to hold the lenses firmly to their seats, said guards being provided with lugs to engage the springs, and said lenses being slotted so as to be securely seated in said guards, substantially as described. 4th. The combination, with a switch-lamp case and its chimney, of a chimney-cap removably connected therewith, said cap being provided with arms by which the soot may be removed from the interior of the chimney, substantially as described. 5th. The combination, with a switch-lamp case and its chimney, of a chimney-cap removably connected therwith, and provided with arms by which the soot may be removed and also with a ventilation-shield, substantially as described. 6th. A switch-lamp case, provided with flanges *a*, substantially as and for the purpose described. 7th. The combination with a hanger a^5 switch-lamp case removably connected therewith, said case being provided with flanges a_5 to prevent the wrong sooting of the case in the hanger, substantially as described.

No. 25,780. Coin or Ticket Receiving Turn Stile. (*Tour pour la Monnaie ou les Billets.*)

Walter Peake, New York. N. Y., U. S., 17th January, 1887 ; 5 years.

Claim.—1st. The combination, with a turn stile or device for closing a passage or doorway, of a device for locking the turn stile, constructed to be released by the insertion of a coin, ticket, check or other device, substantially as described. 2nd. The turn stile post provided with a cam and locking plate, in combination with a locking dog and two pistons, one connected to the dog the other acted upon directly by the cam, substantially as described. 3rd. The casing F, provided with two opposite pistons G, Q, the former connected to a locking device, the latter acted upon by a cam, substantially as described. 4th. The casing F, provided with the piston G, in combination with the piston F, a clearance *i* being left between the pistons, substantially as described. 5th. The casing F formed with a slot *a* arranged in line with the clearance *i* between the pistons G, Q, substantially as described.

No. 25,781. Grain Binding Machine.

(*Machine à Engerber les Grains.*)

William Butterfield. Auburn, N. Y., U. S., 17th January, 1887 ; 5 years.

Claim—1st. In an automatic grain binder, the binder-driving shaft E and its actuating clutch provided with an incline F or spiral surface, in combination with the rock-shaft S mounted in fixed bearings, and the trip-arm R projecting into the path of the grain and clutch driving-arm T, both secured to said rock-shaft. 2nd. In an automatic binder, the divided shaft E having one end geared to the binder, and the opposite end provided with packing devices, in combination with the clutch connecting the two parts, the trip-arm actuated by the grain, and the arm T connected rigidly with the trip-arm shaft, and arranged to act directly upon the clutch, whereby the binder is automatically throw into and out of action by the accumulation and discharge of the gavel. 3rd. In an automatic binder, the divided driving shaft E having one end cranked, and provided with packer-arms and arranged to revolve continuously, and the opposite end geared to the binding mechanism, in combination with the clutch connecting the two parts of said shaft, and the rock-shaft, the trip-arm secured rigidly to said shaft and adapted to be operated by the grain, the arm secured rigidly to said shaft and arranged to directly engage the clutch, and a spring to cause the re-engagement of the clutch, said parts organized for joint operation, substantially as described, whereby the cranked portion of the shaft is permitted to revolve continuously, and the motion of the binder-driving mechanism controlled by the accumulation and discharge of the gavel. 4th. In combination with the binder-driving clutch, the arm T, its rock-shaft and the trip-arm to engage the gavel, the rod U and spring P and the spring adjusting devices. 5th. The packer shaft connected with the binding mechanism by the clutch, in combination with the trip-arm, and the arm connected therewith for disengaging the clutch, the needle and the heel projection on the needle to hold the clutch-disengaging arm out of engagement, whereby the clutch is permitied to remain in engagement after the action of the bundle on the trip-arm has ceased. 6th. The needle having the heel projection or cam, and the trip-arm having a heel projection to co-operate with the cam, in combination with binder-driving mechanism connected with and controlled by the trip-arm, substantially as described and shown. 7th. In combination with the needle or cord-carrier, the elastic tucker consisting of a U-shaped wire or rod placed astride of and secured to the needle, as described and shown. 8th. In combination with the tyer-spindle, its pinion and the L-shaped pivoted knife extending past the edge of the wheel, the wheel Y provided with teeth and delay-surfaces to actuate the pinion, and with the cam to operate directly upon the knife. 9th. The wheel Y provided with the cam or incline on its outer side face, in combination with the pivoted angular knife, one arm thereof extending past the edge to the outer side of the wheel, and the other arm with its cutter extending to the opposite side thereof. 10th. The actuating wheel provided with the cam or incline, the angular knife extending across the edge of the wheel, and the spring acting on the heel of the knife, combined substantially as described and shown 11th. In a grain binder, the combination, with a movable compressor and its rock-shaft, of the arms r^1, s^1 with lateral extensions, the spindle x^1, and the spring y^1. 12th. In combination, with the swinging com-