

scribed. 6th. In a lasting machine, the combination, with the reciprocating plunger bars K, L, provided with grooves or recesses for the awl *d*, and peg-driver *g* and the peg wood holder P of the knife or cutter *n* secured to the plunger bar L, of the peg-driver, and means, substantially as described, for preventing the advance of the peg wood consisting of a retainer bar *p* working in a guide *g*, whereby the peg is held back during the operation of the awl to form the hole, substantially as set forth. 7th. In a lasting machine, the combination, with the reciprocating plunger bars K, L, the awl *d* and peg-driver *g* secured thereto, the knife or cutter *n* secured to the plunger bar L and the peg wood holder P, of the vertically sliding retainer bar *p* operated by the cams *n* on the shaft *p* and the spring *r*, all constructed to operate substantially in the manner and for the purposes described. 8th. In a lasting machine, the combination, with the alternately reciprocating awl *d* and peg-driver *g* and the knife or cutter *n* attached to the plunger bar L, of the spring *r* for holding the peg cut or split off by the knife *n* in a vertical position to insure its being struck squarely by the peg-driver in its descent, substantially as set forth. 9th. In a lasting machine, the combination, with the frame C, the reciprocating plunger bars K, L, provided with grooves or recesses *i* and the spring *u* and peg-driver secured thereto, and operating as described, of the nose piece *i* serrated on its under side and provided with a single vertical aperture *f* for the passage of the awl peg and peg-driver, and having passages or grooves *e* *g* and *h*, all constructed to operate substantially as set forth. 10th. In a lasting machine, the combination, with the shaft *p* and mechanism connected therewith for driving a peg or fastening device, of the vertical driving shaft D connected with the said shaft *p* by bevel gears *m*, *n*, substantially as and for the purpose set forth.

No. 20,136. Apparatus for Bending Tubes and Pipes. (*Machine à Courber les Tuyaux.*)

Edward P. Follett, Rochester, N. Y., U. S., 4th September 1884; 5 years.

Claim.—1st. In an apparatus for bending tube or pipe, the combination of a bed upon which the tube is laid, a grooved forming head over which the tube is bent, a clamp for fastening the tube, a die which bears upon the tube and sweeps around the forming head to produce the bending, and two heads at opposite ends of the machine to hold the ends of the tube, one being stationary, the other moving in unison with the die to clamp the end of the tube as it is bent, as set forth. 2nd. In an apparatus for bending tube or pipe, the combination, with a grooved forming head over which the tube is bent and with a grooved die for bending the tube, of two heads on opposite sides for holding the ends of the tube, one head being stationary, the other moving concentrically around the forming head in unison with the die to carry the end of the tube as it is bent, as set forth. 3rd. In an apparatus for bending tube or pipe, the combination, with a grooved forming head over which the tube is bent, and with a grooved die for bending the tube, of connections which wind over the forming head as the die progresses, and a head at the outer end of the connections for holding the end of the tube, as set forth. 4th. In an apparatus for bending tubes or pipes the combination of a grooved forming head provided with offsets or steps of different diameters and connections which are changeable to the different off-sets or steps projecting outward beyond the forming head, and carrying the head that supports the end of the tube, as and for the purpose specified. 5th. In an apparatus for bending tube or pipe, the grooved forming head provided with corrugations in the groove for the purpose of crimping the pipe on the under side while being bent, as set forth. 6th. In an apparatus for bending tube or pipe, the combination, with the grooved bed for holding the tube, of a frame pivoted to the bed carrying at its outer end a head for receiving the end of the tube, said frame being adjustable vertically on its pivot to bring the head in position to receive the bent end of the tube preparatory to bending the opposite end, as set forth. 7th. In combination with the grooved bed A, the frame *i* attached to the frame by set screws and constructed with side pieces *j*, *j*, and an end piece *l* connected by set screws, whereby said end piece may be changed in position as the frame is adjusted vertically, as set forth. 8th. The combination, with the yoke E and forming head A, of the die G pivoted in the yoke and serving to clamp upon the tube before the yoke receives movement, as herein shown and described.

No. 20,137. Clutch Devices. (*Enlentes.*)

Amédée Tétrault, Miamisburg, Ohio, U. S., 4th September, 1884; 5 years.

Claim.—1st. In a clutch device, a loose driving pinion B gearing with the driving wheel D and provided with clutch teeth *a*, in combination with a driving pinion A provided with clutch teeth *a* and means whereby the pinion A is at intervals geared with the shaft of the wheel D to impart to the latter a motion in excess of that of the pinion B, substantially as described. 2nd. The combination, with the clutch teeth, one carried by a loose and the other by a tight pinion upon the shaft H, and with the wheel gearing with the loose pinion, of means for temporarily driving the said wheel at a greater speed to move one part of the clutch from the other, and a stop device for holding the movable part of the clutch in the position to which it is moved, substantially as set forth. 3rd. The combination of the two part clutch, and means for driving one part at a greater speed than the other to operate them, a detent for holding the moved part in the position to which it is set, and a spring for restoring it to its place when the detent is moved, substantially as set forth. 4th. The combination, with the clutch gear and the wheel driven thereby, of independent means for intermittently driving the said wheel positively at an increased speed, and a catch device to hold the clutch and means for operating the same from said wheel, substantially as set forth. 5th. The combination of the pinions A, B, having engaging teeth *a*, *a*, a spring arranged to carry the pinions toward each other, the driver wheel D carrying a rack E, a catch or detent for holding the pinion B in its position after it has been moved, and releasing means, substantially as described. 6th. The combination, with the driving pinion and the wheel to be driven intermittently, of a rack

adapted to engage with the driving pinion and pivoted to fall back as it passes from the same, for the purpose specified.

No. 20,138. Plumbers' Traps.

(*Trappes d'Egouts, &c.*)

Thomas Dark, Buffalo, N. Y., U. S., 4th September, 1884; 5 years.

Claim.—A stencil trap for water closets, sewer-sinks, &c., formed of two sizes of pipe, the upper part A (or smaller part) adapted to extend from the closet or other place to be drained to a point D, and a large size G adapted to extend from that point to the outlet at the sewer or larger pipe, as set forth.

No. 20,139. Serving Mallet. (*Mallet à Fourrer*)

John F. Cotton, Halifax, N. S., 4th September, 1884; 5 years.

Claim.—The adoption of the spar-handle and the insertion therein, of a reel containing the small stuff for serving, thus making the improved mallet a labor-saving implement in doing away with the necessity of employing an additional hand to "pass the ball," as when using the common mallet, the reel supplying the stuff being carried around the rope in the process of serving.

No. 20,140. Sewing Machine Attachments.

(*Perfectionnements dans les Moulins à Coudre.*)

Joseph S. Sackett, Wallingford, Conn., U. S., 4th September, 1884; 5 years.

Claim.—1st. The combination of the shank B, constructed with the transverse slot *a* at its lower end, the attachment constructed with an arm D corresponding to said slot, and with a notch *b* in its upper end to embrace the shank at the upper end of the slot, and a device, substantially as described, to secure the arm in place, and substantially as described. 2nd. The combination of the shank B, constructed with the transverse slot *a* at its lower end, the attachment constructed with an arm D corresponding to said slot, with a notch *d* upon opposite sides, eccentric heads *f* upon a shaft *e* arranged transversely across the shank to engage said notches *d* when the attachment is in place, substantially as described.

No. 20,141. Roller Mill (*Laminoin.*)

John Livingston, Dayton, Ohio, U. S., 4th September, 1884; 5 years.

Claim.—1st. In a roller-mill, the combination, with an oscillating single through shaft provided with an operating lever secured thereto, of the feed-controlling gates and a sliding frame connecting said gates with the through shaft, whereby the oscillation of said through shaft causes the sliding of the frame in the line of said through shaft, and the sliding of said gates in a direction at right angles thereto, substantially as described. 2nd. In a roller mill, the grain-controlling gates S having diagonal slots *u*, in combination with the sliding frame R, wing W or equivalent device and through shaft M, substantially as described. 3rd. In a roller mill, the combination of the driving-belt and the driving pulleys, with the intermediate plain-faced roller pulley, the swivelled and vertically adjustable stock and an adjustable swinging hanger, substantially as described, whereby the intermediate plain-faced idler pulley can be raised or lowered to regulate the tension of the belt, can be swung to either side to enable the belt to be taken out at various angles, and can be turned on the axis of its stock to insure the true running of the belt, as set forth. 4th. In combination with the meal chest, the outward-swinging meal-chest door J, provided with side flanges *k*, stop pins *l* and ledge or flange *m*, substantially as and for the purpose specified. 5th. The combination, with the supported sliding-frame R and gates S, of the through-shaft N provided with an adjustable pitched segment-wing W, whose edge is confined between lugs pendent from the frame R, whereby the oscillation of the through shaft causes the frame R to slide on its supports without lost motion, substantially as described. 6th. The combination, with the adjustable roll-supports I and the pivots upon which they are mounted, of the lugs *c* projecting from the frame and the adjusting screws *f* co-operating with the lugs, whereby the roll supports are prevented from displacement by lateral strains by means independent of their pivot connections, substantially as described.

No. 20,142. Roller Mill. (*Laminoin.*)

John E. Wilson, Galt, Ont., 6th September, 1884; 5 years.

Claim.—1st. A corrugated plate D fixed to the rod C, which rod is journaled in the bottom of the hopper A, in combination with mechanism arranged to impart a reciprocating movement to the said corrugated plate, substantially as and for the purpose specified. 2nd. A hopper A having at its bottom two bars or rods C, with fingers B set slightly on an incline towards each other, in combination with revolving cams E arranged to impart an independent longitudinal reciprocating motion to each bar C, so that one bar shall move in one direction while its mate is moving in the opposite direction, substantially as and for the purpose specified. 3rd. The rod C journaled in the bottom of the hopper A and having fixed to it the boards F, in combination with an adjustable balance weight G, arranged substantially as and for the purpose specified. 4th. The boards F placed hopper-shaped on the bottom of the hopper A and having corrugated faces at the point where they come in contact with each other, in combination with an adjustable balance-weight fixed to one of the boards which is pivoted arranged, substantially as and for the purpose specified. 5th. The fingers B fixed to the bar or rod C journaled near the bottom of the hopper A, the fingers B being set at an angle substantially corresponding with the angle on one side of the hopper, so that the points of the fingers shall project towards the opening between the feed roller, and the feed-gate, in combination with mechanism arranged to impart a reciprocating motion to the said fingers.