

after piercing the paper. 20th. In combination with the key levers and supplementary levers, the transverse piece arranged successively nearer the ends of the levers as they recede from the fulcrum of the punch selecting bars, for the purpose of elevating them equally. 21st. The combination of a series of movable punches arranged in two rows, a series of key levers, some of which are adapted to operate bars for selecting punches to form an even number of characters, and others to operate bars for selecting punches to form an uneven number of characters, and mechanism for causing the bar selecting punches, to form uneven numbers of characters to alternately assume reversed positions with respect to the rows of punches as said bars are successively operated, thereby causing alternately reversed positions of the perforations composing uneven groups of characters in the paper. 22nd. In combination with the key levers, the oscillating frames adapted to be operated by the same, to actuate the punch selecting bars without alternating said bars, or to alternate the same as desired. 23rd. A fillet of paper so perforated that the component parts of the integral perforations representing the characters will alternate. 24th. A fillet of paper having a series of perforations between the integral perforations representing the characters, in the space usually left blank between said perforations. 25th. A telegraphic perforated transmitting fillet in which the perforations are in two rows, and the integral perforations representing the characters alternately in opposite rows having between each two characters, and an extra perforation or series of extra perforations serving to define and separate the letters. 26th. The combination with the punches, of alternating punch mover, and suitable mechanism for operating the same. 27th. The combination, with the punching and paper fillet feeding devices of a telegraphic perforator, of mechanism for varying the extent of unperforated space, between the perforations. 28th. The combination of the key levers, paper feed regulating cylinder, and suitable mechanism for operating and stopping the same. 29th. The combination, with the punches of a telegraphic perforating machine organized to perforate a fillet in two rows, of feeding mechanism for varying and regulating the spaces between perforations representing letters in connection with said spaces, and devices for controlling the operation of the punches, so as to reverse the successive perforation as regards their respective rows. 30th. The combination with the key levers and the shaft carrying the paper feed roller, of the stop bars O the friction cylinder mounted on said shaft and having the projections for operating said bars, the stop bars limiting the movement of said bars and of the cylinder, and motive devices connected with said cylinder and controlled by the key levers. 31st. The combination, with the key levers, of the top bars O, the cylinder having projections for operating said bars, the stops for limiting the movement of the same, and the cylinder and mechanism connecting said cylinder with the paper feeding devices. 32nd. The combination, with the continuously rotary shaft A, loose pulleys C, and clutch for engaging said pulley with said shaft, of the rotary shaft F, friction drum G having projections  $\rho$ , in intermediate connections between said pulley and drum, the stop bars O and the key levers for operating the same. 33rd. The combination of the key levers, the main rotary shaft A carrying the ratchet B, the loose pulley C on said shaft carrying the clutch b, the intermediate mechanism between the key levers and the said clutch, the paper feed mechanism and devices connecting the same with the loose pulley, and the punching devices also connected with and operated by said pulley. 34th. The continuously revolving shaft, and ratchet and the loose pulley and clutch, in combination with the revolving paper feed regulating cylinder and connecting belt or suitable gearing. 35th. In combination with the key levers and feed cylinder, the stop bars arranged to have not only a vertical movement, but also a lateral movement. 36th. In combination with the paper feed rollers, the winding reel and paper delivery reel, the yielding roller and automatic friction brake for preventing the rupture of the paper and undue delivery of the same, as it is drawn from said reel. 37th. The combination, with the paper feed rollers, the winding reel and paper delivery reel, of the friction brake for preventing the rupture of the paper as it is drawn from said delivery reel. 38th. In combination with the feed rollers and the winding reel, the friction brake for preventing rupture of the paper as it is wound upon the reel. 39th. In combination with the winding reel, a rotating movable flanged guide roller having an oscillating motion, to rotate the paper and hold it in place while it is being wound on the reel. 40th. The winding reel provided with a series of pins arranged in circular form for catching the paper, and supporting it while being wound. 41st. In combination with the key levers, a series of stop bars loosely connected therewith, and a series of stop pins or projections suitably arranged on the feed regulating cylinder. 42nd. In combination with the paper feed rollers and intermittently acting punches, the winding reel and paper delivery reel, the yielding roller  $\eta$  and automatic friction brake arm W for preventing the rupture of the paper and undue delivery of the same as it is drawn from said reel, and the yielding roller Z and automatic brake lever Z for regulating the movement of the winding reel.

### No. 13,087. Improvements on Valves. (*Perfectionnements aux soupapes*)

The Hancock Inspirator Company, (Assignee of John T. Hancock,) Boston, Mass. U. S., 12th July, 1881; for 5 years.

*Claim*.—1st. The combination of two or more separate valves united together and arranged in relation to the orifices which they open and close, so that one orifice shall be opened or closed in advanced of the other or others. 2nd. The valves G H connected by a stem E, in combination with the passages B C.

### No. 13,088. Improvements on Metal cans. (*Perfectionnements aux boîtes métalliques.*)

Thomas McDonald, (Assignee of Richard Austin,) Toronto, Ont., 12th July, 1881; for 5 years.

*Claim*.—A cylindrical sheet metal case or can constructed with a lid D having a double flange D1 and notched and deflected in the under side of flange D1, and corresponding with other notched and deflected portions of the flange C, so that by placing the notch in the flange D1 over the notch in the flange C, and turning the lid by hand, it will be thoroughly secured thereby, and by turning the lid in the contrary direction it will be slackened and taken off when so required.

### No. 13,089. Improvements on Machines for Pointing and Lapping Loops. (*Perfectionnements aux machines à effiler et plier les cercles.*)

James Naylor, jr., Rochester, N. Y., U. S., 12th July, 1881; for 5 years.

*Claim*.—1st. In a machine for the combined purpose of pointing thinning points, and lapping barrel hoop blanks, the combination of the wheel C' having an inclined face with the wheel C having a like inclination to form the V, and the straight faced part extending beyond the periphery of the cutting extremities of the knives in the wheel C. 2nd. The wheel C carrying two distinct sets of knives, the wheel C' carrying but one set, in combination with the rests. 3rd. The combination of the wheel C, with the lapping rest E, when placed outside the periphery of the V formed by the wheels C C'. 4th. The combination of the rests F G, for pointing and thinning with the wheels C C', so that operations are done by keeping the blank in the same line. 5th. The thinning rests F, so placed in relation to the straight faced part of the wheel C as to admit the passage of the blank, after the operation between it and the face of the wheel, in combination with the pointing rest G, when the motion of the wheels is from the thinning rest to the pointing rest. 6th. The combination of the wheels with their different diameters and faces, the lapping thinning rest, located outside the V, the pointing rest within the V and the two distinct sets of knives.

### No. 13,090. Improvements on the Method of Finishing the Heads of Tacks, Nails and Rivets. (*Perfectionnements dans la méthode de finir les têtes des broquettes, clous et rivets.*)

The Abington Tack and Machine Association, (Assignee of John Hyslop, jr., Abington, Mass., U. S., 12th July, 1881; for 5 years.

*Claim*.—Forcing the tacks, nails and rivets, point foremost, through a die of the desired shape.

### No. 13,091. Improvements in Pipe Moulds. (*Perfectionnements aux moules des tuyaux.*)

Robert J. Wilson, Ridgetown, Ont., (Assignee of Ezra M. Hamilton, Los Angeles, Cal., U. S.,) 12th July, 1881; for 5 years.

*Claim*.—The cylinder A and sliding clamps D, connected together by a rod F and having oblique slots F F, which receive the studs or screws G G from the cylinder.

### No. 13,092. Improvements on Apparatus for Laying Railway Tracks. (*Perfectionnements aux appareils à poser les voies de fer.*)

Theodore Adams, Philadelphia, Pa., 12th July, 1881; for 15 years.

*Claim*.—1st. A railway car provided with a roller tramway centrally located, or thereabout, upon the platform of the car and extending throughout its entire length, in combination with a chute to transfer rails, ties, etc., from the car to the road bed. 2nd. A chute or supplemental roller tramway mounted near its longitudinal centre upon a truck, and constructed and arranged to be connected to the platform of a railway car. 3rd. In combination with the railway car A, a chute or supplemental roller tramway mounted near its longitudinal centre upon a car N and adjustable thereon, for the purpose of allowing the forward end of such chute to conform to the centre of a curved road bed. 4th. In combination with a railway car A, provided with a roller tramway centrally located, or thereabout, upon its platform, a chute or supplemental roller tramway mounted near its longitudinal centre upon a car N, and adjustable thereon. 5th. A plate  $\rho$  attached near the end of the chute G, in combination with a clevis  $\sigma$  on the car A, the parts being constructed and arranged to permit the lateral adjustment of the forward end of the chute. 6th. The combination of the uprights I I of the truss frame, with the end K of the car N, as a means of propelling such car, and of permitting the lateral adjustment of the chute G. 7th. In a railway car, the combination, with a roller tramway, of pieces c c c, &c., raised up from the platform of the car to facilitate the loading of the rails upon the tramway.

### No. 13,093. Improvements on Car Couplings. (*Perfectionnements aux attelages des chars.*)

Charles H. Shippee, Wickford, R. I., U. S., 12th July, 1881; for 5 years.

*Claim*.—1st. The combination of a horizontal swinging and sliding bar C, pivoted as desired, with a hook h pivoted to turn vertically on its end, and having its junction with a bar supported by a hanger b. 2nd. The apertured coupling and draw-bar C, the block e having lugs  $\epsilon$  and pin  $\epsilon$ , and the spring  $\zeta$  combined with the king bolt a. 3rd. In combination, with the draw-bar C, the jointed coupling hooks h h formed with a tapering end and fitted with the inclined lugs h. 4th. In combination with the draw-bar C and jointed hook h having the slide slot  $\epsilon$ , the hanger b fitted with the turning rod G, and pin r. 5th. The tubular bearing  $\zeta$  fitted in the bolster of the truck and the cross timbers of the car, combined with the king bolt a, block  $\epsilon$  and slotted draw-bar C. 6th. The hook h, hung on the swinging draw-bar C and formed with an inclined shoulder h, that is under cut on its face. 7th. In combination with the swing draw bar C, and its coupling hook h, the slide rod  $\epsilon$ , and hook or stirrup  $\eta$  fitted for retaining the draw bar in place. 8th. In combination with the slotted buffer d, the block o, plates p, spring  $\zeta'$  and pin q.

### No. 13,094. Improvements on Washing Machines. (*Perfectionnements aux machines à laver.*)

Daniel F. Babb, and Martin J. Wigle, Kingsville, Ont., 12th July, 1881; for 5 years.

*Claim*.—1st. The application and use of corrugated and indented zinc, or other metal, as a rubbing surface, both for the washboard E and rubber I. 2nd. The combination, with the corrugated and indented zinc or other metal rubbing surface, of the cast iron guards F F.