

uous rolling of spikes from point to head, from a bar or rod of metal which is equal to, or greater in sectional area than the horizontal sectional area of the head of the finished spike and capable of affording in the aggregate double, or more than double its length in finished spikes. 2nd. The combination of a spike roll provided with dies for shaping and cutting the points of the spikes, a cooperative roll provided with dies for shaping and cutting the points and deeply recessed dies for forming and laterally developing the heads, and for forming the shank and gearing which drives said rolls, with the point cutting dies in advance of the head forming dies, for rolling each spike from point to head. 3rd. The combination, with the two rolls, of the series of practically solid dies for forming spikes, and the automatic plungers for forcing the finished spikes from the dies.

No. 14,716. Improvements on Printing Presses. (*Perfectionnements aux presses d'imprimerie.*)

The Gilman Vertical Press Company, of the State of New Hampshire, (Assignee of Francis H. Richards, Springfield, Mass.) U.S., 1st May, 1882; for 15 years.

Claim.—1st. The combination, in a printing press, of the bed B provided with the slotted posts *a a*, the platen A provided with its shaft *c* and the connecting rod *e*, secured pivotally to the platen and to the frame of the machine, and appliances for moving the platen vertically between said posts. 2nd. The combination, with the bed B, of the platen adapted to be moved vertically against *f*, the connecting rod *r* attached to the platen, and the eccentric bolt *g* securing said rod to the frame of the machine. 3rd. The combination, with the platen provided with the shaft *e* and with appliances for guiding it in its vertical movements, of the connecting rods *d d*, and the shaft *h* provided with arms *d d*. 4th. The combination, with the connecting rods *d d* of adjustable length, connected to the platen shaft, of the shaft provided with arms *d d* and with the segment *f*, of the treadle connected with said segment and of the springs *h* adjustably connected with the frame of the machine. 5th. The combination, with the vertical ink table shaft N, of the ratchet wheel K secured thereto, the pawl lever *j*, spring *t* and shaft *h*. 6th. The combination, with the ink roller frame carrier *Z*, of the connecting rod *l* pivotally attached to the latter and to the frame of the machine, shaft *s*, arm *r* and belt crank lever *o*, connected with shaft *h*. 7th. The tympan finger shaft 14 having the lever 16 attached thereto, in combination with the platen and with the shaft *s*. 8th. In combination, the platen A, the tympan finger shaft 14, the rod 17 provided with the adjustable nuts, and the spring 19. 9th. In combination, the ink roller frame carrier *Z* pivotally attached to the frame of the machine, the ink roller frame *z* carrying rollers *h*, and appliances for swinging said carrier *Z* between the posts *a a*. 10th. The paper tables 24 pivoted to one side of their centres, in combination with the brackets 23 and the rods 22. 11th. In a printing press, the combination of a stationary horizontal bed and platen arranged above the same, and appliances for reciprocating the platen vertically, and turning it from a horizontal to a vertical position, and back. 12th. In a printing press, the combination, with a horizontal stationary bed, horizontal inking plate and rollers reciprocating across the two, of a platen arranged above the bed and appliances whereby the same is reciprocated vertically, parallel to the bed, and turned to a vertical position to receive the sheet and back. 13th. The combination of the horizontal stationary type bed, platen constructed to receive and hold the sheets to be printed, appliances for guiding and turning the platen above the bed, and a treadle connected to the platen to operate the same.

No. 14,717. Improvements on Dry Pulverizers. (*Perfectionnements aux triturateurs par la voie sèche.*)

Stephen P. M. Tasker, Philadelphia, Pa., U.S., 4th May, 1882; for 5 years.

Claim.—1st. In a pulverizing machine, in combination with a tight casing enclosing revolving disks and a ball, and within which material is pulverized, an exhausting device adapted to suck the pulverized material from out of the casing. 2nd. In combination with a tight enclosing casing provided with means for pulverizing metalliferous ores, or other substances, an exhaust stack opening therein on the one hand, and enclosed at its discharging extremity by a screen and an air exhausting or forcing apparatus. 3rd. In combination with the exhausting stack and screen enclosing the discharging orifice thereof, the receiving chamber provided with a chute or kindred discharging contrivance. 4th. In combination with a pulverizing machine of the class recited, a feeding hopper and hopper valve. 5th. In combination with a primary hopper, a conical valve and means for alternately lifting and dropping, and revolving said conical valve.

No. 14,718. Improvements on Mechanical Toys. (*Perfectionnements aux jouets mécaniques.*)

William A. Webber, Medford, Mass., U.S., 4th May, 1882; for 15 years.

Claim.—1st. A toy constructed in imitation of a living being, and provided interiorly with mechanically operated appliances adapted to produce musical sounds in a series of notes. 2nd. A toy constructed in imitation of a living being, in combination with appliances arranged within the toy and adapted to produce musical sounds in a series of notes, and mechanical means operative from the exterior of the toy to move said musical appliances. 3rd. A mechanical toy made in imitation of a living being and having placed within it, bellows or other wind mechanism, a series of reeds and reed chambers or race way for a perforated music sheet, air passages leading from the race-way to the reeds, and mechanism for holding a perforated music sheet in close contact with and feeding it along the race-way and all constructed in relation to each other, and to the outside of the toy to be operated as described.

No. 14,719. Improvements on Planers' Chucks. (*Perfectionnements aux mandrins des raboteuses.*)

John H. Greenwood, Logan, Ohio, U.S., 4th May, 1882; for 5 years.

Claim.—1st. In a metal planer, the combination of a sliding bed K, rocking chuck I, tool O, head J, bar CD, arc E and clamp screw U. 2nd. A curve cutting mechanism operated by the horizontal longitudinal movement of the reciprocating bed, in combination with the mechanism for producing the rocking movement of the chuck. 3rd. The combination, with a rocking chuck, of the pivoted slide head J, the adjustable guide bar C D and graduated arc E, for the purpose of enabling the machine to plane convex or concave curves of any desired radius, and also straight work when necessary. 4th. The combination, with the frame of the rocking chuck, of one or more slotted graduated arcs provided with clamping mechanism to set the chuck at any desired angle to plane inclined work. 5th. The combination, in a metal planer, of a fixed tool, a bed plate having rectilinear motion in a horizontal plane, and a chuck having rocking motion in a vertical line. 6th. The combination of a hinged work holder rocking in a longitudinal vertical plane, with a horizontal and longitudinally reciprocating bed, a cutting tool provided with horizontal transverse and vertical adjustments, and guiding and adjusting mechanism for controlling the position and movement of the work holder relatively to the planing tool. 7th. The combination of the sliding bed K, chuck frame M, chuck I, cross head J, guide bar D and slotted arc E. 8th. The combination of the rocking chuck I, cross head J and adjustable guide bar D. 9th. The combination of the frame N, slotted arc E, guide bar D and the bolts and nuts for securing the guide bar in position. 10th. The guide bar D, chuck I and cross head J.

No. 14,720. Improvements on Washing Machines. (*Perfectionnements aux machines à laver.*)

James Dougherty, Mount Pleasant, Iowa, U.S., 4th May, 1882; for 5 years.

Claim.—1st. The rubber presser I provided on its underside or surface with a series of recesses or air chambers. 2nd. In combination with a wash box having a double inclined or slightly curved bottom, provided on its upper surface with rubbing surfaces, the rubber I and turner K for rubbing and partially squeezing the clothes, and giving the same a rolling motion. 3rd. The wash box having inclined or curved rubbing surfaces, the journalled walking beam F with the suspended pressers I K, having alternating motion.

No. 14,721. Improvements in Incandescent Electric Lamps. (*Perfectionnements aux lampes électriques incandescentes.*)

John Jamieson, Newcastle-on-Tyne, Eng., 4th May, 1882; for 5 years.

Claim.—The means of cleaning the interior of incandescent vacuum electric lamps without destroying the vacuum in such lamp, or any mere modification of such means.

No. 14,722. Improvements on Shirts. (*Perfectionnements aux chemises.*)

Isaac Schmeer, New York, U.S., 4th May, 1882; for 5 years.

Claim.—1st. In shirts having open bosoms, the combination of inner flaps *b*, outer flaps *c* having eyelets and lacing cord *d*. 2nd. In a garment having neck band *g*, the combination thereof with the collar *e* which is fastened to the inner part of said neck band, below the top edge thereof and adapted to be entirely concealed when folded inwards, and to be folded upwards, outwards and downwards, around the neck band *g*. 3rd. A shirt provided with an extra yoke forming a pocket into which the collar may be folded. 4th. A shirt provided with extra yoke, said yoke being free from the shirt along its upper edge combined with a rolling collar.

No. 14,723. Improvements on Railway Tie Sawing Machines. (*Perfectionnements aux machines à scier les traverses des chemins de fer.*)

John Campbell, Windsor, Ont., 4th May, 1882; for 5 years.

Claim.—1st. The combination, with a gang of two circular saws, arranged at a suitable distance apart, of a chain supporting way arranged between said saws, and extending on opposite sides thereof, and an endless band chain arranged to travel upon said way, between said saws, and provided with a series of spaced links having outwardly projecting log-holders, arranged to pass between said saws and carry logs longitudinally between the same. 2nd. The combination, with the two circular saws, and a chain way between and extending on both sides thereof, of the band chain provided with the spaced log-carriers, and means for driving said saws and chain, the said chain and its supporting way being of sufficient length and properly arranged to support simultaneously a log that is being sawed, another that has been sawed and is being carried away from the saws, and another that is approaching the saws, so that receiving, sawing and delivering the logs are performed as a continuous operation.

No. 14,724. Improvement in Gates. (*Perfectionnement dans les barrières.*)

Alfonso P. Campton, Rohnerville, Cal., U.S., 4th May, 1882; for 5 years.

Claim.—A gate provided with lever E, lever hinge D provided with eye *g*, chains *d h*, latch F, diagonal brace *e* and catch G.