

**No. 31,046. Machine for Bending and Coiling Pipe.** (*Machine à courber et lover les tuyaux.*)

Herbert E. Fowler, New Haven, Conn., U.S., 4th April, 1889; 5 years.

*Claim.*—1st. In a machine for bending and coiling pipe, the combination, with a grooved feed roll, of a feed roll having a groove of greater depth, and a bending and shaping roll having its periphery extending into the periphery of said deeply grooved roll, substantially as specified. 2nd. In a machine for bending and coiling pipe, the combination, with a grooved feed roll, of a feed roll having a groove of greater depth, and an adjustably arranged bending and shaping roll having its periphery extending into the periphery of said deeply grooved feed roll, substantially as specified. 3rd. In a machine for bending and coiling pipe, the combination, with a pair of feed rollers, of a bending roller which projects into the space between said feed rollers to a point within the periphery of one of them, and a slide which forms a bearing for said roller, and is provided with a feed screw for adjusting it toward and from said feed rollers, substantially as described. 4th. In a machine for bending and coiling pipe, the combination, with a pair of feed rollers, of a slide provided with a screw for adjusting it toward and from the space between said feed rollers, a plate or frame pivoted upon said slide, a screw for tilting or laterally adjusting said pivoted plate or frame, and a bending roller which is journaled upon the inner end of said plate or frame, and together with one of said feed rollers forces the pipe to follow the contour of the opposite feed roller for a portion of its periphery, substantially as specified. 5th. In a machine for bending and coiling pipe, the combination of a feed roller, an opposite feed roller formed with a deep groove in its periphery, and a bending roller which is journaled to project with its edge into the deep groove of said feed roller, and together with said roller to force the pipe to follow the contour of said other feed roller for a portion of its periphery, substantially as described. 6th. In a machine for bending and coiling pipe, the combination, of a feed roller formed with a circumferential groove, and a deeper groove in the bottom of said groove, and a narrow bending roller which is journaled to project into said deeper groove and formed with a circumferential groove of the same diameter as the grooves in said feed rollers, and which together with said deeply grooved roller forces the pipe to follow the contour of the opposite feed roller for a portion of its periphery, substantially as described. 7th. In a machine for bending and coiling pipe, the combination, of a circumferentially grooved feed roller, an opposite feed roller formed with a circumferential groove, and with a deep groove in the bottom of said circumferential groove, a circumferentially grooved bending roller which is journaled to project into said deep groove, and together with said deeply grooved feed roller to force the pipe to follow the contour of the opposite feed roller for a portion of its periphery, and means for adjusting said bending roller to project more or less into said deeply grooved roller and toward said opposite feed roller, substantially as described. 8th. In a machine for bending and coiling pipe, the combination of a circumferentially grooved feed roller, an opposite feed roller formed with a corresponding circumferential groove and with a deep groove in the bottom of said groove, a slide which projects with its inner end toward the space between said feed rollers, a screw for adjusting said slide toward or from said rollers, and a circumferentially grooved bending roller which is journaled at the inner end of said slide to project into the deep groove of said feed roller, and together with said feed roller to force the pipe to follow the contour of the opposite feed roller for a portion of its periphery, substantially as described. 9th. In a machine for bending and coiling pipe, the combination of the machine frame or table formed with the diagonal slot 25, the circumferentially grooved feed roller 19, the opposite feed roller 21 formed with the corresponding circumferential groove 22, and with a deep groove 23 in the bottom of said groove, the guide roller 24, the oblique guide 39, the slide or block 26 in said diagonal slot, the screw 28 for adjusting said slide, the plate or block 32 pivoted upon said slide, the screw 36 for laterally adjusting said plate or block, and the narrow bending roller 33 which is journaled at the inner end of said pivoted plate or block and projects into the groove 23 of said feed roller 21, substantially as described.

**No. 31,047. Miner's Pick.** (*Pic de mineur.*)

Fredrick Sohuman, Springhill Mines, N.S., 4th April, 1889; 5 years.

*Claim.*—A pick head such as described having holes of any form in the ends of the arms *a* to receive picks, points *b* having correspondingly shaped shanks to fit the holes *a*, as shown and described for the purposes set forth.

**No. 31,048. Balanced Slide Valve.**

(*Tiroir de vapeur équilibré.*)

Pierre L. Lafrance, Detroit, Mich., U.S., 5th April, 1889; 5 years.

*Claim.*—1st. In a slide-valve, the combination, with the lower diaphragm forming the face of the valve, of an upper plate the one having a vertically adjustable engagement with the other, substantially as set forth. 2nd. In a slide-valve, the combination, with the lower diaphragm forming the face of the valve, of an upper plate supported by screw posts thereupon, said posts provided with jam nuts, substantially as and in the manner set forth. 3rd. In a slide-valve, the combination, with the lower diaphragm forming the face of the valve, of a vertically adjustable plate, said plate provided with laterally adjustable sides, substantially as set forth. 4th. In a slide-valve, the combination, with the lower diaphragm forming the face of the valve, of a vertically adjustable plate made in sections and provided with adjustable sides, substantially as set forth. 5th. The combination, with a steam-chest of a slide-valve, said valve consisting of a lower diaphragm and upper plate having an adjustable engagement the one with the other, whereby any wear of the valve seat may be taken up, substantially as set forth.

**No. 31,049. Compound for Roofing Purposes.** (*Composition de toiture.*)

Frank T. Tinning, Toronto, Ont., 8th April, 1889; 5 years.

*Claim.*—A compound for the purpose of roofing composed of asphalt, petroleum residuum, oil and resin in combination with cement, sand, gypsum, and asbestos fibre in the hereinbefore stated proper quantities and treated as specified and described.

**No. 31,050. Machine relating to the Cutting of Bevelled Rubber Soles and other Materials.** (*Machine à tailler les semelles de caoutchouc biseautées et autres matériaux.*)

Willard F. Wellman, Boston, Mass., U.S., 8th April, 1889; 5 years.

*Claim.*—1st. In a sole cutting machine, the combination, of stock clamp B, D, track *f* corresponding to the form of article to be cut, knife E<sub>1</sub>, and means substantially such as described for causing the knife to travel in a path determined by the track *f*, substantially as and for the purpose set forth. 2nd. In combination, the support B, foot D, knife carrier E, knife E<sub>1</sub> secured in the carrier, the foot D being formed with a track *f* and rack *d*, and the carrier being provided with pins *m*, *n*, and spur gear *i*, substantially as and for the purpose set forth. 3rd. The support B, foot D, knife carrier E, and knife E<sub>1</sub> secured in carrier E, foot D having a track *f*, and rack *d*, and carrier E having pins *m*, *n*, and gear *i*, in combination with arms *d*, F hinged at *b* and provided with pulleys *ar*, *az*, *bt*, *bz*, *ht*, and shafts *a*, *b*, *h*, all substantially as and for the purpose set forth. 4th. The knife carrier E herein described made up of two sections *e*, *e*<sub>1</sub>, hinged together and provided with pins *m*, *n*, and gear *i*, substantially as and for the purpose set forth.

**No. 31,051. Incandescent Lamp and Socket Holder therefor.** (*Lampe et support de lampe incandescente.*)

The Thomson-Houston International Electric Company, Boston, (assignee of Elihu Thomson and George H. Alton, Lynn), Mass., U.S., 8th April, 1889; 5 years.

*Claim.*—1st. In an electric lamp support, a contact terminal fixed on one face of a plate of insulating material, and having a bent free end depressed below the opposite face. 2nd. In an electric lamp support, a metallic frame made in one piece and having insulating blocks or washers secured to its top and bottom, the top washer carrying the contact terminals. 3rd. In a lamp support, a metallic frame carrying an insulating plate or block for the contact terminals, and provided with a lateral tubular socket for the spindle of the lamp switch, as and for the purpose described. 4th. In an electric lamp support, the combination, with the intermediate metallic frame, made in one piece, of the two attached insulating pieces, a contact terminal mounted on the upper block and having a spring end, a spring mounted on the other block and in connection with the frame, and an intermediate rotary connecting piece secured to a spindle borne by the frame. 5th. The contact terminal blank E, consisting of metallic bushing provided with a shoulder at one end and tapered at the other, as and for the purpose described. 6th. A blank for a ring contact terminal, having the ears or extensions projecting radially inward and integral with the ring. 7th. An electric lamp base having a contact terminal composed of a screw-threaded bushing, eyeletted in a non-conducting washer secured to the lamp collar. 8th. The lamp contact terminal consisting of an eyeletted bushing having a perforation extending through it to receive a lamp wire, as and for the purpose described. 9th. The combination, with the insulating plate fastened to the lamp neck, of a ring contact terminal having extensions integral with it, and extending through and fastened upon, the opposite side of said plate. 10th. In an electric lamp support, the combination of a metallic frame made of a single piece of metal, having means for attachment of one of the leading in wires, two insulating washers or plates fastened respectively to the top and bottom of the frame, two contact terminals secured to the upper plate, a switch spring and means for attachment of a leading in wire in connection respectively with said terminals, and a rotary contact mounted in the metallic frame. 11th. In an electric lamp support, the combination, with the metallic frame made in one piece, of the insulating plate mounted thereon and carrying a contact terminal, a spring connected with said terminal, a second spring fastened to the base of the frame, a sleeve or bushing extending transversely from the frame, and a switch spindle mounted thereon and having a metal head between the two springs, as and for the purpose described. 12th. In an electric lamp support, a metal frame made in one piece carrying the contact terminals insulated therefrom, and provided with a horizontal sleeve forming the socket or bearing for the lamp switch. 13th. In an electric lamp support or holder, a metal frame made in one piece carrying an insulating plate, two contact terminals secured to said plate, one of which terminals has an extension forming a means for attachment of a leading in wire, and means upon the metallic frame for attachment of the other leading in wire. 14th. A blank for the metallic frame of a lamp support, consisting of a plate forming the base of the frame, and provided with an arm or extension perforated to receive a tube or socket for a rotary switch, as and for the purpose described. 15th. The combination, with the insulating plate or washer, of the metal bushing eyeletted therein, and having an internal screw thread adapted to engage with a screw contact terminal. 16th. The screw contact terminal seated in the insulating plate, in combination with the arm or extension fastened by the upset or rivetted end of the screw, as and for the purpose described.

**No. 31,052. Sewing Machine.** (*Machine à coudre.*)

The Commercial Over-Seaming Sewing Machine and Manufacturing Company, San Francisco, Cal., U.S., (assignee of Morris Lachman, London, Eng.), 8th April, 1889; 5 years.

*Claim.*—1st. In a machine constructed for over-seaming and provided with a vertically reciprocating eye pointed needle, the combi-