

support and wheel, the paper-supporting carriage and mechanism operated by the upward movement of the type wheel support to move said carriage laterally, as set forth. 4th. The combination of the rotary type wheel, the movable support therefor adapted to be depressed by the operator, means for automatically raising said support and wheel, the paper-supporting carriage, movable on guides on the supporting base provided with a rack *k*, the pinion *l* supported by said base, and the dog *n* pivoted to the type wheel support and adapted to engage with said pinion, as set forth. 5th. In a type writer, the combination of the carriage *h*, mechanism, substantially as described, for feeding said carriage laterally, the paper holding slide *m* movable on said carriage at right angles to the direction of movement of the latter and the spring *n* and notched plate *o*, whereby the operator is guided in moving said slide, as set forth. 6th. The combination of the carriage *h* having the rack *k*, the pinion *l* and the dog *n* provided with the arm *k* and knob *p*, whereby said dog may be disengaged from the pinion, as set forth. 7th. The combination of the carriage *h* having the rack *k*, the pinion *l*, the dogs *n* and *a*, the latter having the arm *h*, and the former, the arm *k* bearing on the arm *h*, as set forth. 8th. The combination of the type wheel, the movable support therefor adapted to be depressed by the operator, means for automatically raising said support, the ink ribbon reels and devices, substantially as described, operated by the upward movement of the type wheel support, for rotating one of said reels step by step and moving the ribbon longitudinally, as set forth. 9th. The combination of the type wheel, the movable support therefor adapted to be depressed by the operator, means for automatically raising said support, the ink ribbon reels *A A* provided respectively with ratchets *C, C*, having teeth relatively arranged, as described, the dogs *D, D*, pivoted to the type wheel support and adapted to engage automatically with the ratchets *C, C*, when said support rises, and means, substantially as described, whereby either of said dogs is made impetive and the other at the same time operative, as set forth. 10th. The combination of the automatically raised type wheel support *c*, the dogs *D, D* pivoted to said support, the ink ribbon reels having ratchets engaged by said dogs, and the bar *E* adapted to slide in guides on the support *c*, and provided with studs *F, F*, adapted to act on the dogs *D, D*, and make the one operative and the other at the same time operative, as set forth. 11th. The combination, with the ink ribbon reels, of the shouldered and threaded rods supporting said reels, and the socketed standards supporting said rods, whereby the ink ribbon reels are adapted to be laterally adjusted, as set forth. 12th. The combination of the rotary type wheel, the pivoted lever *c* supporting the type wheel, the spring *g*, whereby the lever *c* and the type wheel are normally raised, and the paper-supporting carriage under the type wheel, as set forth.

No. 20,096. Boltin Apparatus. (*Blutoir*.)

The Knickerbocker Company, (assignee of Orville M. Morse,) Jackson, Mich., U. S., 1st September, 1884; 5 years.

Claim.—1st. The combination, with an inclined screen of an air trunk and fan, whereby an air current is directed upwardly through the screen, an elevator whereby the material escaping from the lower end of the screen is returned to its upper end, and means whereby the material is caused to move laterally across the screen, substantially as set forth. 2nd. The combination, with a screen having the proper pitch or inclination to cause the material to flow over it by gravity, an air trunk and fan whereby an air current is directed upwardly through the screen, and an elevator whereby the material escaping from the lower end of the screen is returned to its upper end, substantially as set forth. 3rd. The combination, with an inclined screen, of an elevating mechanism facing the screen and an air trunk and fan, whereby an air current is caused to pass upwardly through the screen, substantially as set forth. 4th. The combination, with an inclined screen, of an elevator whereby the material escaping from the lower end of the screen is returned to its upper end, means whereby a lateral motion across the screen is imparted to the material deflecting devices, whereby the movement of the material across the screen can be regulated, and an air trunk and fan, whereby a current of air is caused to pass upwardly through the screen, substantially as set forth. 5th. The combination, with an inclined screen and an elevator, whereby the material escaping from the lower end of the screen is returned to its upper end, of an air trunk and fan, whereby an air current is directed upwardly through a portion of the screen, substantially as set forth. 6th. The combination, with a middlings purifier composed of an inclined screen, an air trunk and fan, whereby an air current is directed upwardly through the screen, and an elevator, whereby the material escaping from the lower end of the screen is returned to its upper end, of a preliminary bolting apparatus composed of an inclined screen and an elevator, whereby the material escaping from the lower end of the screen is returned to its upper end, substantially as set forth. 7th. In a combined bolting and purifying apparatus, the combination, with an inclined screen composed of sections of different degrees of fineness arranged side by side, of an elevator whereby the material escaping from the lower end of the screen is returned to its upper end, mechanism whereby an air current is directed upwardly through the coarse portion of the screen, and means whereby the material is caused to move laterally across the screen from the fine to the coarse sections, substantially as set forth. 8th. The combination, with an inclined screen, of an elevator whereby the material escaping from the lower end of the screen is returned to its upper end, a casing enclosing the elevator and screen, and an air trunk arranged between the elevator and screen, and adapted to direct an air current upwardly through the screen, substantially as set forth. 9th. The combination, with an inclined screen, of an elevator, whereby the material escaping from its lower end of the screen is returned to its upper end, a casing enclosing the elevator and screen, an air trunk arranged between the elevator and screen, and flexible strips or curtains *k, k*, attached to the air trunk and resting on the screen or casing, substantially as set forth. 10th. The combination, with an inclined screen, of an elevator, whereby the material escaping from the lower end of the screen is returned to its upper end, a casing enclosing the elevator and screen, an air trunk arranged between the elevator and screen, and adjustable deflecting boards attached to the upper end of the air trunk, substantially as set forth.

No. 20,097. Ice Creeper. (*Crampon à Glace*.)

Charles F. West, Philadelphia, Penn., U. S., 2nd September, 1884; 5 years.

Claim.—1st. An ice creeper embodying a shank, clips and spurs, formed of a continuous piece of wire, substantially as and for the purpose set forth. 2nd. An improved ice creeper consisting of a shank, clips at the sides thereof, and spurs projecting from the clips formed of a continuous piece of wire, substantially as and for the purpose set forth. 3rd. The shank *A*, clips *B* and spurs *C*, formed of the parts *a, b, c, d, e, f*, ice creeper of each other, substantially as described. 4th. An ice creeper formed of a continuous piece of wire having a shank, clips and spurs, said shank consisting of two elastic arms *a, a*, which are united by a bend at the rear of the shank, substantially as and for the purpose set forth. 5th. An ice creeper formed of wire having a tooth at the rear thereof, substantially as and for the purpose set forth.

No. 20,098. Device for Trimming the Soles of Boots and Shoes. (*Appareil pour Parachever les Semelles des Chaussures*.)

James Welsh, Plymouth, Penn., U. S., 2nd September, 1884; 5 years.

Claim.—1st. In a device for trimming boot or shoe soles, the combination, with the cutter *D* composed of the top plate *d* and the cutting side plate *d*, the lower cutting edge of which has a contour similar to that of a boot or shoe sole, of the actuating lever *B* carrying said cutter and pivoted to a proper fulcrum, at *b*, in such manner as to swing the cutter and make it act on the sole of a boot or shoe, held in position by any suitable support, substantially as set forth. 2nd. The combination, in a device for trimming boot or shoe soles, with the cutter *D* composed of top plate *d* and cutting side plate *d*, and the pegging and points *E, E*, depending from the plate *d* and arranged concentrically within the plate *d*, on a line having a contour similar to that of a boot or shoe sole, of the actuating lever *B*, carrying said cutter and pivoted to a proper fulcrum, at *b*, in such manner as to swing the cutter and make it act on the sole of a boot or shoe, held in position by any suitable support, substantially as specified. 3rd. In a device for trimming boot or shoe soles, the combination, with the pegging awl points *E, E*, and cutter *D*, composed of top plate *d* and side cutting plate *d*, of the actuating lever *B*, plate *F* and screws *f, f*, as set forth.

No. 20,099. Twist Drill. (*Forst Tors*.)

George H. Burroughs, Princeton, N. J., U. S., 2nd September, 1884; 5 years.

Claim.—1st. A drill having a spirally-curved cutting edge adapted to make a draw or shear and shaving cut, substantially in the manner and for the purpose set forth. 2nd. A drill having a curved cutting edge lying in, or nearly in a plane, at right angles to the axis of the drill, so as to give the latter a draw or shear and shaving cut, as set forth. 3rd. A drill having longitudinal recesses at the inner sides of the grooves, forming ledges or angles, adapted to guide in sharpening the drill, as set forth.

No. 20,100. Valve for Enginery and Vessels.

(*Souape pour Machinerie et Vaisseaux*.)

John E. Jerrold and Christian L. Burgermaster, Allegheny, Penn., U. S., 2nd September, 1884; 5 years.

Claim.—The combination, with the three-part casing *C, D, E*, the former having the stem *N* provided with the valve *B* and spring *M*, of the screw-threaded stem *I* engaging the screw-threaded portion *K* and passing through the parts *D, F* and resting on the top of the stem *N*, and the wheel *H* and packing-piece *G*, substantially as shown and described and for the purposes set forth.

No. 20,101. Baling Press. (*Presse d'Emballage*.)

David W. Sealey, Albany (assignee of Alexander Buckman, School-ack), N. Y., U. S., 2nd September, 1884; 5 years.

Claim.—1st. In a baling press, the pressing chamber *A* provided with adjustable walls *A*, moveable as at *a*, at their forward ends, to a contiguous stationary part of the press and arranged in relation to the baling chamber *B*, as herein described, for the purpose of completing the compression of the material, before the bale is passed into the baling chamber, as herein specified. 2nd. In a baling press, the baling chamber *B* provided at two of its oppositely located vertical sides, with a single opening *B* and guiding-strips *b*, for the purpose of facilitating the operation of tying off the bale before it is removed from the press, as herein specified. 3rd. In a baling press, the combination, with the pressing chamber *A*, of the baling chamber *B*, and ranged in relation to the pressing chamber, as herein described, and provided at each of its vertical sides, with a single opening *B*, and top and bottom guiding strips *b*, as and for the purpose herein specified. 4th. In a baling press, the combination, with a baling chamber *B* provided with a single opening *B* in two of its oppositely located vertical sides, of the guiding strips *b* and adjusting screws *C*, adapted to press against the middle portions of said guiding strips, as and for the purpose herein specified.

No. 20,102. Flour Bolt. (*Blutoir*.)

The Knickerbocker Company (assignee of Orville M. Morse), Jackson, Mich., U. S., 2nd September, 1884; 5 years.

Claim.—1st. In a separator, the combination of a sieve or screen having the proper pitch or inclination, to cause the material to flow over it by gravity, and having its mesh increasing in coarseness from its upper end to its lower end, to increase the separating capacity of the screen as the velocity of the material increases, and an elevator, whereby the material escaping from the lower end of the screen is returned to its upper end, substantially as set forth. 2nd. In a separator, the combination of a sieve or screen having the proper pitch or inclination, to cause the material to flow over it by gravity, and