

the screws *v* provided with the miter gear *x* at their inner ends and working in said jaws, the rotary rod *L*, slotted at one end, and provided at its opposite end with the miter gear *M*, adapted to inter-mesh with the gears *x*, the coupling rod *O*, provided with a tongue *t*, spring *n*, and boss *Q*, all constructed, combined and arranged to operate substantially as described. 4th. A tool stock or chuck consisting of the tubular body *A*, having the chambered nut *N* at its upper end and the radially sliding jaws *q* at its lower end, the screws *v* provided with the miter gears *x* at their inner ends and working in said jaws, the rotary rod *L* slotted at one end and provided at its opposite end with the gears *x*, the squared coupling-rod *O*, provided with a tongue *t*, the expansile spring *n*, adapted to hold said rod in contact, the boss *Q*, for turning the rods, and the cap *F*, substantially as described.

No. 17,821. Shoe. (Soulrier.)

W. Rogers, Cincinnati, Ohio, U. S., 3rd October, 1883; 5 years.

Claim.—1st. The outsole *N*, having a lip or flap *J* turned up near the edge on its upper or inner surface at the forward part, which flap is extended to be turned down over the edge of the upper and line of stitches, substantially as set forth. 2nd. The described process of manufacturing shoes, which consists in placing a removable lasting-piece upon the forward part of the last and a permanent sectional innersole upon the rear part of the last, and in lasting the upper to the permanent innersole upon the rear part of the last and to the removable lasting piece upon the forward part of the last and in tacking the outer-sole to the permanent innersole and to the removable lasting piece, and stitching the outsole, innersole and upper together in the rear part of the shoe and only the outsole and upper in the forward part and withdrawing the removable piece, and where an outsole channelled on its upper surface along the forward part has been used in turning back of the flap on the line of stitches, substantially as set forth. 3rd. The shoe having in the rear part a permanent innersole extending to a point at or near the ball, with the upper stitched thereto between the inner and outer soles and the forward part of the upper stitched only to the outsole, substantially as set forth.

No. 17,822. Slide Valves and Gearing.

(Tiroirs de vapeur et garnitures.)

W. B. Turman, Waldron, Arkansas, U. S., 3rd October, 1883; 5 years.

Claim.—1st. In a slide valve, the combination with the steam chest *A* provided with the supply and exhaust ports *b c*, the guide strips *d l*, and the adjustable packing strips *f k*, on its top and exhaust side, of the valve *B*, provided with the entrance port *o*, interior steam chamber *p*, the exhaust port *q*, the opening *r*, and the projection *t*, substantially as and for the purpose set forth. 2nd. The cage or frame *E*, combined with slide valve *B*, substantially as shown and described. 3rd. The combination of cage *E*, provided with cross strips *u v l*, and set screws *g m*, the packing strips *f k*, and valve *B*, substantially as described. 4th. The packings *j r*, combined with valves *B*, and packing strips *f k*, substantially as shown and described. 5th. The valve *B*, provided with packings *j r*, set in recesses, in combination with the supporting guide strips *f k* all arranged as shown. 6th. The valve *B*, provided with packing strips *f k*, and formed with internal steam cavity *p* and passages *e w*, substantially as described. 7th. A valve gear consisting of the slide rod *I*, provided with arms 2, 2, and fitted for being rocked sidewise, the slide rods *H H*, provided with notches 3 and fitted for movement by cams or eccentrics upon the engine shaft and the connections between the rod *I*, and the valve stem, all substantially as described, combined for operation as set forth. 8th. In valve gearing, the combination of the eccentric or cam rods *H H*, the slide rod *I*, and the slide *K*, connected to the valve stem, substantially as shown and described. 9th. In valve gearing, the combination of the eccentric rods *H H*, the slide rod *I* provided with arms 2, 2, the slide *K*, and the lever *L*, substantially as shown and described. 10th. The combination, with the bed plate *F*, the notched eccentric rods *H H*, and the sliding rod *I*, provided with arms 2, of the curved plate *P*, substantially as described. 11th. In valve gearing, the combination, with the slide rod *I*, of the sleeve *J*, the brackets 4, and the lever 5, as and for the purpose specified. 12th. In valve gearing, the combination, with the slide *K*, of the rod *I*, that is operated by the eccentrics of the adjustable slide *M*, substantially as described.

No. 17,823. Balanced Slide Valve.

(Tiroir de vapeur équilibré.)

W. T. Reaser, Madison, Wisc., U. S., 3rd October, 1883; 5 years.

Claim.—1st. The combination, with a slide valve and its seat, of vibrating supports having segmental or rocking bearings at their upper and lower ends, arranged outside of and on opposite sides of the slide-valve, and adapted to move along with the valve, substantially in the manner, as and for the purpose shown and described. 2nd. The combination, with a slide valve and its seat, of vibrating supports having segmental or rocking bearings at their upper and lower ends, the upper bearings *e*, being cut from a circle of larger diameter than the lower bearings *e*, said bearings being arranged outside of and on opposite sides of the valve, and adapted to move along with it, substantially in the manner as and for the purpose shown and described. 3rd. The combination, with the sliding-valves and valve-seats, of double-valved engines, and means for connecting the valves, of vibrating supports arranged in pairs, and having segmental or rocking bearings at their upper and lower ends arranged outside of and on opposite sides of the slide valves, and adapted to move with them, substantially in the manner as and for the purpose shown and described. 4th. The combination, with the sliding valves and valve seats, of double valved engines, and means for connecting the valves, of vibrating supports arranged in pairs, and having segmental or rocking bearings at their upper and lower ends, the upper bearings *e*, being cut from a circle of larger diameter than the lower bearings *e*, substantially as and for the purpose described. 5th. The combination, with a slide valve and its valve seat, of vibrating supports having segmental or rocking bearings at their upper and lower ends, arranged outside of and on opposite sides of the slide valve, toothed segments *H H* connected thereto, and the toothed bars *N N*, substantially as and for the purpose shown and described. 6th. The combination, with a

slide valve and its valve seat, of vibrating supports having segmental or rocking bearings at their upper and lower ends, arranged outside of and on opposite sides of the slide valve, connecting cross bars *e e*, having toothed segments *g*, rod or bar *G*, connected to the valve and having cog teeth *g* thereon, and the horizontal plates *F F*, substantially as and for the purpose shown and described. 7th. The combination with a slide valve, its valve seat, and vibrating supports having segmental or rocking bearings at their upper and lower ends, of the plates *J J*, substantially as and for the purpose shown and described.

No. 17,824. Silicious Copper and Silicious Bronze. (Cuivre et bronze siliceux.)

L. Weiller, Angouleme, France, 3rd October, 1883; 15 years.

Claim.—1st. The manufacture, substantially as set forth, of the new compounds which I have called sodium-tin and sodium-bronze. 2nd. The manufacture of silicious bronze, substantially as set forth, by introducing one of the compounds which I have called respectively sodium-tin, and sodium-bronze, and fluosilicate of potash with or without an amount of uncombined sodium into melted copper or bronze. 3rd. The manufacture of silicious bronze, substantially as set forth, by introducing the metal sodium and fluosilicate of potash with or without an amount of tin into melted bronze or with tin into melted copper. 4th. The manufacture of silicious copper, substantially as set forth, by introducing the metal sodium and fluosilicate of potash into melted copper.

No. 17,825. Dynamo Electric Machine.

(Machine dynamo-électrique.)

P. Jablochkoff, Paris, France, 3rd October, 1883; 15 years.

Claim.—A dynamo-electric or electro-dynamic machine wherein a magnetic coiled bobbin revolves between or within polar fields, the bobbin being fixed obliquely on its axis so as to present its opposite edges to opposite fields alternately in each revolution, substantially as described.

No. 17,826. Composition for Tinning Plates.

(Composition pour étamer les plaques.)

A. F. Taylor, Neath, and G. Leyshon, Tindale, Eng., 3rd October, 1883; 5 years.

Claim.—The process described for the manufacture of a flux consisting in boiling spirits of salt or muriatic acid with spelter or zinc, then allowing it to settle, and then mixing with charcoal and lime, chalk or magnesia, or the carbonate of alkaline earths.

No. 17,827. Carpet Sweeper.

(Balayeuse de tapis.)

G. W. Gates, A. B. Watson and J. McKee, Grand Rapids, Mich., U. S., 3rd October, 1883; 5 years.

Claim.—1st. In a carpet sweeper, the case *C C*, hinged at the top and made in two sections, in combination with the spring *S*, and so constructed as to open and shut, substantially as and for the purpose described. 2nd. The combination of the following parts, viz: the case *C C*, made in two parts, having groove *g*, the driving wheels *W W*, supports *K*, and brush roller.

No. 17,828. Button Hole Sewing Machine.

(Machine à coudre faisant les boutonnières.)

P. Diehl, Elizabeth, N.J., U.S., 4th October, 1883; 5 years.

Claim.—1st. A shipper-lever for a button-hole machine, one arm of which is adapted to receive motion from a driving lever, the other arm of which is provided with a roller fitting and working in a guiding-groove of the feed-wheel, and to which shipper-lever is pivoted between said arms, mechanism for communicating motion to said feed-wheel, in combination with a feed-wheel having such guiding groove formed to automatically shift said shipper-lever, and thereby to change its points of contact with the driving-lever, substantially as and for the purposes described. 2nd. A shipper-lever for a button hole machine having two arms, one carrying a roller, which is received in a guiding groove of the feed wheel, and the other adapted to be operated by contact with a vibrating driving lever, in combination with a feed-lever, to which is pivoted between said arms, such feed lever having a cramping-block working in the feeding-groove of said feed-wheel, and a retracting spring, and with a feed-wheel provided with such guiding and feeding grooves, substantially as and for the purposes described. 3rd. The combination, in a button-hole machine, of the cam *d*, having the groove *d*, the driving-lever *H*, the shipper-lever *J*, with its roller *o*, the feed-lever *K*, pivoted to said shipper-lever at *o*, and provided with the block *K*, and the spiral retracting spring *k*, with the feed-wheel *M*, having the guiding and feed grooves *n* and *n*, substantially as and for the purposes described. 4th. The combination, with a feed wheel having a guiding groove, a shipper-lever provided with a roller adapted to enter and work in such groove, and also provided with mechanism for conveying motion to said feed-wheel, of adjustable blocks adapted to form points of contact between said shipper-lever and a driving lever, substantially as and for the purposes described. 5th. In a button-hole or over-seaming machine, the combination of an arm attached to the needle-bar and projecting from it at right angles, a link, one end of which is pivoted to a crank on the main driving shaft and the other end provided with a sleeve adapted to receive said arm, with the said main driving-shaft and crank, substantially as and for the purposes set forth. 6th. In a button-hole or over-seaming machine, the combination with the main driving-shaft *C*, crank-wheel *c*, provided with the cam groove *c*, link *e*, provided with a sleeve at its lower end, needle bar *P*, provided with the arm *p*, adapted to enter and slide in said sleeve, and rocking frame *E*, provided with mechanism to rock it, of the positive take-up lever *Q*, provided with a pivot and roller, and adapted to be operated by the action of said cam-groove *c* on such roller, substantially as described.