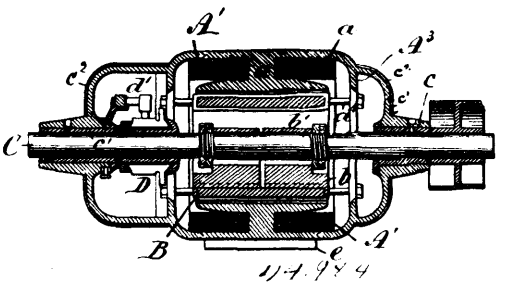
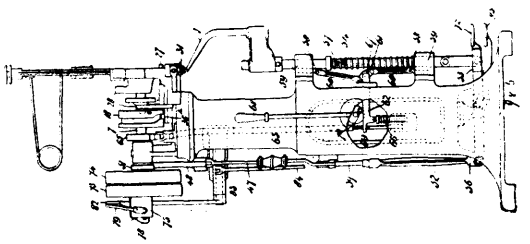
toward the edges of the cylinder and embracing the coils, substantially as described. 2nd. The combination, with an armature, of a



multipolar field-magnet, consisting of a cylinder surrounding the armature, and having pole-pieces projecting from its edge inward and other pole-pieces projecting from its middle portion inward, the different pole-pieces alternating with one another around the armature, and exciting coils confined between the cylinder and the pole-pieces. 3rd. The combination, with the cylinder A, provided with one set of pole-pieces, of the end rings provided with the inward projections, constituting the other set of pole-pieces, as set forth. 4th. The combination, with the cylinder A, provided with one set of pole-pieces, of the end rings provided with the inward projections constituting the two other set of pole-pieces, and bolts as a^4, connecting the two rings and securing them to the cylinder, substantially as described.

No. 44,985. Machine for Nailing Boots.

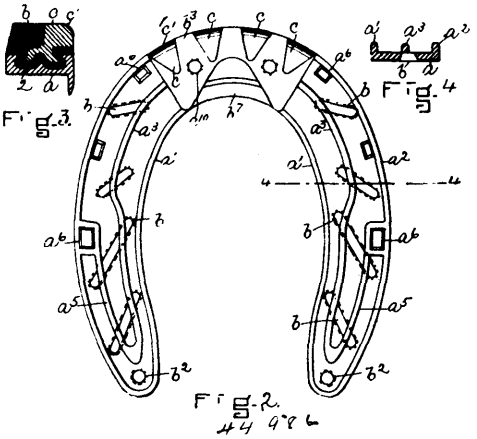
(*Machine à clouer les chaussures.*)



Richard W. Bateman, Halifax, York, England, 28th December, 1893; 6 years.

Claim.—1st. In a boot nailing machine, and in combination, a fixed shear box 20, shear block 22, stud 23, and stud disc 26, operating the block 24, shaft 27, lever 28, and friction roller 29, for operating the disc, and so sliding the shear block, nail carrier 31, piece 34, connected thereto, bar 35, and cranked lever 26, having friction roller 36^a, for sliding the nail carrier, and a cam having separate grooves for engaging with the friction rollers 29 and 36^a, and means for operating the cam, substantially as described. 2nd. In a boot nailing machine, and in combination, a vertical slide piece 4, a horizontal slide piece 8, adapted to move in the piece 4, a friction roller 5^a, and a pricker carried by said piece 8, a supplementary slide piece 10 for operating on the piece 8, pin 9, on piece 10, slotted lever 11, and means for operating the latter, a fixed block 13, adapted to be struck by the friction roller 5^a, means for reciprocating the plate 4, and means for retracting the piece 8, substantially as described. 3rd. In a boot nailing machine, and in combination, the horn 1, horn spindle, a light spring for raising the latter, wedges for securing same in position, means for holding the spindle, toggle levers for inserting and withdrawing the wedges, means for operating said toggle levers, means for lowering the spindle, and means for pricking and pegging the sole on said horn, substantially as described. 4th. In a boot nailing machine and in combination, the horn 1, horn spindle 54, spring 57, sockets 59, wedges 58, toggle levers 60, link 61, pivoted lever 62, connected to same, means for rocking the lever to operate the wedges through the toggle levers, and a treadle connected to the spindle for depressing the latter, substantially as described. 5th. In a machine of the character described, the combination of the pivoted lever 62, toggle link, toggle levers, wedges and horn spindle, rod 63 connected to lever 62, the main shaft, a cam on same for operating the rod, and a spring 66 connected to lever 62. 6th. In a machine of the character described the combination of the pivoted lever 62, toggle links, toggle levers, wedges and horn spindle, the hand lever 68, dix 69, eccentric pin 70 for bearing on lever 62, and spring 66 for operating the wedges by hand, substantially as described. 7th. In a boot nailing machine, and in combination, the horn spindle 54, a foot lever connected thereto at one end, a rod connected to the other end, a strap and weight or its equivalent connected to the rod, a pulley over which the strap passes, means for holding the strap fixed on the pulley, and means for raising the latter so that the horn spindle may be lowered to permit of the feed or movement of the boot, substantially as described. 8th. In a boot nailing machine, and in combination, the horn spindle 54, a foot lever connected thereto at one end, a rod 52, connected to the other end, a strap 39, and spring 38, or its equivalent, connected to the rod, a pulley over which the strap passes, a pivoted arm or fork 41 in which the pulley is mounted, a link 46 pivoted on the arm or fork, means operated by the link for jamming the strap into the pulley, a rod 47 attached to the link, a cranked lever 48 attached to the rod, the main shaft and a cam on same for operating the lever 48 to lift the pulley, and so lower the horn spindle, substantially as described.

No. 44,986. Horse-shoe. (*Fer à cheval.*)



Myron L. Chamberlain, Boston, Massachusetts, U.S.A., 29th December, 1893; 6 years.

Claim.—1st. A compound horse-shoe consisting of a metal frame composed of a plate or web having one or more ribs and provided with locking apertures, and a wearing surface composed of an elastic substance vulcanized on to the said web or plate and enveloping the said rib, the said plate forming a substantially wide solid backing for the elastic wearing surface, substantially as described. 2nd. A compound horse-shoe consisting of a metal frame or shoe, an elastic wearing surface, and a cushioned guard locked to the metal frame or shoe, and having its wearing surface substantially flush with the elastic wearing surface, substantially as described. 3rd. A compound horse-shoe consisting of a metal frame composed of a web or plate having side or edge flanges, one or more ribs secured to or forming part of the said web or plate between the said edge flanges, and a wearing surface of elastic material secured to the said plate or web between the side flanges, substantially as described. 4th. A compound horse-shoe consisting of a metal frame, composed of a web or plate having side or edge flanges and provided with locking apertures, a wearing surface of rubber or like elastic material vulcanized on to the said frame and extended below the side flanges, and one or more metal surfaces embedded in the elastic wearing material and substantially flush with the same, to protect the elastic material from wear, substantially as described. 5th. A compound horse-shoe consisting of a copperized metal frame composed of a plate or web, one or more ribs secured to or forming part of the web or plate between its edges and extended for the whole or a portion of its length, as described, and a wearing surface of rubber or like elastic material vulcanized on to the said copperized plate or web, substantially as described. 6th. A compound horse-shoe consisting of a copperized metal frame or shoe, a wearing surface of rubber or like elastic substance vulcanized on to the said copperized metal frame or shoe, and one or more metal wearing surfaces locked to the metal frame or shoe and embedded in the elastic wearing substance and substantially flush with the same, substantially as and for the purpose specified. 7th. A compound horse-shoe consisting of a metal frame composed of a plate or web provided with a plurality of countersunk holes or openings forming locking apertures, one or more ribs attached to the lower surface of the plate between its sides, and a rubber wearing surface secured to the lower surface of the plate and extended into the countersunk holes and enveloping the said rib, substantially as described. 8th. A compound horse-shoe consisting of a copperized metal frame composed of a plate or web provided with a plurality of countersunk holes, and having one or more ribs attached to the lower surface of the plate or web and extended across the said countersunk holes, and a rubber wearing surface vulcanized on to the lower surface of the copperized plate or web, filling the countersunk holes and enveloping the said rib, substantially as described. 9th. A compound horse-shoe, consisting of a copperized metal frame composed of a plate or web having locking apertures, and one or more ribs attached to the lower surface of the