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C. C. HARLOW & A. LINDGREN.

BRUSH MACHINE.

APPLICATION FILED SEPT. 27, 1900.

NO MODEL.

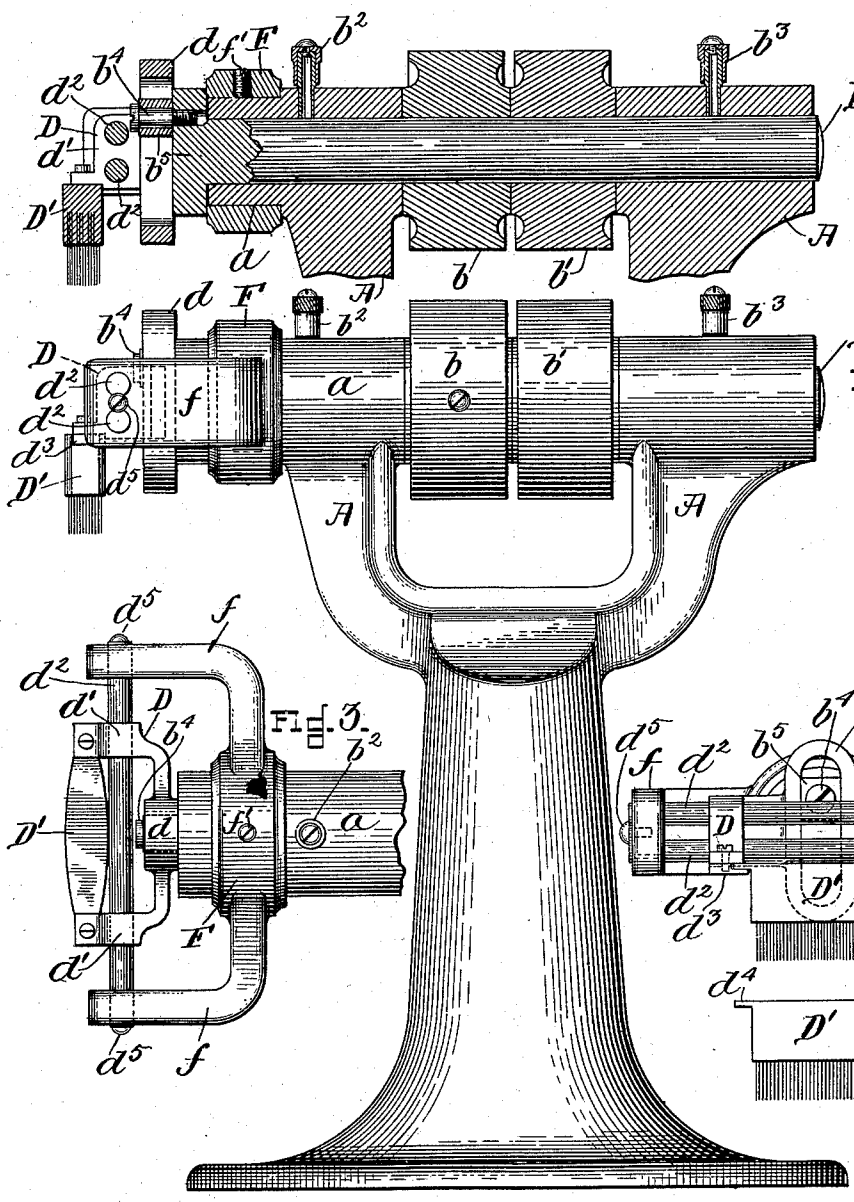


Fig. 2.

Fig. 1.

Fig. 3.

Fig. 4.

Fig. 5.

Witnesses.

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CUSHING C. HARLOW AND ALEXANDER LINDGREN, OF BROCKTON, MASSACHUSETTS, ASSIGNORS TO CHARLES S. PIERCE, OF BROCKTON, MASSACHUSETTS.

BRUSH-MACHINE.

SPECIFICATION forming part of Letters Patent No. 717,988, dated January 6, 1903.

Application filed September 27, 1900. Serial No. 31,318. (No model.)

To all whom it may concern:

Be it known that we, CUSHING C. HARLOW and ALEXANDER LINDGREN, both of Brockton, in the county of Plymouth and State of Massachusetts, have invented a new and useful Reciprocating-Brush Machine, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation of the best form of our machine. Fig. 2 is a sectional view of the moving parts. Fig. 3 is a plan and Fig. 4 an end view of the head of our machine. Fig. 5 shows the brush detached.

Our invention is a brush held by clamps in a holder mounted on ways and means to rapidly reciprocate the holder, all combined to form a machine such that the workman can present a boot or shoe to the reciprocating brush, and thereby clean off the stitches which unite the welt and outsole without danger of injury to the upper. This work has heretofore been done by hand and no machine-brush adapted to this work has heretofore been known.

In the drawings the frame A carries shaft B, with fast and loose pulleys b b' and suitable oil-cups b^2 b^3, as will be plain from the drawings. Shaft B has a crank-pin b^4 at one end, which carries the usual box b^5. Our brush-holder is a yoke D with a slotted bar d across the bow of the yoke and two holes through each leg d' of the yoke, through which the guide-rods d^2 extend, and the legs d' of the yoke D also carry clamps d^3, which take ears d^4 on brush D′ in order to firmly connect the brush and its holder and compel the brush D′ to reciprocate rapidly as the holder D is reciprocated in the ways formed by the guide-rods d^2, engaging the legs d' of the holder D. These ways or guide-rods d^2 are supported in arms f, fast to hub F, which is supported on the outer end of box a, which is a part of frame A. We prefer to make the end of box a cylindrical to fit a cylindrical bore in hub F and to hold hub F stationary by means of set-screw f', as this enables hub F and its arms f with rods d^2 and the brush-holder and brush to be adjusted to suit the workman, some preferring that the brush shall reciprocate in a horizontal plane, while others prefer a plane more or less inclined to the horizon, and while this feature of our invention is practically of much importance yet it will be obvious that this feature is not dependent upon the other features of our invention, for part a may be non-cylindrical and fit a non-cylindrical hole through hub F. The ways or rods d^2 are preferably short pieces of wire inserted endwise through the holes in legs d' of brush-holder D and held from endwise movement by the heads of screws d^5.

The operation is as follows: When the belt is shifted from loose pulley b' to fast pulley b, shaft B revolves rapidly, in practice about twelve hundred per minute, and the crank-pin b^4 and its box b^5 in the slot of bar d cause brush-holder D to reciprocate rapidly on ways d^2, which are held fast in the arms f of hub F, the plane of the ways d^2 being adjusted to suit the workman by adjusting hub F on the end of box a. The workman holds the shoe in his hands and presents the upper edge of the welt to the rapidly-reciprocating brush and cleans the stitches without danger of heating the upper, for our reciprocating brush seems to have no tendency to become unduly heated when the welt and the stitches on its upper surface are thus presented to its action.

What we claim as our invention is—

1. In combination a crank-shaft; its boxes; a sliding block on the wrist-pin of the crank, and in a slot in a slotted brush-carrier; that brush-carrier; and ways for the brush-carrier supported on one of the boxes of the crank-shaft.

2. In combination a crank-shaft; its boxes; a hub on the end of one of the boxes of the crank-shaft; ways carried by that hub; a

brush-carrier on those ways; and means to cause the revolution of the crank-shaft to reciprocate the carrier.

3. In combination a crank-shaft; a hub with a cylindrical bore on the cylindrical end of one of the boxes of the crank-shaft; means to retain the hub in any desired angular position with relation to the cylindrical end of the crank-shaft box; ways carried by the hub; a carriage on these ways; and means to cause the revolution of the shaft to reciprocate the carriage.

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Witnesses:
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