

J. AMES, Jr.

Machines for Driving Brush-Handles.

No. 142,137.

Patented August 26, 1873.

Fig. 3

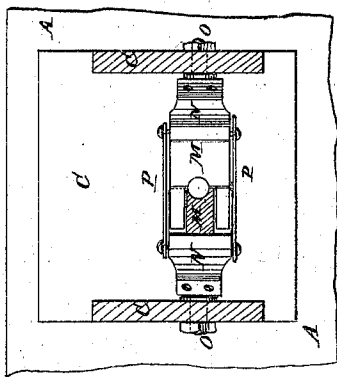


Fig. 4

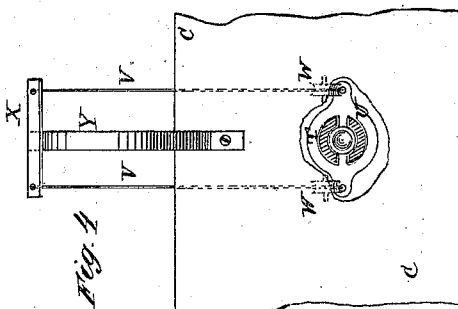
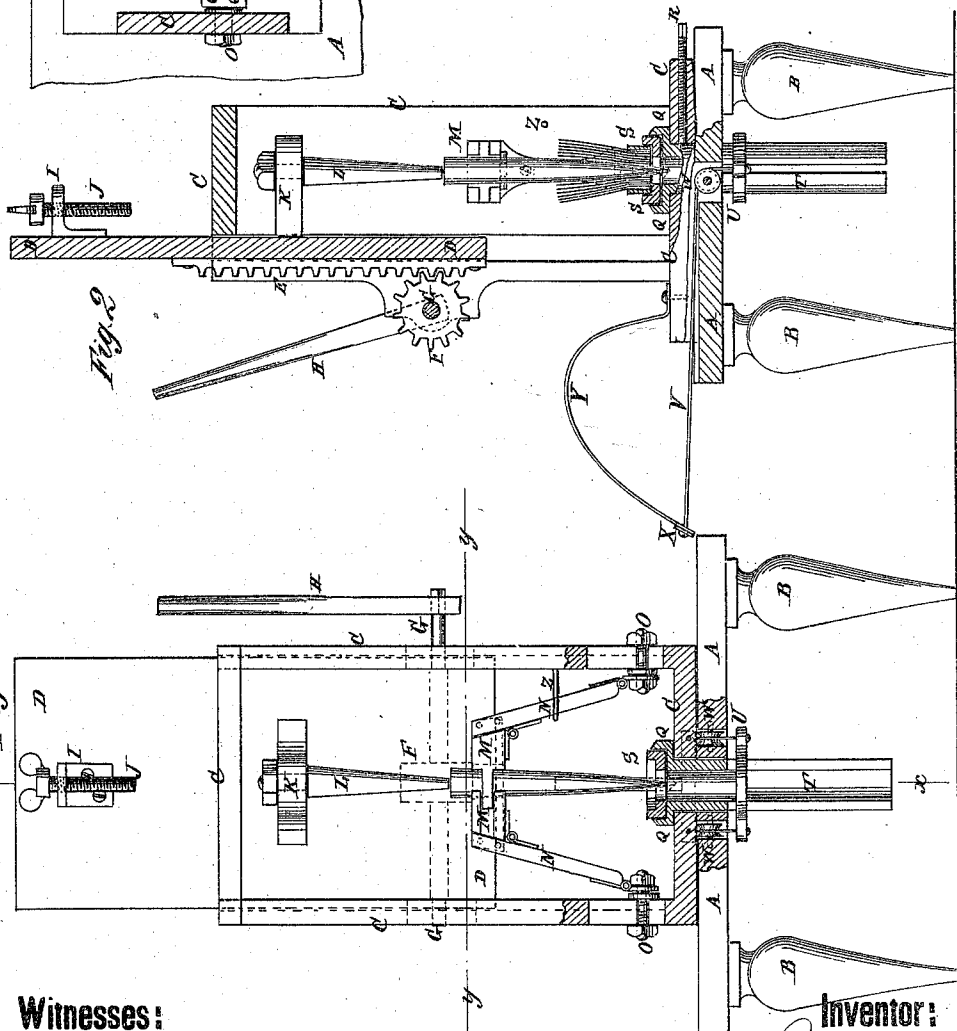


Fig. 2



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JOHN AMES, JR., OF LANSINGBURG, NEW YORK.

IMPROVEMENT IN MACHINES FOR DRIVING BRUSH-HANDLES.

Specification forming part of Letters Patent No. **142,137**, dated August 26, 1873; application filed July 19, 1873.

To all whom it may concern:

Be it known that I, JOHN AMES, Jr., of Lansingburg, in the county of Rensselaer and State of New York, have invented a new and Improved Machine for Driving Brush-Handles, of which the following is a specification:

Figure 1 is a front view of my improved machine, partly in section, to show the construction. Fig. 2 is a vertical section of the same taken through the line *x x*, Fig. 1. Fig. 3 is a horizontal section of the same taken through the line *y y*, Fig. 1. Fig. 4 is a detail top view of the spring-guide for the forward end of the handle.

My invention has for its object to furnish an improved machine for driving brush-handles, which shall be simple in construction, convenient in use, and reliable in operation, driving the handles exactly in the axis of the brush. The invention consists in the notched and hinged blocks, the hinged and pivoted arms, and the adjustable bolts, in combination with the driver for holding the brush-handle while being driven; and in the guide, the cords, and the spring, in combination with the slotted tube and the driver for holding the brush-handle while being driven, as hereinafter fully described.

A is the bench or table of the machine, which is supported upon legs B of such a length as to raise the machine to a convenient height. To the table A is attached a frame, C, consisting of two side boards, connected at their upper and lower ends, by two end boards. D is a plate or frame, which slides up and down in grooves or ways in the inner sides of the side boards of the frame C. To the rear side of the plate or frame D is attached a rack, E, into the teeth of which mesh the teeth of the small gear or pinion wheel F attached to the shaft G, which revolves in bearings attached to the rear edges of the side boards of the frame C. To one end of the shaft G is attached a lever or crank, H, for convenience in operating it to raise and lower the plate or frame D. To the forward side of the upper part of the plate D is attached a bracket, I, through a screw-hole in which passes a hand-screw, J, the forward end of which strikes against top board of the frame C, and thus limits the downward movement of the plate D, and insures all the handles

of the same lot of brushes being driven to exactly the same point. To the middle part of the forward side of the plate D is attached a bracket, K, to which is secured the follower, plunger, or driver L, by which the handle is forced into the brush. M are two blocks, in the inner or adjacent ends of which are formed half-round notches to receive and hold the handle while being driven. The outer ends of the blocks M are hinged to the inner sides of the arms N, so that the blocks M may be kept horizontal while moving toward and from each other. In the side edges of one of the blocks M are formed grooves, and upon the side parts of the inner end of the other part are formed fingers, which fit into said grooves, and thus keep the said blocks M exactly in line with each other as they move out and in. The lower ends of the arms N are hinged and pivoted to the inner ends of the bolts O, so that the upper ends of the arms N may move toward and from each other, and so that the upper ends of the arms N and the blocks M may be moved back out of the way to enable the brush to be conveniently removed from the machine. Z are stops attached to the side boards of the frame C, to stop the arms N in such a position that the hole in the blocks M may be directly below the point of the driver L. The bolts O pass through vertical slots in the side boards of the frame C, where they are secured in place by nuts, so that by loosening the said nuts the blocks M and arms N may be moved up and down to adjust the machine for use with larger or smaller brushes. The blocks M and the upper ends of the arms N are held toward each other by rubber or other springs P, connecting the upper ends of the said arms N, as shown in Fig. 3. In the bottom board of the frame C, and in the table A directly beneath the driver L, is formed a hole, in which is fitted a thimble, Q, which is secured in place by a set-screw, R, which passes in through the bottom board of the frame C, as shown in Fig. 2. The upper end of the thimble Q is flanged and countersunk to receive a socket, S, the cavity of which is made of such a size that the ferrule of the brush may fit into it exactly, and be supported against the strain while the handle is being driven. The socket S is detachable, so that it may be taken out

and replaced with another having a larger or smaller cavity, when larger or smaller brushes are to be operated upon. The socket S and thimble Q have a hole formed through them of sufficient size to allow the handles of the brushes to pass through freely. To the lower side of the table A, around the hole in said table, is attached a downwardly-projecting tube, T. The tube T is slotted longitudinally, and may be an extension of thimble Q. U is a ring, which surrounds the tube T. The ring U is made with a bar passing through the slot of the tube T, and an enlargement upon the middle part of said bar fitting into the cavity of the tube T. In the enlarged center of the bar of the ring U is formed a hole or socket to receive the point of the brush-handle, so as to keep said handle accurately centered. To the opposite sides of the ring U are attached the ends of two cords, V, which pass over pulleys W. The cords V extend back through channels between the table A and the base board of the frame C, and their rear ends are attached to the ends of a cross-bar, X, the middle part of which is attached to one end of a bent spring, Y, the other end of which is attached to the base board of the frame C.

In using the machine the point of the brush-handle is passed down through the hole between the blocks M, and is inserted in the center of the brush-head, the lower end of the driver resting upon the upper end of the brush-

handle. The lever H is then operated, forcing the brush-handle down through the brush-head until the forward end of the set-screw J strikes the top board of the frame C. As the forward end of the brush-handle passes down through the brush-head, its point or forward end enters the socket in the guide U, which keeps it centered. The brush-handle is thus always supported at two points, and kept accurately centered. When the brush-handle has been fully driven the driver L is raised from between the blocks M, the blocks M and arms N are pushed back out of the way, and the brush is removed.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The notched and hinged blocks M, the hinged and pivoted arms N, and adjustable bolts O, in combination with the slotted frame C and the driver L, for holding the brush-handle while being driven, substantially as herein shown and described.

2. The guide U, cords V, and spring Y, in combination with the slotted tube T and driver L, for holding the brush-handle while being driven, substantially as herein shown and described.

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Witnesses:

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