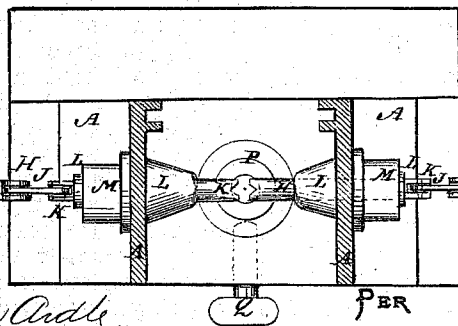
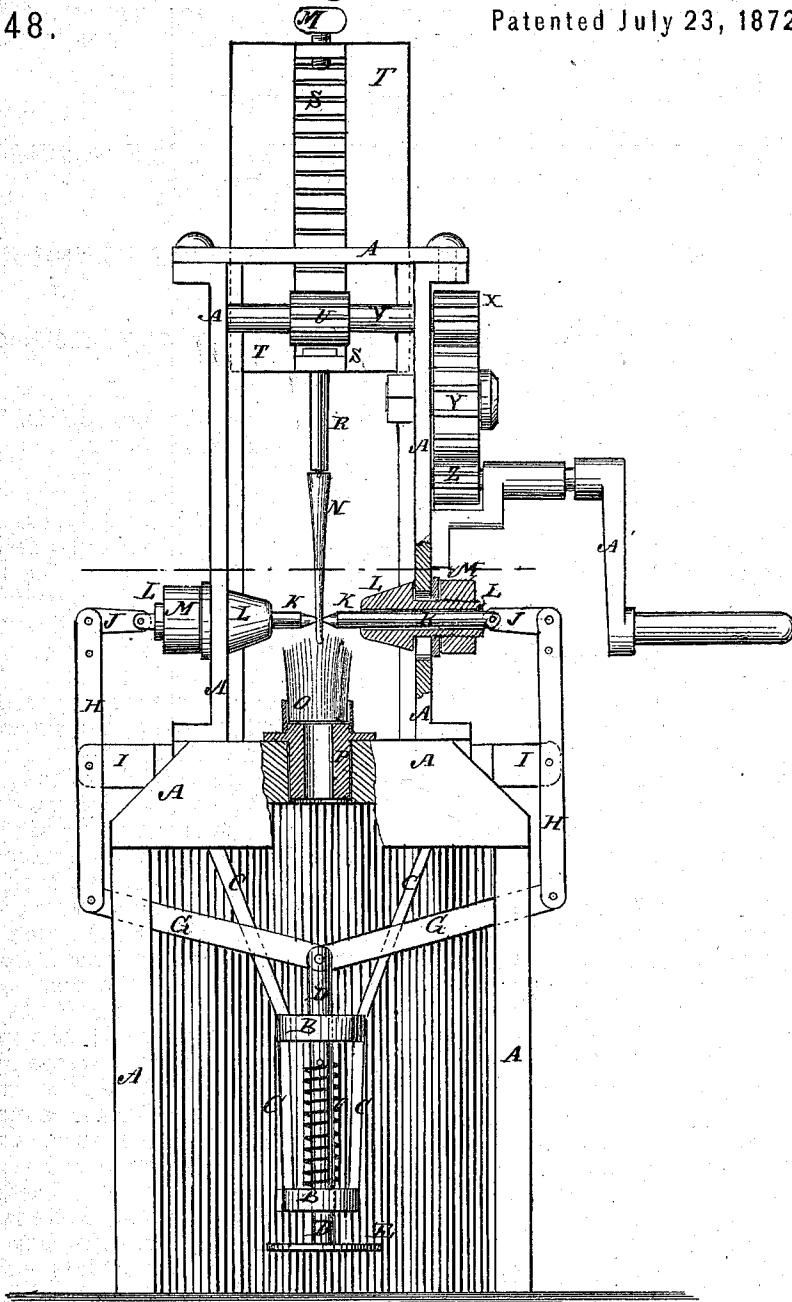


P. PEARTREE.

Machine for Driving Brush-Handles.

No. 129,748.

Patented July 23, 1872.



Witnesses:

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IMPROVEMENT IN MACHINES FOR DRIVING BRUSH-HANDLES.

Specification forming part of Letters Patent No. 129,748, dated July 23, 1872.

Specification describing a certain Improvement in Machine for Driving Brush-Handles, invented by PETER PEARTREE, of Lansingburg, in the county of Rensselaer and State of New York.

Figure 1 is a front view of my improved machine, parts being broken away to show the construction. Fig. 2 is a horizontal section of the same taken through the line *x x*, Fig. 1.

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 effective in operation; and it consists in the construction and combination of the various parts of the machine, as hereinafter more fully described.

A is the frame of the machine. B are two guide-plates, placed the one directly above the other, and which are connected with and firmly supported from the lower part of the frame A by arms or a frame-work, C. Through the plates B are formed holes for the passage of the vertical rod D, to the lower end of which is attached or upon it is formed a foot-rest or treadle, E. The rod D is held up by a coiled or other spring, F, coiled around or connected with said rod D. To the upper end of the vertical rod D are pivoted the inner ends of two bars, G, which pass out through openings or slots in the frame A, and to their outer ends are pivoted the lower ends of the two levers H. The rods or bars G may each be made in one piece; or each may be made in two pieces, the adjacent ends of said pieces being connected by a right-and-left nut, so that by turning the said nut in one or the other direction the said rods or bars may be lengthened or shortened, as may be desired. This latter construction I prefer on account of the great facility it gives for centering the brush-handle, as hereinafter described. The levers H are pivoted to lugs or brackets I attached to the frame-work A. To the upper ends of the levers H are pivoted the outer ends of the short bars J, to the inner ends of which are pivoted the outer ends of the rods K, so that the said rods may move out and in in a straight line, while the upper ends of the levers H move in the arcs of circles. The rods K pass through and work in guide-blocks L, which pass through slots in the sides of the upper post of the frame

A, where they are adjustably secured in place by hand-nuts M, which are screwed upon the outer ends of the said guide-blocks L, as shown in Figs. 1 and 2. By this construction the guide-blocks L, and consequently the rods K, may be adjusted higher or lower, according to the size of the brush to be operated upon. To enable this to be done several holes are formed in the upper part of the levers H to receive the pivoting-pins that connect the said levers H with the short bars J. The inner ends of the rods K are forked or notched, as shown in Fig. 2, to receive and grasp the brush-handle N, and hold it while being driven. If from any cause the point of the handle N, while being held by the holding-rods K, should not be exactly over the center of the brush-head O, it may be centered by adjusting the length of the bars G in the manner hereinbefore described, or in any other convenient manner. The butt of the brush-head O rests upon a die or plate, P, having a hole formed through its center for the passage of the brush-handle. The stem or shank of the die P fits into a hole in the bed-plate or table of the machine, and is detachably secured in place by a set-screw, Q, as shown in Fig. 2. In the case of filled brush-heads the die P must be made with a circular central projection, as shown in Figs. 1 and 2, to fit into the open end of the brush-ferrule, so that the ends of the bristles may have a firm support while the handle is being driven. In the case of solid brush-heads, the dies should be made with a shallow socket or recess to receive the butt of the brush-head, so that it may be held securely and steadily while the handle is being driven. The handle is driven by the plunger or driver R, upon the lower end of which are formed one or more spurs to penetrate the end of the handle N, and thus keep it in place. In the case of round handles, one spur would be sufficient; but in the case of oval handles there should be two or more spurs to keep the said handles from turning upon the ends of the holding-rods K. The upper end of the plunger or driving-rod R is attached to the lower end of the rack-bar S, which is formed upon or attached to the forward side of the plate T, the side edges of which enter grooves in the side parts of the upper part of the frame A. The teeth of the rack-bar S mesh

into the teeth of the small gear-wheel U attached to the short shaft V, which revolves in bearings in the upper part of the frame A, and to which the power is applied. By this construction, when the handle to be driven has been arranged as hereinbefore described, by revolving the shaft V in one or the other direction the handle will be forced down into the brush-head, or the driver raised from said handle. W is a set-screw, which passes down through a lug formed upon the upper end of the rack-bar S, so that as the said rack-bar is lowered to drive the brush-handles the lower end of the said set-screw may strike the top bar or plate of the frame A, and stop the driver at the required point. This construction enables the operator, by simply adjusting the set-screw W, to drive all the handles to exactly the required point, which is almost impossible to be done when the handles are driven by hand. Power may be applied to the shaft V by any convenient and suitable gearing. One arrangement for doing this is shown in the drawing, which I will now describe. To the outer end of the shaft V is attached a small gear-wheel, X, into the teeth of which mesh the teeth of an intermediate gear-wheel, Y, into the teeth of which mesh the teeth of a gear-wheel, Z, to the journal of which is attached a crank, A', to which the power is applied. The gear-wheel Y revolves upon a

gudgeon attached to the frame A, and the journals of the gear-wheel Z revolve in bearings in the said frame and in a bracket attached to it.

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

1. The combination of the guides B, arms or frame C, vertical rod D provided at its lower end with a foot-rest or treadle, E, coiled or equivalent spring F, bars G, whether made solid or extendable, levers H, short bars J, holding-rods K, and adjustable guide-blocks L M with each other and with the frame A, for holding the brush-handle while being driven, substantially as herein shown and described.

2. The combination of the toothed rack S T, driving-rod R, gear-wheel U, and shaft V with each other and with the holding-rods K and frame A, for driving the brush-handle, substantially as herein shown and described.

3. The combination of the set-screw W with the rack S and driver R and with the frame A, for adjusting the driver to drive the handle exactly to the required point, substantially as herein shown and described.

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