J. A. DAYTON.

Machine for Polishing Moldings.

No. 165,073. Patented June 29, 1875.

Fig 1

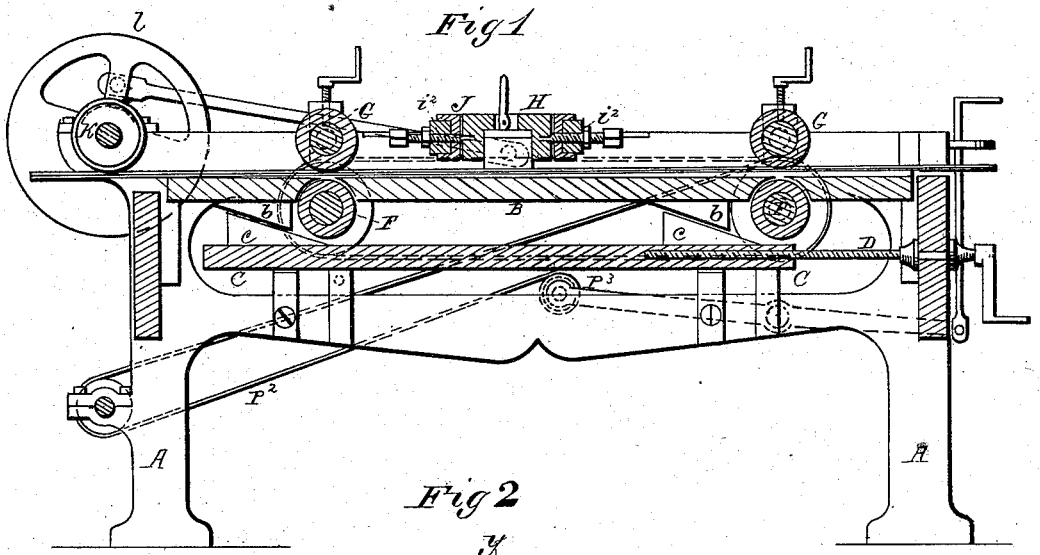


Fig 2

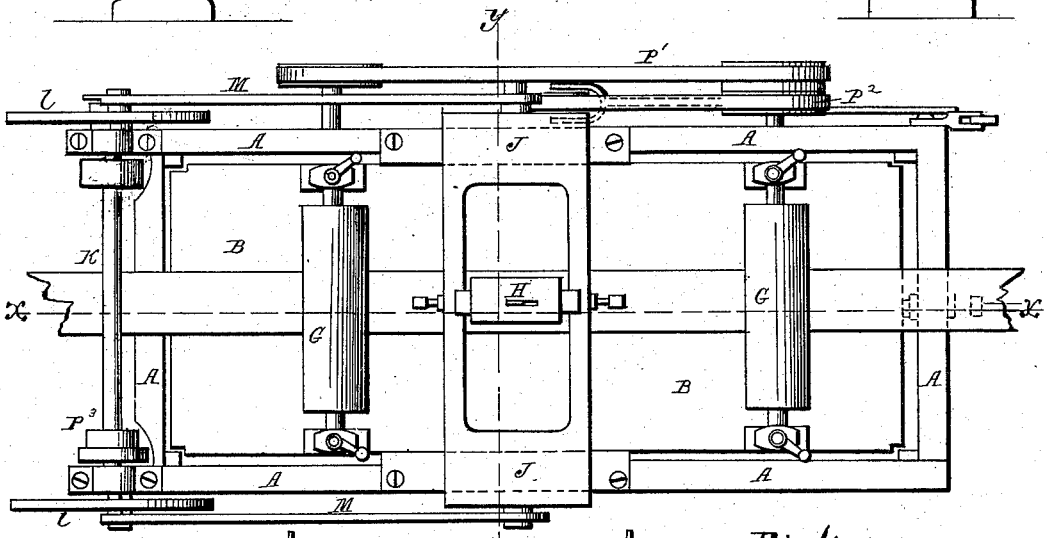


Fig 3

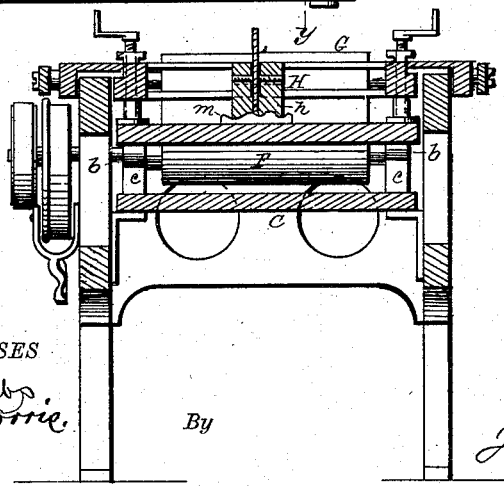
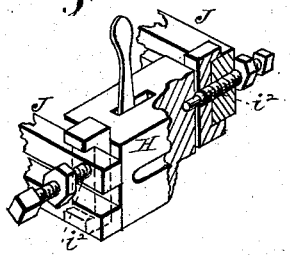


Fig 4



WITNESSES

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JOHN A. DAYTON, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN MACHINES FOR POLISHING MOLDINGS.

Specification forming part of Letters Patent No. **165,073**, dated June 29, 1875; application filed May 7, 1875.

To all whom it may concern;

Be it known that I, JOHN A. DAYTON, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Machines for Polishing Moldings, of which the following is a specification:

This invention relates to certain improvements in polishing-machines for polishing moldings and other like articles.

The object of the invention is to adapt the apparatus to polishing articles of various thicknesses, and cause the polishing rubber or pad to give or adjust itself to the inequalities or irregularities of the article, imitating, to some extent, the action of the hand in polishing.

My invention consists of a novel construction and combination of parts, which will be fully hereinafter described, and specifically pointed out in the claims, and a preliminary description is therefore not deemed essential.

In the accompanying drawing, Figure 1 is a vertical longitudinal section of my improved machine taken in the line *x x* of Fig. 2. Fig. 2 is a top view. Fig. 3 is a vertical transverse section taken in the line *y y* of Fig. 2. Fig. 4 is a perspective view of the polisher.

A represents the frame of the machine, in the upper part of which is the bed or table B, which is arranged so as to be vertically adjustable inside of said frame. On the under side of the bed or table B are a number of wedge-shaped blocks or inclined planes, *b*, corresponding in number and position with a number of inclined planes, *c*, on the upper side of a frame, C, arranged within the main frame A, the upper inclined planes running in one direction, and the lower ones in an opposite direction. The frame C rests on supports attached to the side pieces of the main frame, and is provided with guides for maintaining it in proper position in the frame. At one end of the frame A is a screw, D, passing through the end piece of the main frame, and engaging with the end piece of the frame C. The bed or table B works in the main frame, so that it may be made to rise and fall therein. The inclined planes *b* rest directly upon the inclined planes *c*, and the bed or table is thereby supported in place. Feed-rolls F F are journaled in bearings attached to the bed or table, so as to rise and fall therewith, and are arranged to protrude through openings in the table sufficiently far above the surface to engage with the work. Immediately over these feed-rolls are similar rolls G G, journaled in bearings attached to the bed or table. The lower rolls are driven by belting P^1 P^2, and the upper rolls turn by friction. The belt P^2 is provided with a belt-tightener, P^3. The faces of the rollers F F G G are covered with rubber or other suitable material, sufficiently thick and elastic to insure their proper engagement with the work without injuring or marring the same. The lower rollers, being attached to the bed or table, always maintain the same position with relation thereto. The journal-bearings of the upper rolls are adjustable up or down, in order that the pressure of the rollers may be made to correspond with that of the polisher, when one polisher is substituted for another of different thickness, or when the polishes has become worn.

The polisher may be the same as that described in Letters Patent No. 151,847, granted to George G. Cochrane and myself, June 9, 1874; or it may be made of any other suitable material with a polishing-surface.

As shown herein, the polisher *h* is attached to a holder or stock, H, by glue or otherwise, and has a rubber pad or cushion, *i*, interposed between it and the stock or holder to render it elastic. The polisher, or the stock H to which it is attached, is pivoted to a carrying-frame, J, by means of screw-pivots i^2 working in slots in the frame in such a manner as to permit it to oscillate in a direction transverse to its line of travel, in order that it may adjust itself to the work. The frame J is arranged to reciprocate in ways or guides at the upper portion of the main frame A. At one end of the main frame is journaled the main shaft K, which is driven by a belt from the driving-power. At the ends of the shaft K are crank-wheels *l*, connected by pitmen M with the polisher-carrying frame J, so that as the shaft revolves the frame is reciprocated back and forth. The shaft K is connected by belts with the shaft P^3, so as to turn said roller with the desired speed, and impart motion to the lower roll.

The molding *m* or other work to be polished

is fed in at one end of the machine, passing between the feed-rollers and under the polisher. Then by turning the screw D so as to draw the frame C toward the feed end of the machine, the inclined planes *c* pass under the inclined planes *b*, and raise the bed or table B until the required pressure is obtained upon the work between the feed-rollers and between the polisher and the bed or table. As the shaft revolves it imparts a reciprocating motion to the polisher, and a rotary motion to the feed-rollers, so that as the work is polished it is fed along by the rollers. Adjustable guides may be used on the table B for the purpose of guiding the work thereon. By turning the screw D in an opposite direction to that described above, the frame C is moved backward so as to allow the bed or table to descend.

By the construction and arrangement of parts in this machine, the polisher-carrying frame has a reciprocating motion only, while the pressure upon the work is produced from below by the vertical adjustment of the bed or table, through the operation of the frame C and the inclined plane.

The table may be adjusted to accommodate moldings or work of different thicknesses, and the movement is gradual and uniform throughout.

By feeding the polishing material down through the polishing-block, and having it present at all times during the polishing action, the polishing material will keep the polishing-block from being coated or glazed with the gummy or other matter present in the material acted upon, which is a desideratum of the greatest importance, as the constant renewal and redressing of the polisher is avoided. This machine will also be found eminently useful in polishing or scouring any wooden or metal surface, and will be found a practical apparatus for removing glue and other foreign substances from the surface of veneered molding, as all glue will be removed from the surface and a rich polish imparted.

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

1. The combination of the vertically-adjustable bed B and the reciprocating carrier H, provided with the polishing-stock *h*, and pivoted within a carrying-frame, J, whereby the said carrier and its polishing-stock may be oscillated within the carrying-frame in a direction transverse to its line of travel, as and for the purpose specified.

2. The combination, with the reciprocating polisher, of the bed B, having inclined planes *b*, and the vertically-adjustable rollers G G, of the frame C, having the inclined planes *c*, and the operating screw D, for adjusting said frame to elevate or lower the bed B, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand.

JOHN A. DAYTON.

Witnesses:

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JOS. L. COOMBS.