(No Model.)

P. T. LAMKIN.

MACHINE FOR SANDPAPERING HANDLES.

No. 435,698. Patented Sept. 2, 1890.

Fig. 1

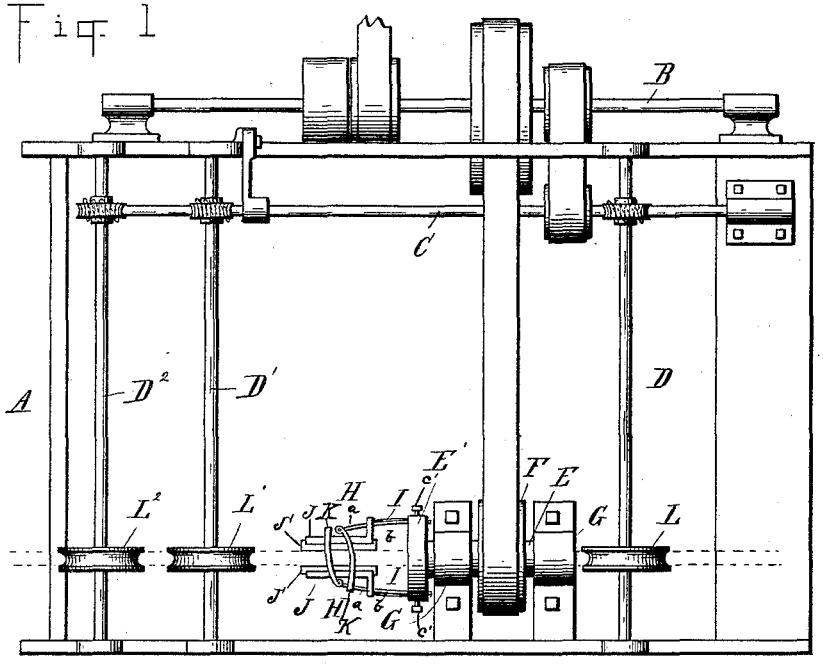


Fig. 2

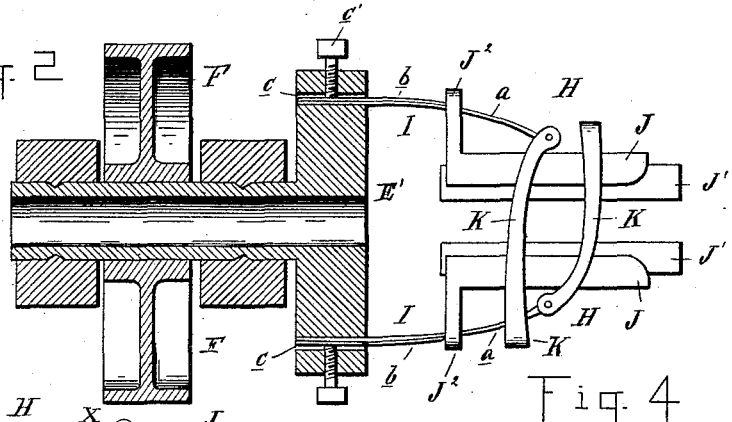


Fig. 3.

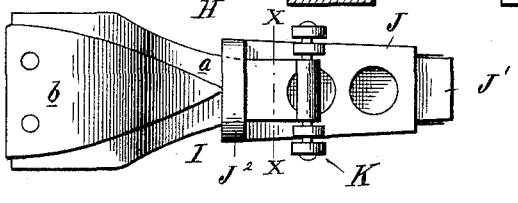
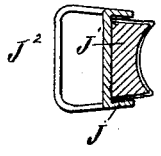


Fig. 4



Witnesses:
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Geo C Gregg

Inventor:
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UNITED STATES PATENT OFFICE.

PERRY T. LAMKIN, OF WHITTAKER, MICHIGAN.

MACHINE FOR SANDPAPERING HANDLES.

SPECIFICATION forming part of Letters Patent No. 435,698, dated September 2, 1890.

Application filed December 4, 1889. Serial No. 332,496. (No model.)

To all whom it may concern:

Be it known that I, PERRY T. LAMKIN, a citizen of the United States, residing at Whittaker, in the county of Washtenaw and State of Michigan, have invented certain new and useful Improvements in Machines for Sandpapering Handles, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in polishing-lathes; and the invention is especially designed to be used for sandpapering or polishing handles—such as hoe-handles, rake-handles, &c.; and the invention consists in the peculiar construction, arrangement, and combination of the various parts, all as more fully hereinafter described, and shown in the accompanying drawings, in which—

Figure 1 is a plan view of my improved machine. Fig. 2 is an enlarged longitudinal section showing the hollow mandrel and polishers. Fig. 3 is a plan view of one of the polishers detached. Fig. 4 is a cross-section on line *x x*, showing the way in which the sand-paper is secured.

A is the frame of the machine, on which is mounted the main shaft B, counter-shaft C, and the feed-shafts D, D′, and D^2, the latter being arranged in pairs in vertical planes and actuated by suitable worm-gearing with the shaft C.

E is a hollow mandrel provided with a head E′ and pulley F, journaled in bearings G on the frame of the machine.

H are polishers, which consist of the following parts: I are spring-arms, preferably made as shown in the drawings, of the main spring *a* and re-enforcement *b*, and these springs are adjustably secured in slots *c* in the head E′ at points opposite and equidistant from the center of the hollow mandrel by means of a set-screw *c*′. The rear ends of these springs curve inwardly and have secured pivotally to them the holders J for holding the polishing-blocks J′, the pivotal connection being made at or near the longitudinal centers of said holders. These blocks J′ are slightly wedge-shaped in plan, and in cross-section are of dovetail form, to fit the corresponding socket in the block-holder, in which they are wedged or clamped in any suitable manner. The working-faces of these blocks are formed concave, and are covered with the polishing medium or sand-paper, which latter may be held in place without gumming or gluing it to the block, by merely allowing its edges to project into the socket of the tool-holder, and thus secure it together with the block. The holders are provided with bails J^2 at their forward ends, which loosely embrace the spring-arms I, and prevent the holders from approaching each other too closely at their forward ends, while the holders are prevented from being crowded too far apart by bails K, one on each holder, and each embracing the opposite holder.

L, L′, and L^2 are pairs of grooved feed-rolls, mounted on the feed-shafts in line with the center of the hollow mandrel.

In practice the operation of the machine is as follows: The handles, or whatever else the operator may desire to polish, are fed into the hollow mandrel by the feed-rolls L, which carry the work to the polishers. Now it will be seen that as the ends of the holders forward of the pivots are the heavier the centrifugal force will readily distend them to receive the work. As soon as the work is sufficiently entered between the holders, the latter will be pressed down into contact with the work by the pressure of the spring-arms, the pivotal connection of the blocks allowing them to adjust themselves to the shape of the work, and should any choking occur the bails K will prevent any undue strain upon the spring-arms. In passing out from the polishers, the work is drawn by the feed-rolls L′ and L^2, which discharge it from the machine. While the work is discharged from the rear end of the polishers the tendency of the front ends to collapse and thereby produce an imperfect polish at the rear end of the work is counteracted by the bails J^2, which hold the front ends of the holder apart. The tension of the springs upon the work may be regulated by adjusting the springs in the slots *c*, thereby moving the polishers from or toward the head E′ of the hollow mandrel, and whenever the sand-paper is worn out very little delay is incurred in replacing it with new paper, as it is simply held in place by wedging its margins between the blocks and their sockets.

It is obvious that a lathe of this kind may be constructed with more than two polishing-tools without altering the construction, and it will also appear that one bail K would be sufficient for the purpose for which they are applied, but the use of a bail on each holder balances the two holders.

What I claim as my invention is—

1. In a polishing-lathe, the combination of the hollow revolving mandrel provided with a face-plate, spring-arms supported in said face-plate and projecting in the longitudinal direction of the mandrel, and the holders pivotally secured at or near their longitudinal centers to the free ends of the spring-arms, and with their front halves of greater weight than their rear halves, substantially as described.

2. In a polishing-lathe, the combination, with the feeding devices, of a hollow mandrel provided with a face-plate, and spring-arms adjustably secured to said face-plate in the longitudinal direction of said mandrel, the holders pivotally secured at or near their longitudinal centers to the spring-arms to prevent the front ends of the holders from approaching each other too closely, substantially as described.

3. In a polishing-lathe, the combination, with the feeding devices, of the revolving face-plate E′, the spring-arms I, secured thereto at diametrically-opposite points, the holders J, pivotally secured at or near their longitudinal center to the free ends of said spring-arms and having their front portions made heavier than their rear portions, the means for securing the polishing medium to the holders, the bails J^2, through which the spring-arms pass, and the bails K, mounted near the center of the holders, to limit their outward motion, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 12th day of August, 1889.

PERRY T. LAMKIN.

Witnesses:
CHARLOTTE BISHOP,
WILL BISHOP.