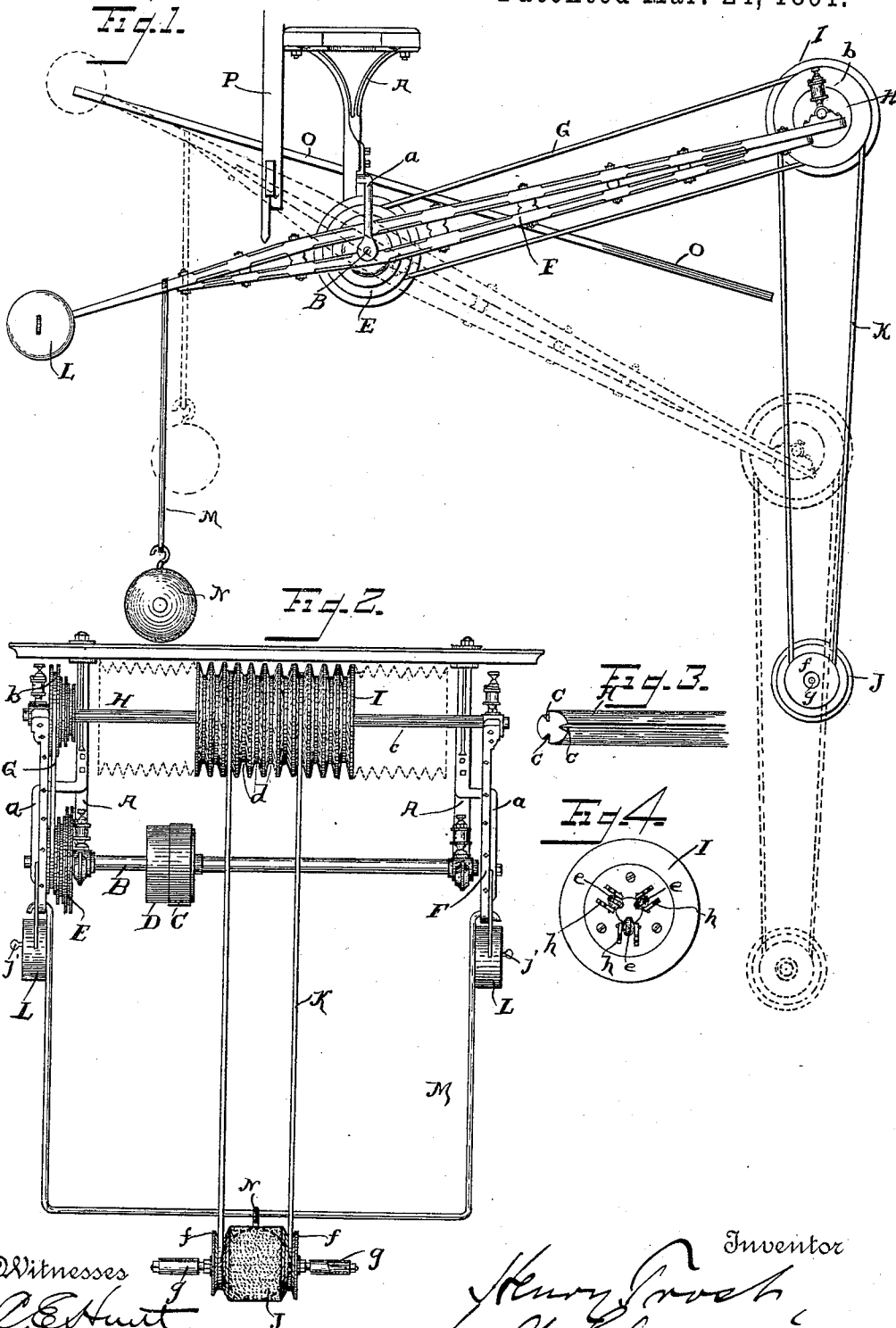


(No Model.)

H. TROST.
POLISHING MACHINE.

No. 449,059

Patented Mar. 24, 1891.



Witnesses
C. E. Hunt.
Alfred T. Gage.

Inventor
Henry Trost
by W. C. Stevenson
Attorney

UNITED STATES PATENT OFFICE.

HENRY TROST, OF COHOES, NEW YORK, ASSIGNOR TO CAROLINE R. TROST,
OF SAME PLACE.

POLISHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 449,059, dated March 24, 1891.

Application filed November 21, 1890. Serial No. 372,203. (No model.)

To all whom it may concern:

Be it known that I, HENRY TROST, a citizen of the United States, residing at Cohoes, in the county of Albany and State of New York, have invented certain new and useful Improvements in Polishing-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in polishing-machines, designed primarily for rubbing and polishing furniture; but it will be at once evident that it may be used for polishing all wood, metal, or mineral surfaces.

The invention has for its object, among others, to provide an improved machine of this character wherein shall be combined simplicity of construction, ease of manipulation, and efficiency of the work accomplished. I suspend the machine from above, so as to avoid occupying the space below. I pivot the carrying-frame so that it may be easily moved upon its pivot when desired. I arrange the brush or roll-actuating pulley so that it may be moved endwise upon its shaft and yet revolve therewith. The roll or brush is operated directly from this pulley by belts passed over the said pulley and over or in grooves in each end of the roll or brush. The pivoted frame is provided with weights suspended from the rear, which may be regulated according to the degree of pressure it is desired to put on the surface to be polished.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a side elevation of my improved polishing-machine. Fig. 2 is a front view thereof. Fig. 3 is a perspective view of a por-

tion of the shaft upon which the actuating-pulley is carried. Fig. 4 shows an end view of the actuating-pulley on an enlarged scale.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates hangers, of which there are preferably two, suspended from the ceiling or some suitable support overhead, and suitably journaled in suitable bearings in these hangers is the shaft B, on which are the fast and loose band-pulleys C and D, respectively, over which the driving-belt (not shown) passes, power being derived from any suitable source. (Not shown.) This shaft is extended at one end beyond the hanger, as shown in Fig. 2, and on this extended end is a cone-pulley E, arranged between the said hanger and one side of the pivoted frame, soon to be described.

From each hanger A extends outward and downward an arm *a*, as seen in Figs. 1 and 2, and F is a frame pivoted to the lower ends of these arms, as seen best in Fig. 1. This frame may be constructed in any suitable manner adapted to the purpose for which it is to be used, and may be pivoted nearer to or farther from its center, as found most desirable. It may be of wood or iron, or a combination of the two, preferably of wood, trussed, as shown in Fig. 1, and it is, as will be apparent, independent of shaft B in its movement. It will also be obvious that in order that the swinging frame may be inclined at any permissible angle and at the same time maintain a uniform distance between the center of shaft B and of shaft H the pivotal points of suspension of frame F should be at dead-center with shaft B.

G is a belt passed over the cone-pulley E and over another cone-pulley *b* on the shaft H at the front end of the pivoted frame. This shaft H is provided with longitudinal grooves *c*, preferably three in number, as shown in enlarged perspective in Fig. 3, and preferably V-shaped in cross-section.

I is the driving or actuating pulley provided upon its periphery with a plurality of grooves *d* and sleeved upon the shaft H, being provided at its ends with beveled wheels or projections *e*, journaled in brackets *h*, secured by

a plate *i* to the ends of the pulley, which wheels slide in the grooves *c* of the shaft, so that as the shaft revolves the actuating-pulley will revolve with it, yet the pulley is free
5 to be moved endwise on the shaft—for instance, by pulling sidewise on the brush hereinafter mentioned—to change its location as the nature of the work requires.

The pivoted frame is provided with a system of weights for regulating the pressure to be placed upon the surface to be polished. The rear ends of the frame are illustrated as provided with weights *L*, secured thereto and adjusted thereon by the set-screws *j*. There
15 is also illustrated a bail *M*, suspended, as shown, from the frame, so as to be free to swing, and from the lower end or cross-bar of this bail is suspended a weight *N*, which can be easily removed to be supplanted by another, which will be heavier or lighter, as desired, or additional weights may be suspended from the bail.

The roll or brush *J* may be of any desired length, and should be covered with a material best adapted to the purpose for which it is to be used. For instance, the covering may be of cloth, sand, or emery-paper, chamois, bristle, or any other applicable material, which may have a base or foundation of felt or other elastic material. It is driven by the
25 belts *K*, which pass over the pulley *I* in grooves selected according to the length of the roll, and each of these belts runs in a groove *f* at the ends of the roll, as seen best in Fig. 2.
30 The roll is guided by handles *g*, loose upon the ends of the axis of the roll. The actuating-pulley is moved endwise upon its shaft, as desired, in any suitable manner.

I have indicated by letters *O* and *P* parts intended to represent any suitable form of belt-shipper to move the power-belt from the loose to the tight pulley, and vice versa; but the same is not illustrated and described in detail, as it forms no part of this invention and
45 may be of any well-known and suitable construction.

Various modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.
50

I have shown and described herein a particular form of polishing-roll which is considered to give the best results; but I make no claim to the same in this application.

What I claim as new is—

1. The combination, with the suspended pivoted frame, of the actuating-pulley traveling longitudinally on a shaft carried by said frame, and the roll operated by belt directly from the said pulley, as set forth. 55

2. The combination, with the suspended frame pivoted between its front and rear ends, of the actuating-pulley carried thereby at its forward end, means for revolving the said pulley, and the roll supported by belts passed over the actuating-pulley and revolved by the same belts, substantially as specified. 60

3. The combination, with the swinging frame, of the grooved actuating-pulley, the roll, and the belts arranged in grooves in the pulley and in the roll, as set forth. 65

4. The combination, with the pivoted suspended frame, of the weights at the rear end thereof, the actuating-pulley at the front end and movable endwise upon its shaft, and the roll supported and driven by belts passed around the actuating-pulley, substantially as specified. 70

5. The combination, with the hangers formed with arms extended outward and downward, of the drive-shaft journaled in the hangers, the frame pivoted in the arms, the cone-pulleys and belts connecting them, the grooved actuating-pulley carried by a shaft on the pivoted frame, the roll, and the belts connecting the pulley and roll and supporting the latter, substantially as specified. 75

6. The combination, with the shaft having longitudinal grooves, of the pulley having at its end beveled wheels traveling in said grooves, substantially as specified. 80

In testimony whereof I affix my signature in presence of two witnesses.

HENRY TROST.

Witnesses:

DANIEL C. McELWAIN,
JOHN W. VOIGELE.