W. Wadleigh,

Polishing Wood.

No. 39,315. Patented July 21, 1863.

Fig. 1.

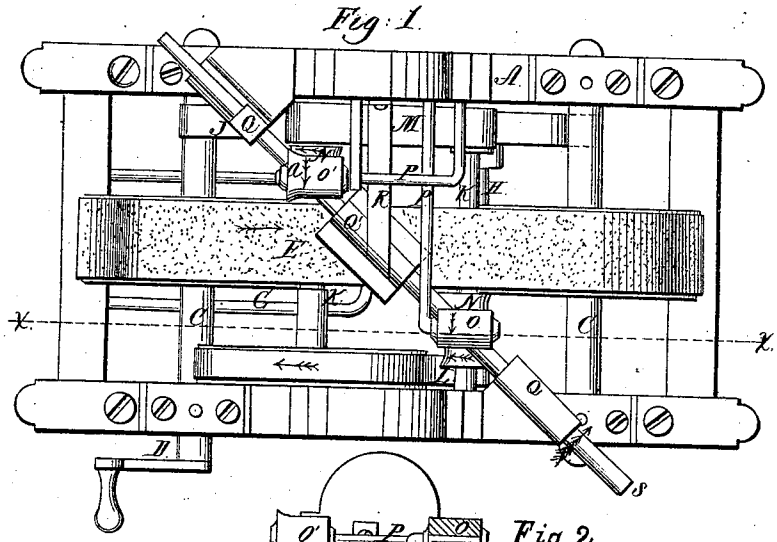
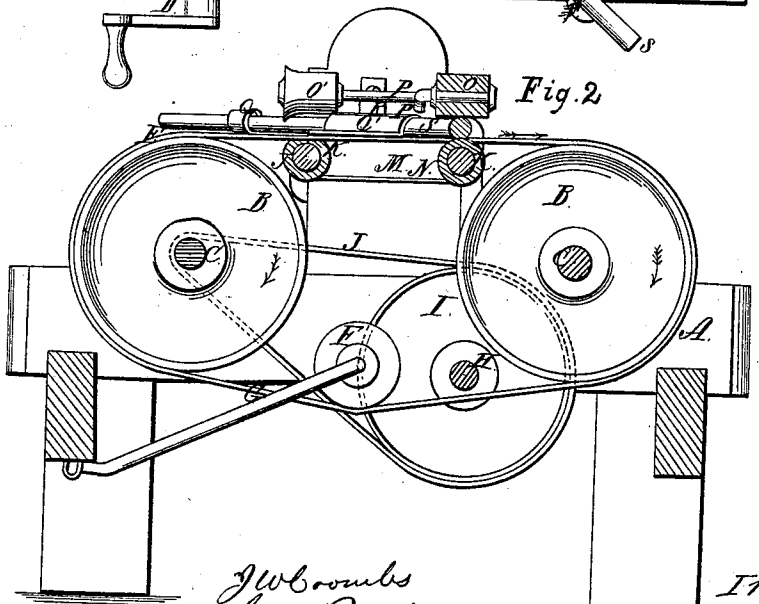


Fig. 2.



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Inventor: Warren Wadleigh per Munn & Co.

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UNITED STATES PATENT OFFICE.

WARREN WADLEIGH, OF SANBORNTON BRIDGE, NEW HAMPSHIRE.

MACHINE FOR POLISHING TURNED ARTICLES.

Specification forming part of Letters Patent No. **39,315**, dated July 21, 1863.

To all whom it may concern:

Be it known that I, WARREN WADLEIGH, of Sanbornton Bridge, in the county of Belknap and State of New Hampshire, have invented a new and Improved Machine for Polishing Turned Articles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompany drawings, making a part of this specification, in which—

Figure 1 is a plan or top view of my invention; Fig. 2, a side sectional view of the same, taken in the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to a new and improved machine for polishing or smoothing wooden articles, which have been turned in lathes or made cylindrical by other means.

The invention consists in the employment or use of an endless belt, having its outer surface covered with emery or other suitable polishing material, in connection with feed-rollers and guides, all arranged as hereinafter fully set forth.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a framing, which may be constructed in any proper manner to support the working parts of the machine, and B B represent two pulleys, which are placed on shafts C C, the latter being parallel with each other and fitted transversely on the framing A, and one of said shafts having a crank, D, attached.

E is an endless belt, which is fitted on the pulleys B B, and has its outer surface covered with emery or any suitable polishing material. This belt may be constructed of leather, canvas, or other suitable material, and a proper degree of tension is given it upon the pulleys B B by a pulley, F, which is fitted in a frame, G, so arranged as to cause the pulley F to bear upon the lower part of the belt E. (See Fig. 2.)

H is a shaft, which is placed in the framing A, below the level of the shafts C C, and has a pulley, I, upon it, around which a belt, J, passes from the shaft C, which has the crank D attached to it.

K K′ are two shafts, which are placed in the upper part of the framing A, just below the upper part of the endless belt E. The shaft K is driven by a belt, L, from the shaft H, and the shaft K′ is driven by a belt, M, from the shaft K. On each shaft K K′ there is placed a roller, N. These rollers are at opposite sides of the upper part of the endless belt E, and they have peripheries of concave form, with an elastic covering. Directly over the rollers N there are pressure-rollers O O′. These rollers O O′ have their axes at right angles to the shafts K K′, as shown in both figures. The roller O has a straight periphery, but the roller O′ is made of flaring form at one end, as shown at *a*. The peripheries of the rollers N are designed to be a trifle below the level of the upper part of the endless belt E, and the rollers O O′ are fitted on rods P, which have some degree of elasticity to admit of said rollers yielding or giving to a certain extent.

Q Q Q′ represent guides, which are attached to the upper part of the framing A, in line with the "bite" of the two pairs of rollers N O N O′. The guides Q Q are tubes attached rigidly to the framing, while the central guide, Q′, is a semi-tube, is directly over the belt E, and is attached to a plate, R, having some degree of elasticity. (See more particularly Fig. 1.)

The operation is as follows: By turning the shaft C, having the crank D attached, the endless belt F and rollers N O N O′ will move in the direction indicated by the arrows, and the cylindrical stick S, to be polished or smoothed, is inserted through one of the guides Q and between the first pair of rollers, N O, and underneath the central guide, Q′. The stick S is rotated and at the same time fed obliquely across the belt E, in consequence of the position the rollers N O bear with each other, and when the front end of the stick S has crossed the belt E it passes between the rollers N O′ and into the other guide Q, the last-named rollers assisting and operating in conjunction with the first-named rollers N O to rotate and feed the stick obliquely across the belt E, which polishes or smoothes the stick. The pressure of the stick upon the belt E is due to the degree of tension said belt may have, and this may be regulated by the pulley F. The guides should be of sufficient capacity to admit sticks of different diameters, and the elastic rods P admit of the rollers O O′ yielding or giving to suits sticks of different diameters, and to exert a pressure upon the

stick to cause the same to be rotated and fed along over the belt E. The plate R of the central guide, Q′, is made elastic for the purpose of exerting a suitable pressure on the stick directly over the belt.

By this machine turned sticks may be expeditiously polished and smoothed in a perfect manner.

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

1. The endless polishing-belt E, in connection with the rollers N O N O′, arranged to operate substantially as and for the purpose herein set forth.

2. The guides Q Q Q′, in combination with the polishing-belt E and rollers N O N O′, for the purpose specified.

WARREN WADLEIGH.

Witnesses:
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