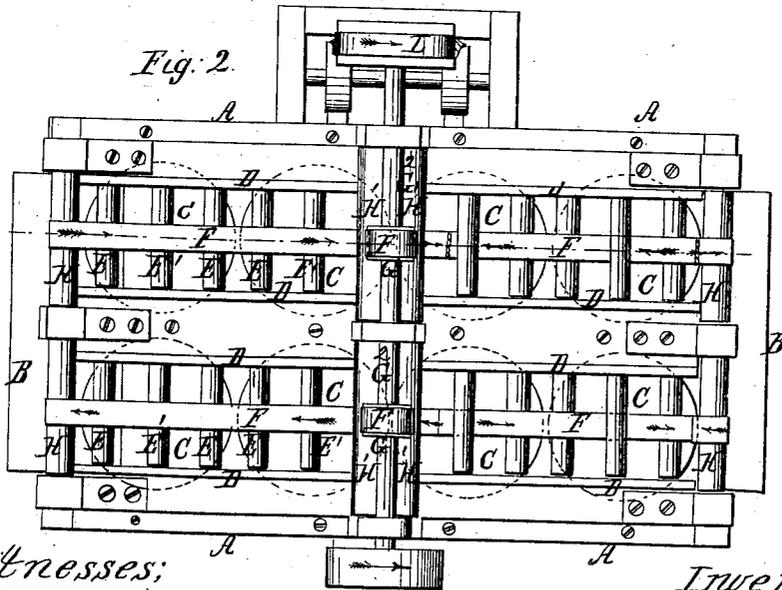
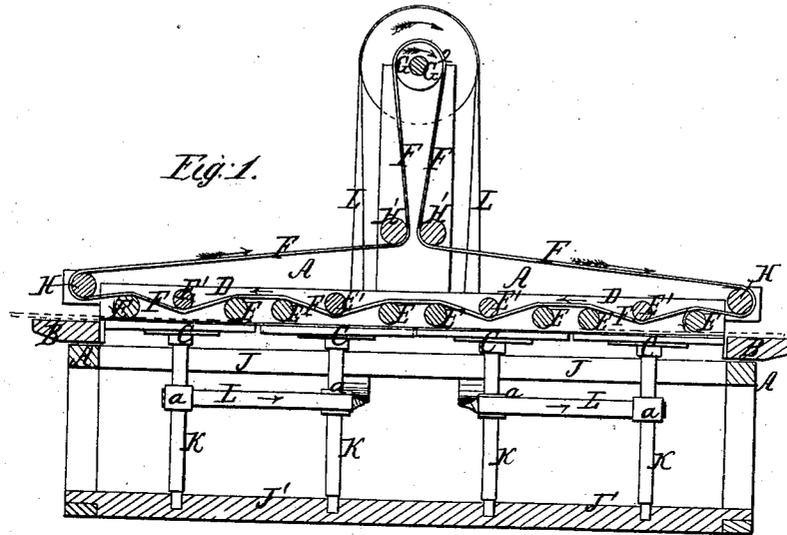


No. 27,953.

PATENTED APR. 17, 1860.

G. MUNGER.
MACHINE FOR POLISHING WOOD.



Witnesses;
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UNITED STATES PATENT OFFICE.

GEO. MUNGER, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO HIMSELF AND E. P. DEAN,
OF SAME PLACE.

MACHINE FOR POLISHING WOOD.

Specification of Letters Patent No. 27,953, dated April 17, 1860.

To all whom it may concern:

Be it known that I, GEORGE MUNGER, of New Haven, in the county of New Haven and State of Connecticut, have invented a new and Improved Wood-Smoothing Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a vertical longitudinal section taken through the machine, as indicated by the red line *x, x*, in Fig. 2. This figure (1) exhibits the means for communicating rotary motion to a number of smoothing disks, and to the feed rollers for conducting the work over the smoothing surfaces. Fig. 2 is a plan view of the complete machine, furnished with two sets of smoothing disks, with their guide and pressure rollers.

Similar letters of reference indicate corresponding parts in both figures.

The object of this invention is to obtain a machine by which doors, window-sashes, slate-frames, etc., etc. may be finished or smoothed off in a better manner than can be done by hand, and with great rapidity. The machine should be made so that it will accommodate itself to the varying thickness and sizes of work, and so that it may be worked by manual, as well as steam, or horse power.

For this purpose my invention consists in arranging in a suitable relation with a system of feeding pressure rollers a number of rotary disks, which are placed in a horizontal plane, and have roughened surfaces suitable for smoothing the work passed over or in contact with their faces, the whole to be operated simultaneously and with a rapidity of motion commensurate with that of the feed rollers, as will be hereinafter described and represented.

To enable those skilled in the art to fully understand my invention I will proceed to describe its construction and operation.

The labor and loss of time in smoothing or sand papering large and unwieldy work is too well known to require any description.

In the drawings, A represents a table of any suitable length and width, in the front and rear part of which is a shelf for resting board B, both of which are on a horizontal plane with a system of rotary smoothing

disks C, C, the upper faces or surfaces of which are roughened or covered with sand-paper or other suitable material, or the disks may be composed of a suitable composition for giving the desired effect. These disks are arranged along in regular succession, the finer surfaced disk succeeding the coarser disk, so that the surface of the work will be gradually reduced from a coarse to a fine, smooth state. Two, four, or more of such smoothing disks may be used as circumstances require. Arranged along on each side and over the surface of these disks, at a suitable distance from the axes of the same, are parallel guide bars D, D, which may be fixed permanently or made suitably adjustable, between which the stuff to be submitted to the smoothing operation is passed. These bars D, D, besides serving as guides for the work as it is passed through the machine, serve also as bearings for the system of driving and feeding pressure rollers E, E', Figs. 2 and 3, which feed rollers should work in adjustable bearing boxes, so that they will accommodate themselves to the difference in thickness of stuff presented to the disks, and, at the same time, hold down and feed the stuff through the machine, their surfaces may be grooved or serrated for this latter purpose. These pressure and feed rollers are driven by an endless belt, F, which passes under rollers, E', and over the feed rollers E, and is carried under rollers H, H, which hang in brackets at each end of the table A, from these the belt is carried to the middle of the machine, passed under rollers H', H', thence up and over wheel G, on the main driving shaft G². The axes of the driving rollers E', are above those of the lower feed rollers, sufficiently only, however, to allow the work to pass without coming in contact with the belt, F. This belt, if there be sufficient tension kept on it, will serve to give a sufficient downward pressure on the work, and to allow them to adjust themselves to the different thicknesses of the stuff, without employing springs in their bearings, as above presupposed.

The shafts K, of the smoothers or smoothing disks C, C, have their bearings in longitudinal bars J, J', of the frame of the machine, and under the bars J, and keyed to the shafts K, are belt wheel *a, a*, round which passes an endless belt I, which is driven by a pulley on the main shaft. This one belt

is passed round the pulleys *a, a*, in such a manner as to give motion to all of them simultaneously.

5 The machine represented by the drawings is duplicated, and after the work is passed through one part of the table, and submitted to one series of smoothers, it is passed through the opposite side of the machine and over the other set of smoothing disks.

10 This description with the accompanying drawings will give a clear idea of the general construction and arrangement of the several parts of my machine for smoothing and for conducting the work through this operation.

15 The parts may be modified however to suit

various sizes and kinds of work, without any material change in the principle of my invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is:— 20

Combining with suitable rotating smoothing disks, adjustable, or self-adjusting, feed and pressure rollers for the purposes and essentially in the manner herein set forth. 25

GEO. MUNGER.

Witnesses:

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