

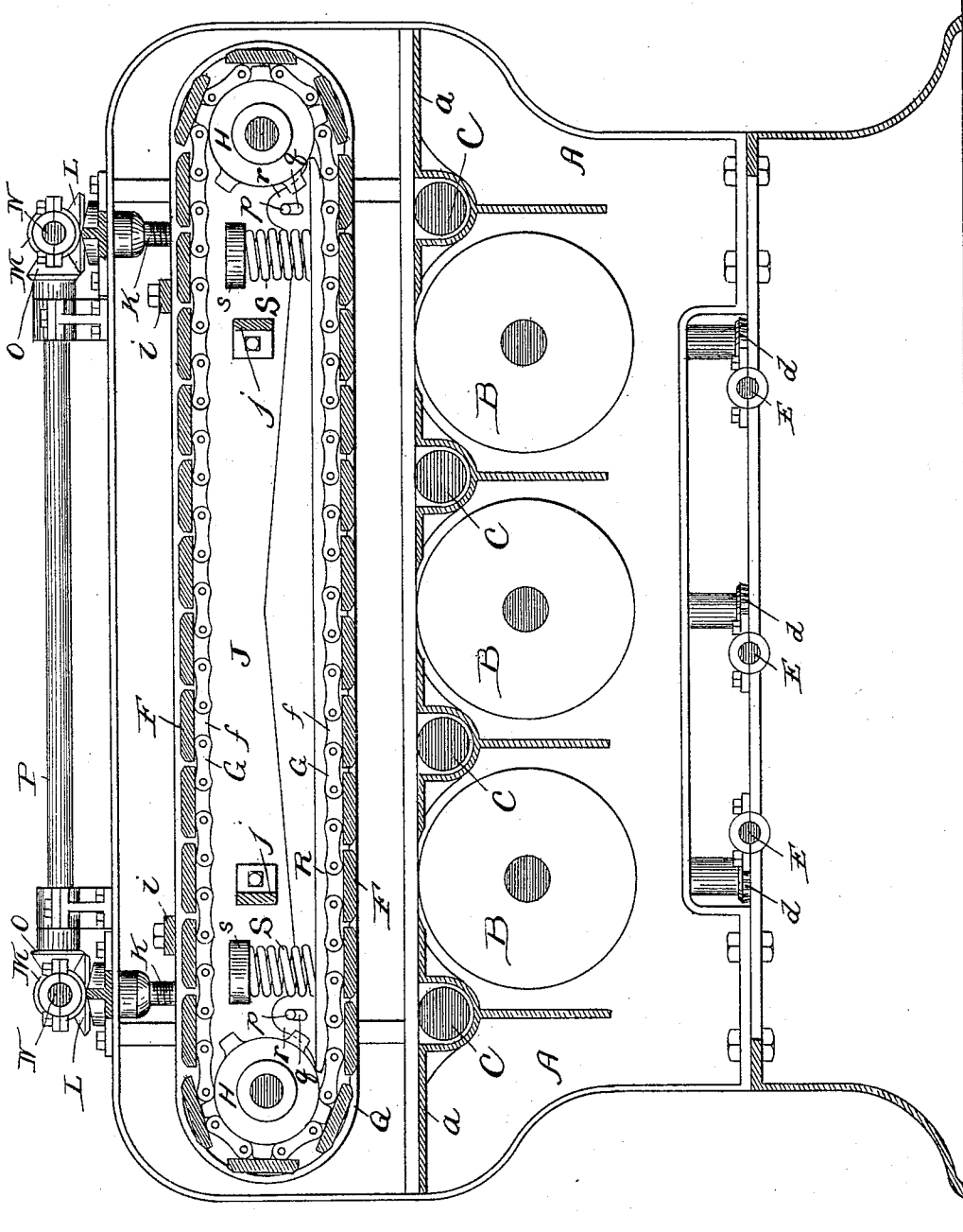
(No Model.)

2 Sheets—Sheet 1.

J. L. PERRY.
WOOD POLISHING MACHINE.

No. 496,204.

Patented Apr. 25, 1893.



Witnesses:

Lew. C. Curtis
Emma Stack

Fig. 1.

Inventor:

James L. Perry

By Munday Evans Vadeck

His Attorneys.

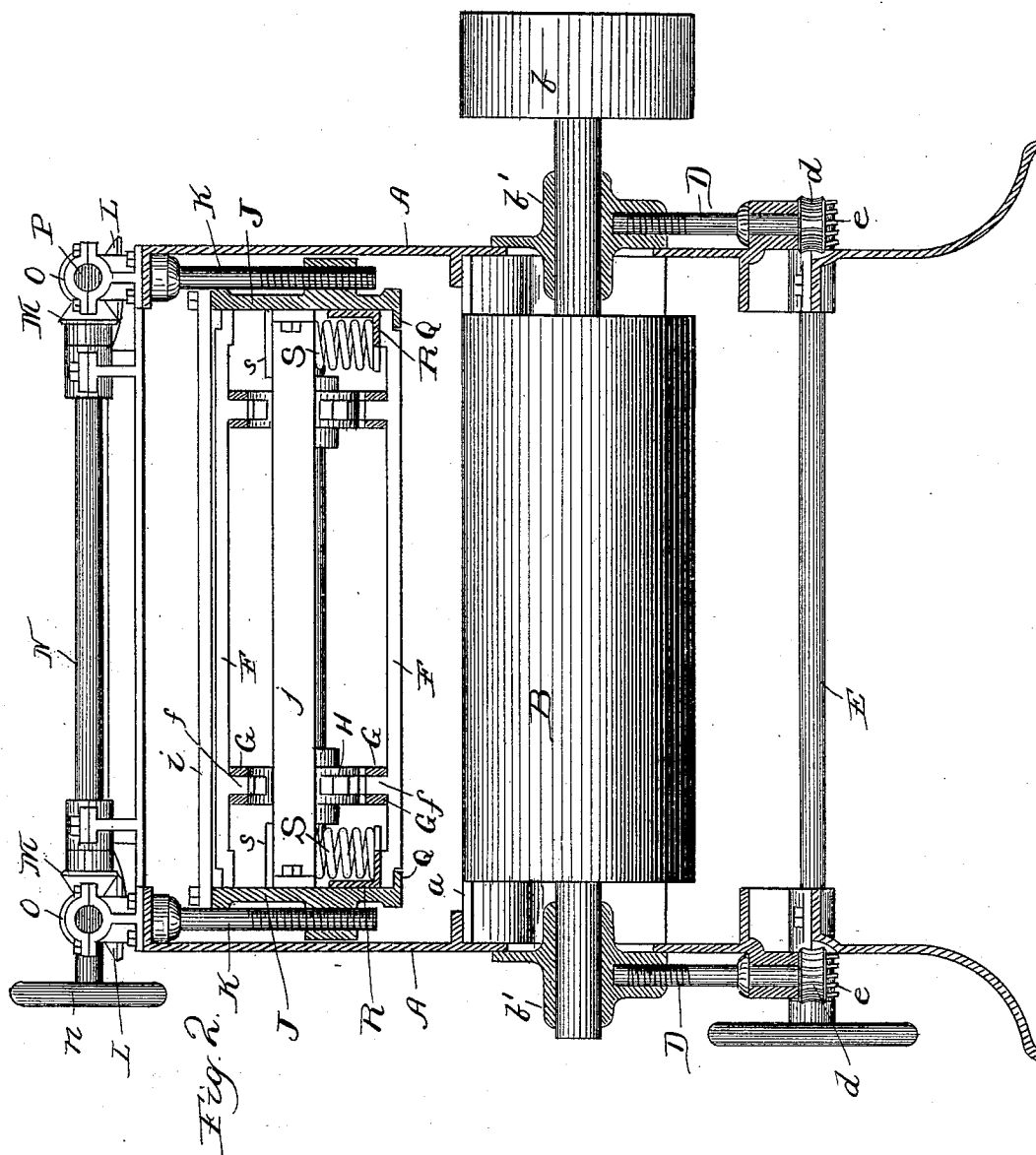
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Emma Stack

Inventor:
James L. Perry
By Munday Evans & Adcock
Tras Attorneys.

UNITED STATES PATENT OFFICE.

JAMES L. PERRY, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE J. L. PERRY MACHINE COMPANY, OF SAME PLACE.

WOOD-POLISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 496,204, dated April 25, 1893.

Application filed March 14, 1892. Serial No. 424,778. (No model.)

To all whom it may concern:

Be it known that I, JAMES L. PERRY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Wood-Polishing Machines, of which the following is a specification.

This invention relates to the construction of pressure creating and feeding devices of wood polishing machines.

As heretofore constructed, machines of this class having horizontal polishing cylinders, have usually employed in conjunction therewith pressure rolls acting to keep the material in contact with the sand paper cylinders, and feed rolls acting to force the material past the cylinders. In my present invention I substitute for the pressure rolls an endless bed, and thereby greatly simplify the machine by dispensing with a large part of the gearing necessary to operate such rolls. By this substitution, I also improve the feed because the material operated upon, however short it may be, is subject to a constantly acting pushing or feeding force while it is passing through the machine, whereas in the old construction the feed and pressure rolls, being located at convenient spaces apart, are not always acting upon short stuff. Again the endless bed is constant in its pressure during the whole time occupied in the transit through the machine, whereas with the rolls the stuff is alternately seized and released by different pairs of feed and pressure rolls. The endless bed of my improved machine is also by preference located above the path of the material, so that it may bear down upon the same. This location is specially desirable because the polishing cylinders are best supported near the base of the machine; and because in case of an accidental stripping off of the sand paper, the latter merely falls to the floor instead of being caught in the endless bed or other moving parts of the machine. The drawing away of the dust is also facilitated by locating the bed above and the cylinders below the path of the feed.

The details of my improvement are fully illustrated in the accompanying drawings, wherein—

Figure 1 is a longitudinal vertical section,

and Fig. 2 is a transverse vertical section of my improved machine.

In the drawings A represents the main or supporting frame of the machine.

B B are the polishing or sand paper cylinders, each driven by a pulley *b*. C C are feed rolls which may be located between cylinders B, and driven in the usual manner. The cylinders are supported in bearings *b'*, adjustably supported upon screws D, operated by worms *e* upon shaft E meshing with pinions *d* upon the screws. The table or stationary part supporting the material is shown at *a*. The endless pressure and feeding bed is located above the path of the material for reasons stated. It consists of an endless series of bars F, joined together by links G, pivoted to interior lugs or projections *f* borne by the bars, and carried upon sprocket wheels H H located at the ends of the machine, and driven by appropriate mechanism (not shown). Both the bed and its operating wheels are supported in a frame which may consist of rigid side pieces J, cross bars *j* located between the upper and lower courses of the bed, and other cross bars *i* located above the upper course, as shown. The bars *j* are bent at right angles at their ends and bolted to the side pieces by bolts passing through their right angle portions, while the upper bars are straight and secured by vertical bolts entering the upper edges of the side pieces.

The frame just described is adjustable so as to permit operating upon stuff of different thicknesses, and this adaptability I obtain by supporting the frame upon adjusting screws K K, located one at each corner of the frame, and all geared together so as to insure uniformity through all parts of the bed in the various adjustments. This connecting gearing consists of bevel pinions L L upon the screws, pinions M M upon cross shafts N meshing with pinions L, and other pinions O O upon longitudinal shafts P, also meshing with pinions L. A hand wheel *n* upon one of the shafts N enables the operator to make the adjustments. The lower course of the endless bed is prevented from sagging by providing the side frame pieces with interior flanges Q, upon the upper surface of which the bars F of the bed may ride. I prefer to cut away

the outer surface of the bars at the ends, as shown, to make room for the flanges Q. The lower course of the bed is also held down to its work by guides R, bearing upon the inner surfaces of the ends of bars F as also shown, particularly at Fig. 2. The guides are adapted to yield so as to permit the bed to accommodate itself to inequalities in the thickness of the stuff being worked, this result being obtained by attaching them to the side frames by pins *p* held in the frames and passing through elongated slots *q* in ears *r* projecting upwardly from the guides, and by means of the springs S bearing down upon the guides and having their upper seats in projecting brackets *s* cast or attached to the side frames.

I claim—

1. The wood polishing machine having an endless pressure and feeding bed composed of a series of bars linked together and located above the path of the material, and rigid guides for holding the lower course of the bed down to its work, substantially as specified.

2. In a wood polishing machine, an endless pressure bed composed of a series of bars linked together and located above the path of the material and rigid guides for holding the lower course of the bed down to its work, in combination with polishing cylinders located

below the path of the material, substantially as specified.

3. In a wood polishing machine, an endless pressure bed composed of a series of bars linked together and located above the path of the material and rigid guides for holding the lower course of the bed down to its work, in combination with polishing cylinders and feed rolls located below the path of the material, substantially as specified.

4. In a wood polishing machine, an endless pressure and feeding bed located above the path of the material and provided with means for preventing the sagging of its lower course and with guides for holding the lower course down to its work, in combination with polishing cylinders located below the path of the material, substantially as specified.

5. In a wood polishing machine, an endless series of bars linked together and located above the material, means for causing said bars to press upon the material, yielding supports for said bars, and means for preventing the sagging of the lower course of the bars, substantially as specified.

JAMES L. PERRY.

Witnesses:

EDWARD S. EVARTS,
H. M. MUNDAY.