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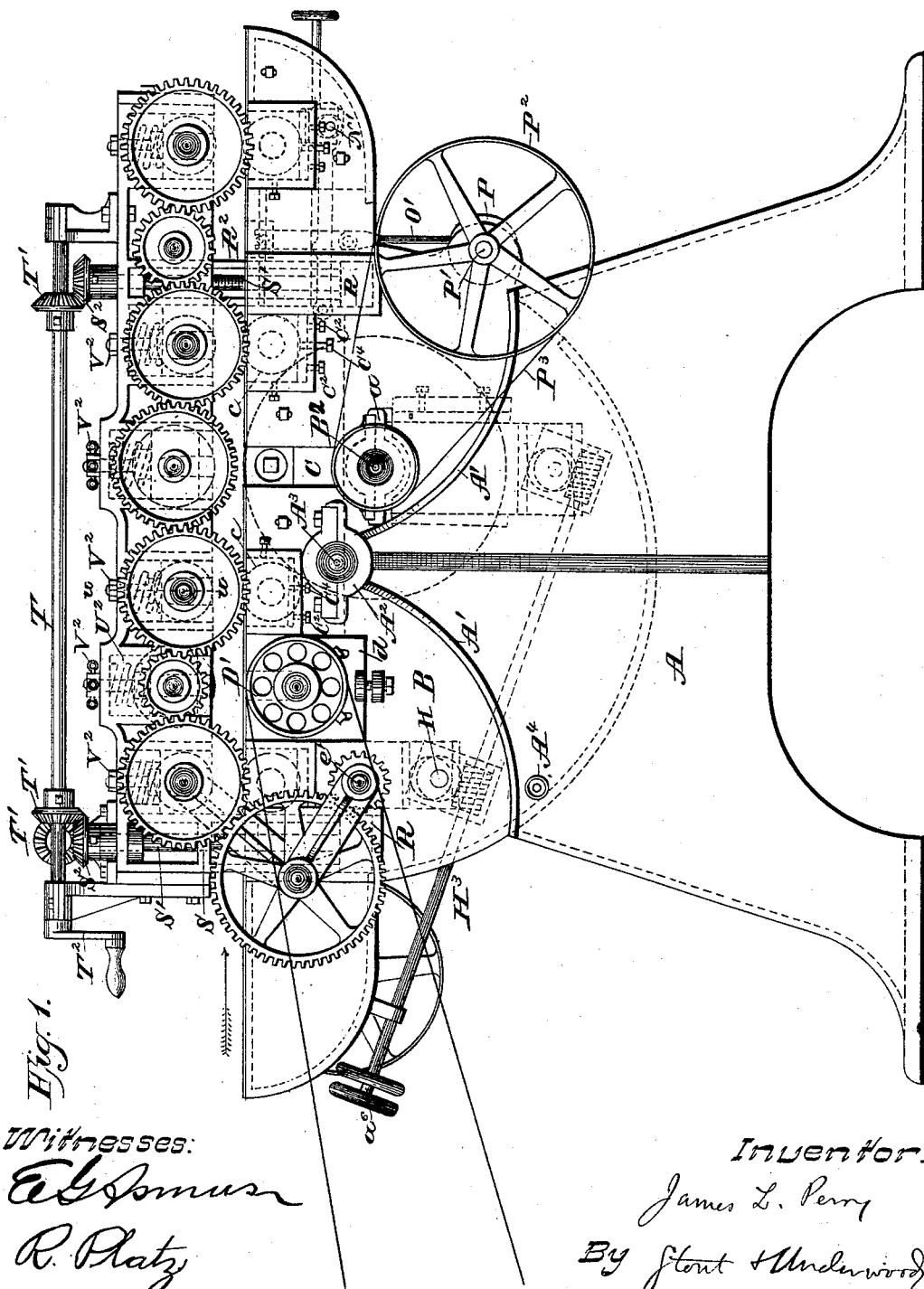
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J. L. PERRY.

WOOD POLISHING MACHINE.

No. 347,125.

Patented Aug. 10, 1886.



Witnesses:

Ed. Somers
R. Platz

Inventor:

James L. Perry
By Stout & Underwood
Attorneys.

(No Model.)

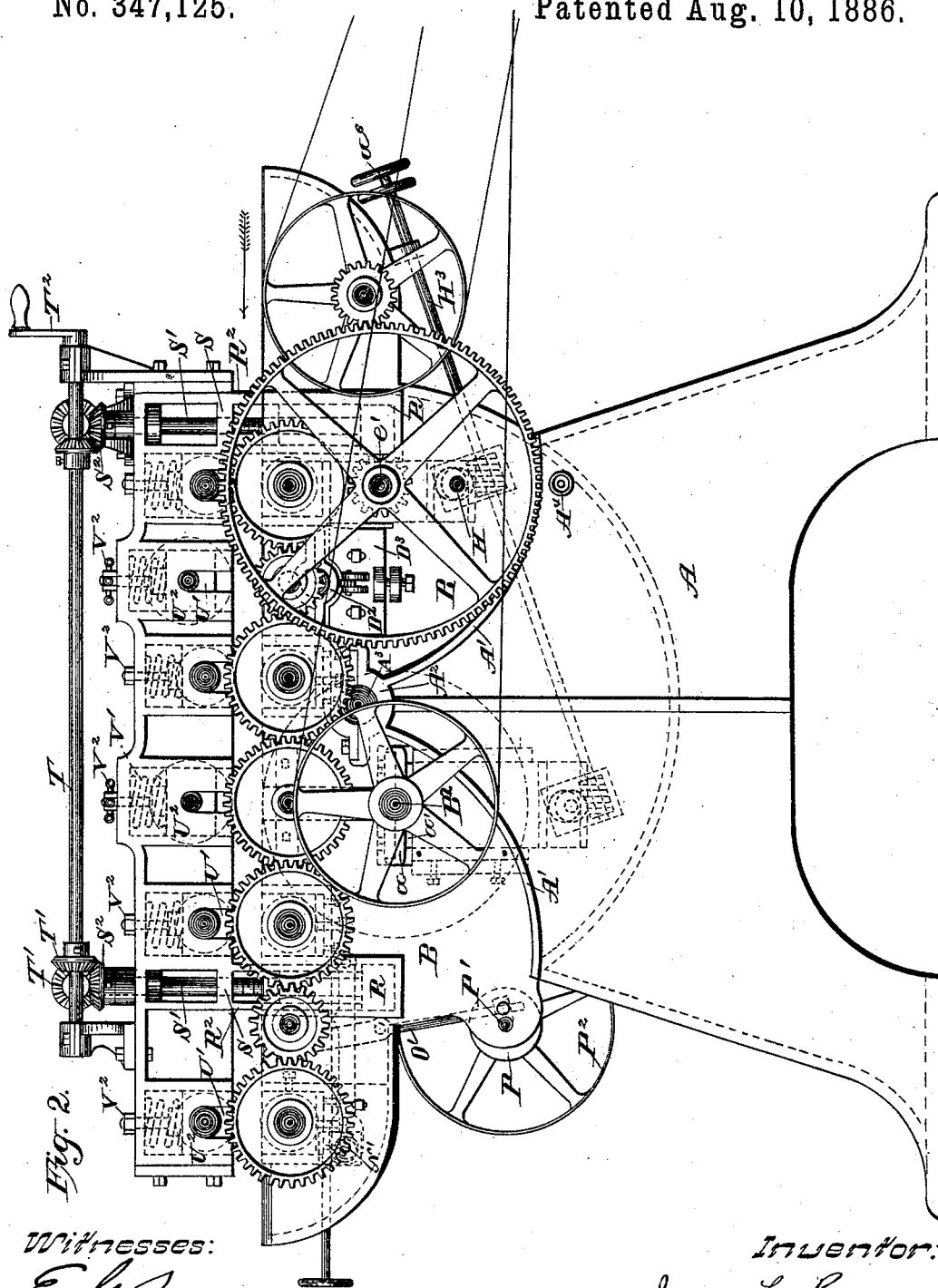
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J. L. PERRY.

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No. 347,125.

Patented Aug. 10, 1886.



Witnesses:

E. G. Amner
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(No Model.)

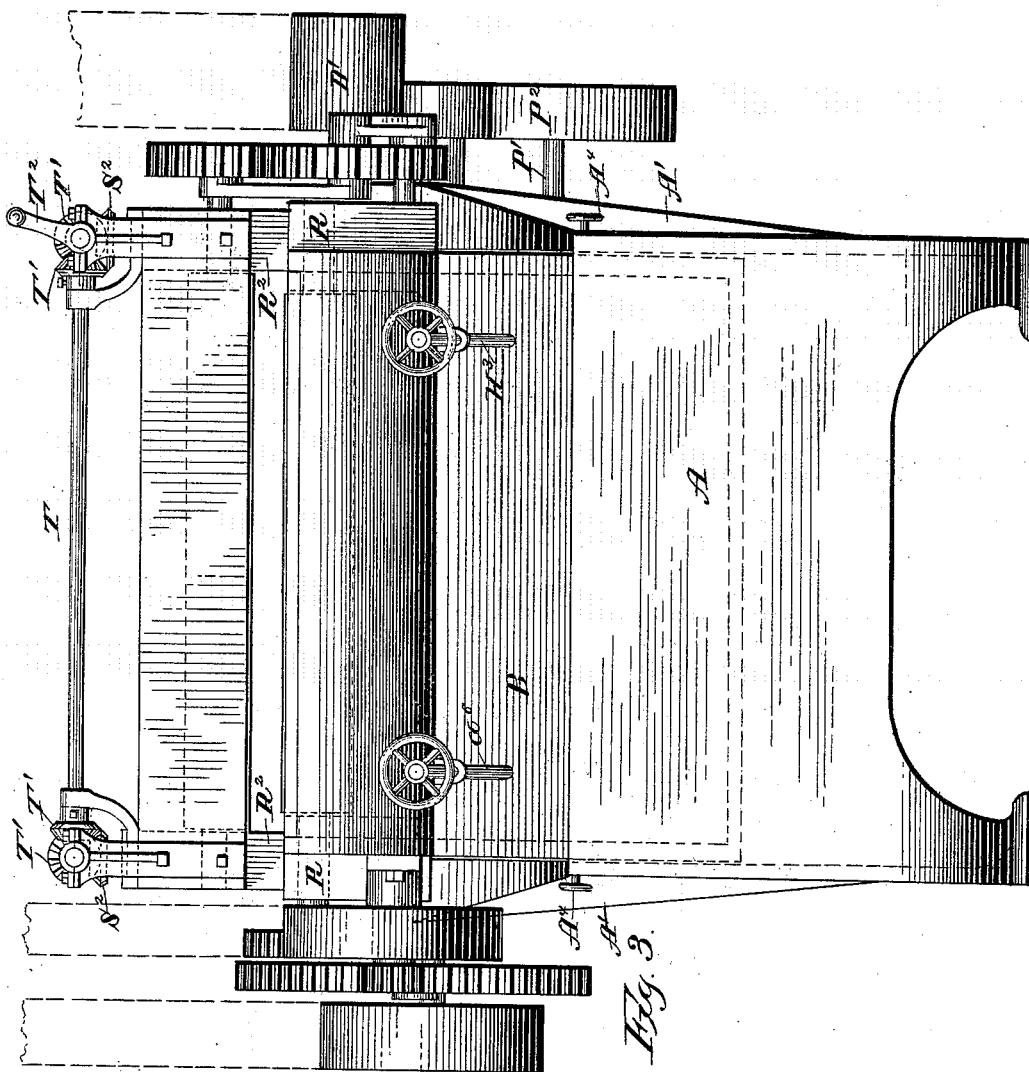
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J. L. PERRY.

WOOD POLISHING MACHINE.

No. 347,125.

Patented Aug. 10, 1886.



Witnesses:

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(No Model.)

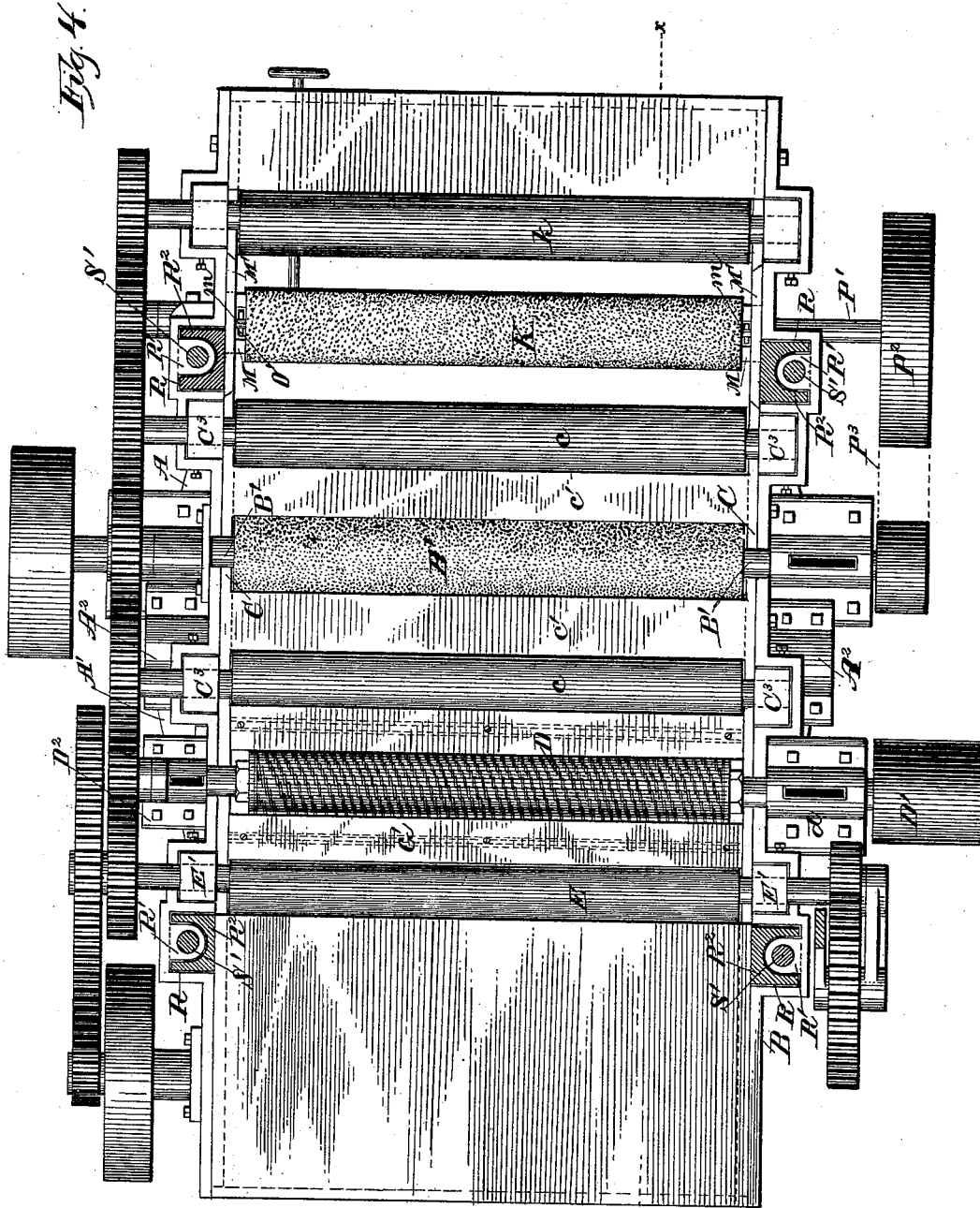
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J. L. PERRY.

WOOD POLISHING MACHINE.

No. 347,125.

Patented Aug. 10, 1886.



Witnesses:

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(No Model.)

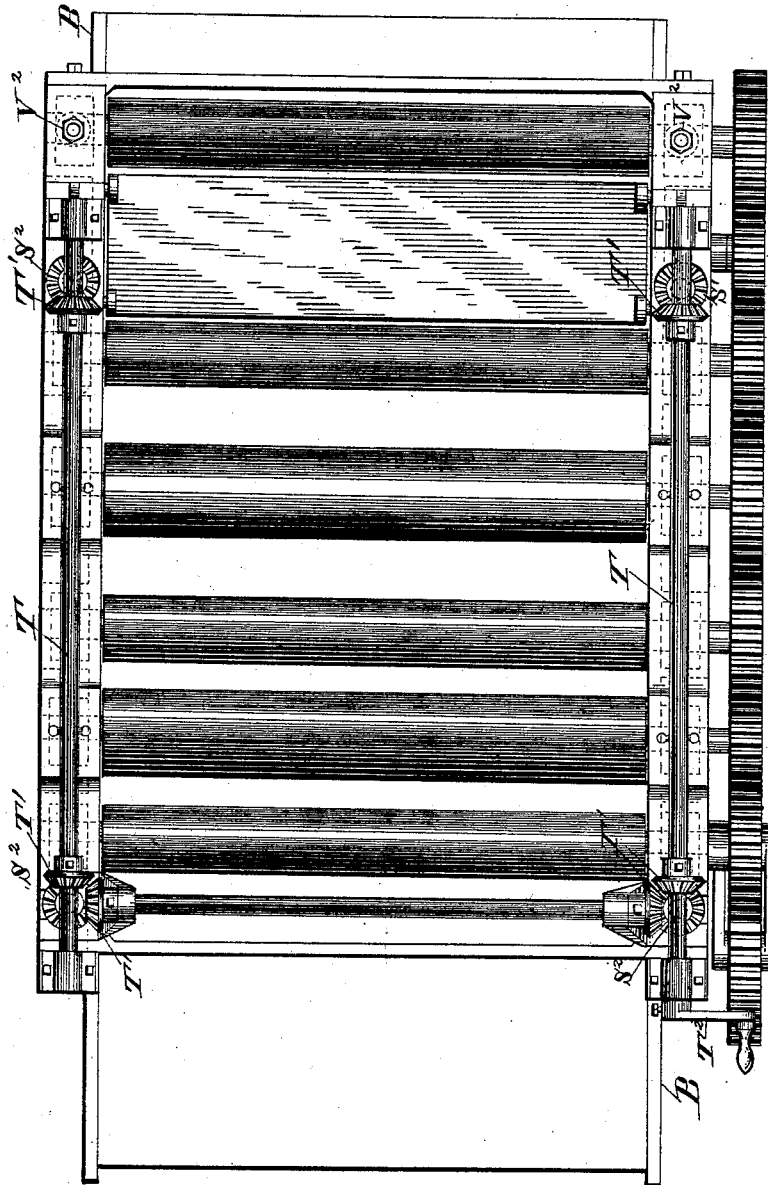
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J. L. PERRY.
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Fig. 5.



Witnesses:

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(No Model.)

9 Sheets—Sheet 6.

J. L. PERRY.

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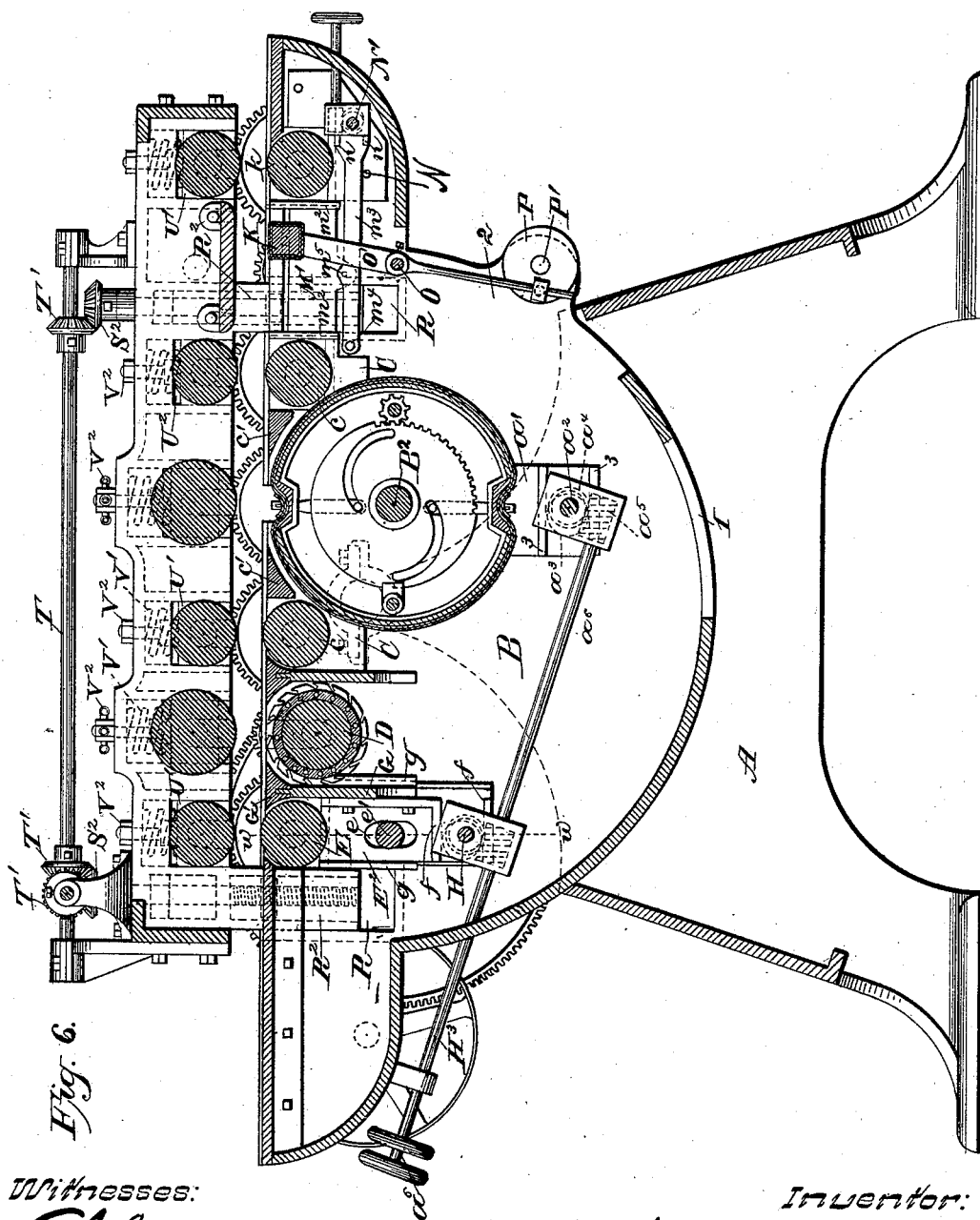


Fig. 6.

Witnesses:

E. A. Mum
R. Platz

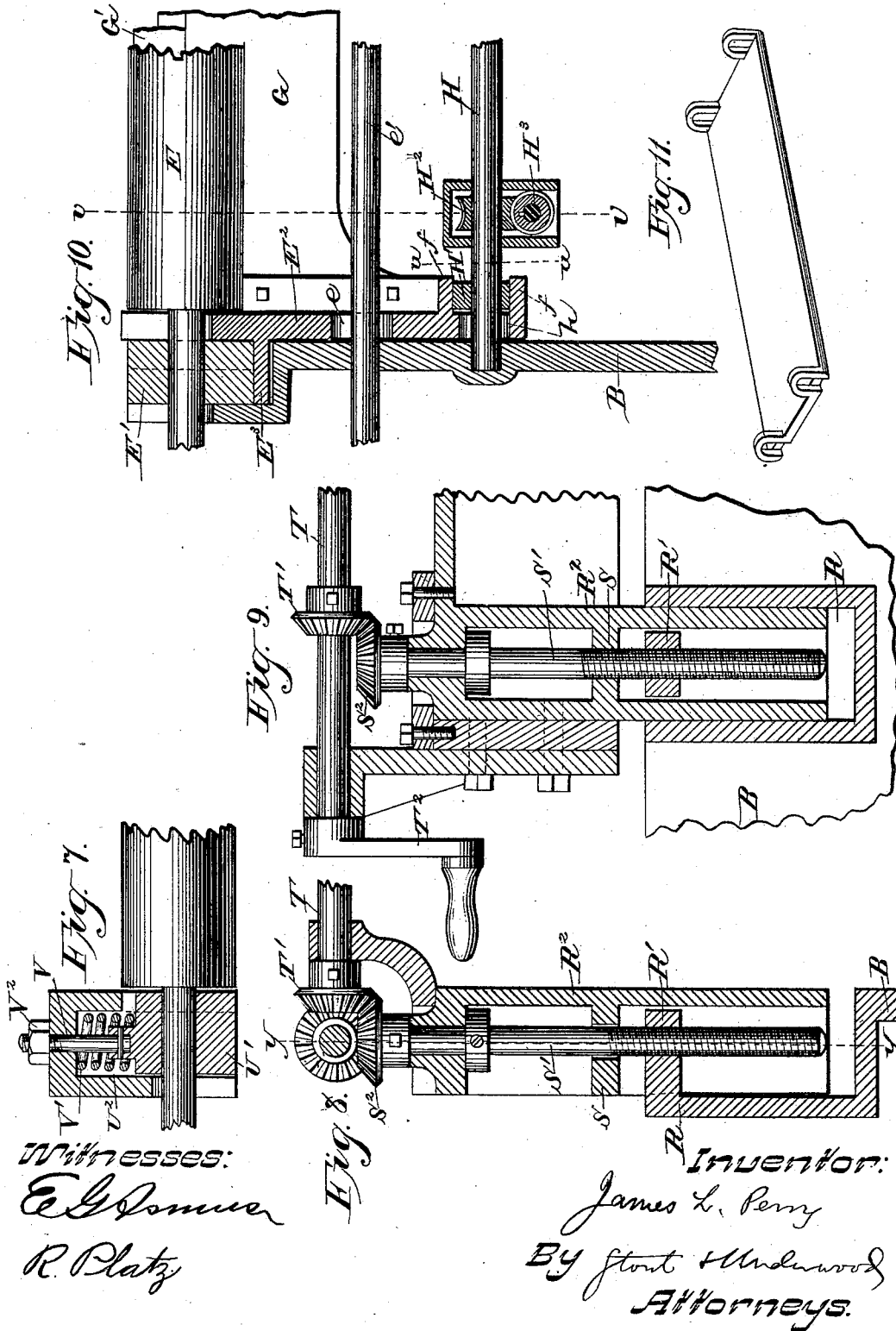
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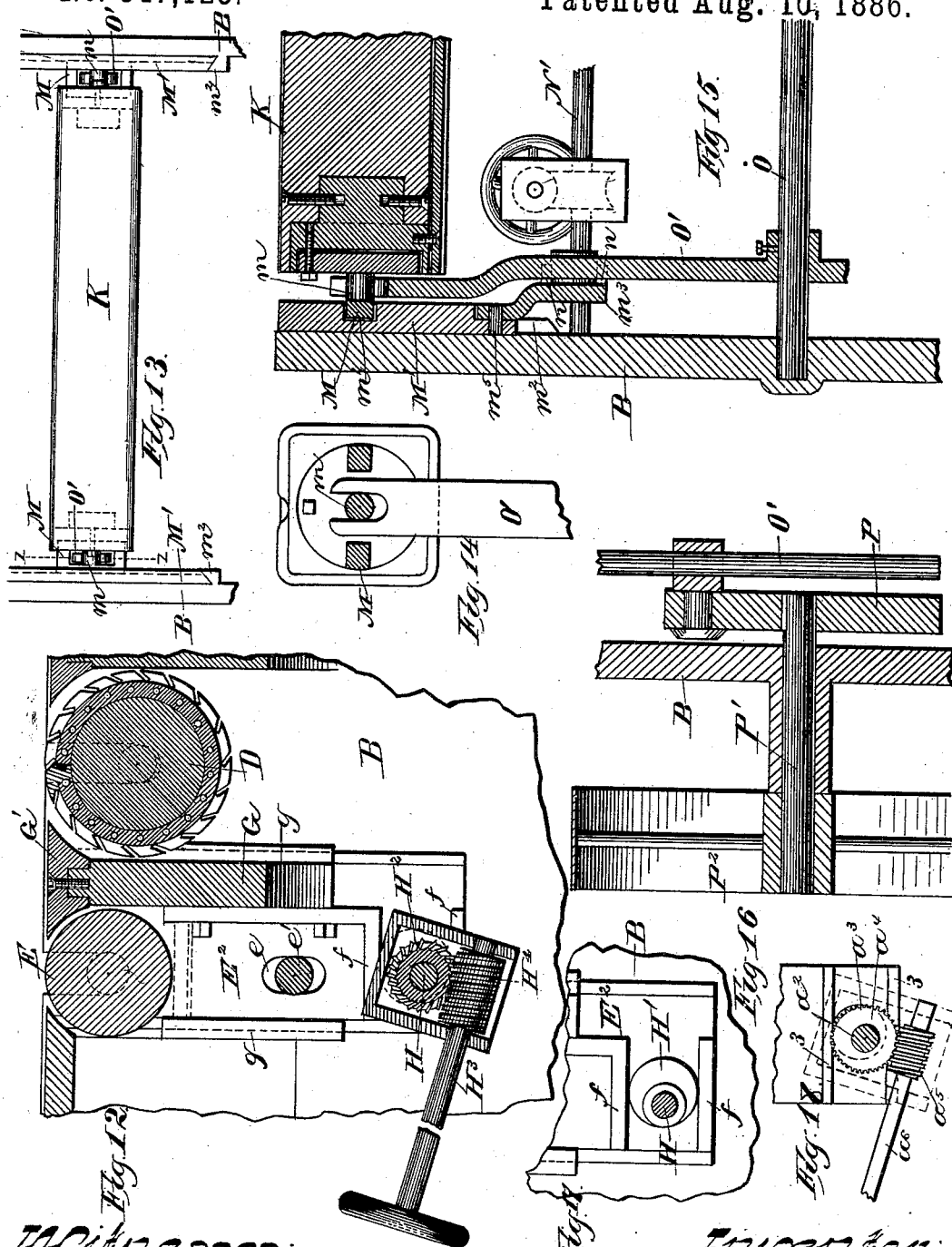
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9 Sheets—Sheet 8.

J. L. PERRY.
WOOD POLISHING MACHINE.

No. 347,125.

Patented Aug. 10, 1886.



Witnesses:
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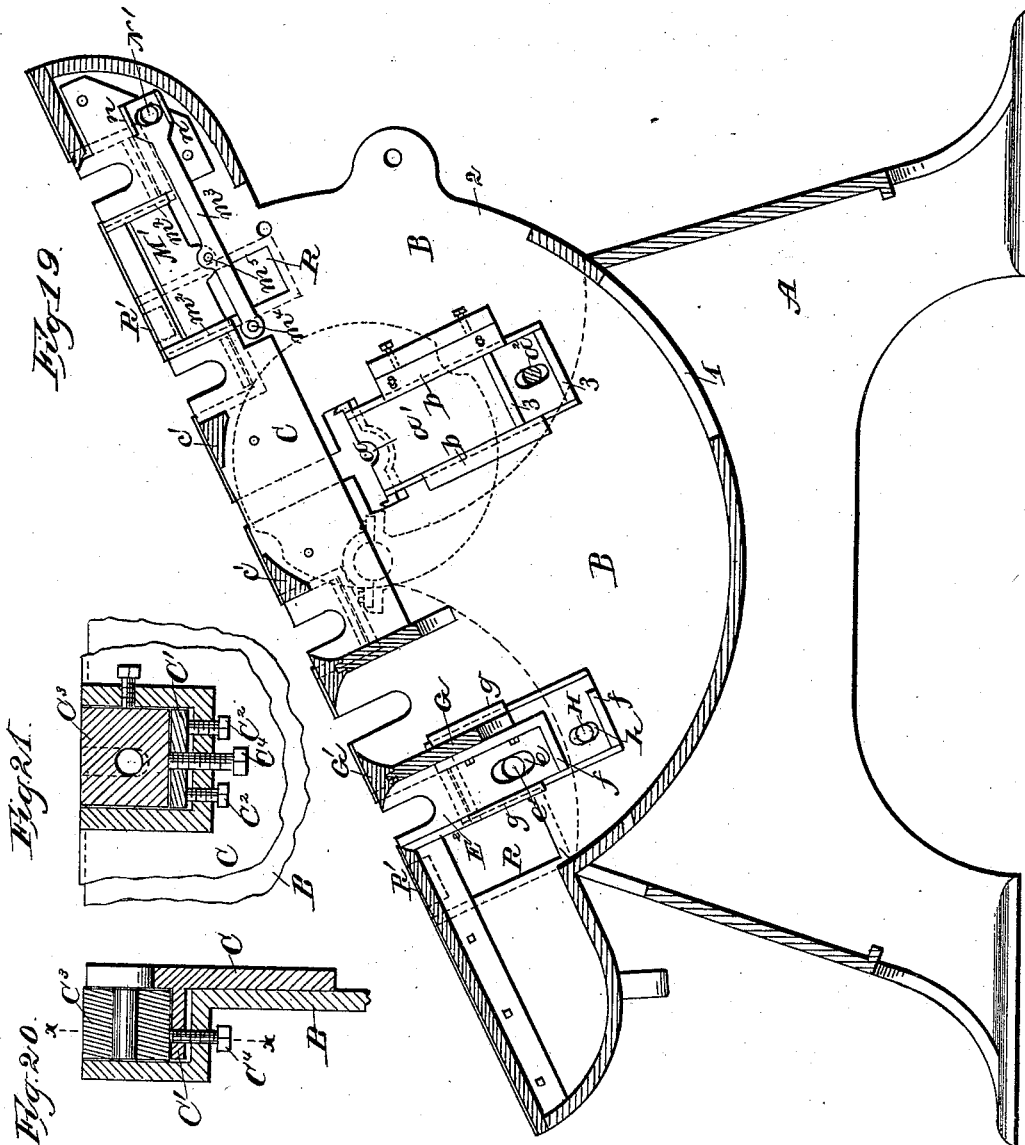
(No Model.)

9 Sheets—Sheet 9.

J. L. PERRY.
WOOD POLISHING MACHINE.

No. 347,125.

Patented Aug. 10, 1886.



Witnesses:
E. G. Sumner
Maurice J. Trean

Inventor:
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UNITED STATES PATENT OFFICE.

JAMES L. PERRY, OF WATERTOWN, WISCONSIN.

WOOD-POLISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 347,125, dated August 10, 1886.

Application filed January 8, 1886. Serial No. 187,978. (No model.)

To all whom it may concern:

Be it known that I, JAMES L. PERRY, of Watertown, in the county of Jefferson, and in the State of Wisconsin, have invented certain new and useful Improvements in Wood-Polishing Machines; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to wood-polishing machines, and will be fully described hereinafter.

In the drawings, Figure 1 is an elevation of the right-hand side of the machine, an arrow indicating the direction in which lumber is carried. Fig. 2 is an elevation of the left-hand side of the machine. Fig. 3 is an elevation of the front end of the machine. Fig. 4 is a plan view with the presser-frame removed. Fig. 5 is a like view with the presser-frame in place. Fig. 6 is a vertical longitudinal section through the center of the machine. Figs. 7 to 10, inclusive, are detail sections; Fig. 11, a perspective of the front of the presser-plate. Figs. 12 to 18, inclusive, are detail sections. Fig. 19 is a skeleton section of main frame. Figs. 20 and 21 are detail sections.

A is the base of my machine, which consists, preferably, of a hollow casting having wings A' on each side, and peaks which terminate in bearings A², for gudgeons A³, that project out from each side of the main frame B of the machine, and on these bearings the main frame swings freely, except when locked by a set-bolt, A⁴, that screws through the side of the base and impinges on the side of the main frame, which may be indented to receive the inner end of said bolt. The bottom of the main frame forms a chamber that has two openings, that at 1 to admit the spout of a blower, and that at 2 to give access to the sand-cylinder B' when the rear end of the main frame is lifted, the main frame being trunnioned to the bed, to admit of its being tilted to expose the sand-cylinder, as shown in Fig. 19. This sand-cylinder is situated near the middle of the main frame, and its shaft B² is journaled in adjustable bearings a, the standards a' a' of which slide in between guides b, that project from the inner faces of the frame. Each standard a' has a kind of housing near its lower end, formed by flanges 3 3, to receive an eccentric, a³, (shown in Fig. 18,) that is

keyed on a shaft, a², that is journaled in the frame, and this shaft is provided about midway between the two eccentrics with a worm-gear, a⁴, for engagement with a worm, a⁵, on shaft a⁶, so that by turning shaft a⁶ the eccentrics may be made to either lift or drop the standards a', and with them the sand-paper cylinder, so as to give the latter more or less cut. This cylinder cuts up through a frame, C, that is let into the main frame, and carries feed-rollers c c, while its two sides are connected by guard-strips c'. Ears C' project from the frame C into squared openings in the main frame, and rest over bolts C², by which they are raised and lowered, and the housings or bearing-blocks C³ of the feed-rollers lie upon these ears C', and may each be lined up either by a bolt, C⁴, or by lining-strips, and a similar device may be used to adjust them laterally. The cutter-head D is arranged in the front of the machine, one end of its shaft (the end carrying pulley D') being arranged in an adjustable bearing, d, while its other end is journaled in a housing, D², that is hinged to a vertically-adjustable plate, D³, and just in front of the cutter-head is arranged a feed-roller, E. This roller E is journaled at each end in a bearing-block, E', that rests in a suitable housing in a sliding frame, E². Each of the frames E² has, in addition to a housing, E', for the bearing-block, another housing at its lower end composed of flanges f f. The two frames E² E² are connected by a brace, G, and guard-plate G', and each slides in between a pair of guides, g g, arranged on the frame. A slot, e, is made in each of the frames E², and a shaft, e', is run through the main frame of the machine and these slots. Another shaft, H, is run through the machine and similar slots, h, in the lower ends of the frames E², and this shaft carries near each end an eccentric, H', and near one eccentric a worm gear-wheel, H². Each eccentric H' lies in a housing in frame E², made by the flanges f f, and its worm-wheel H² meshes with the worm a⁵ on shaft H³.

The frames E²—one on each side of the machine—form, with the brace G and guard G', a single carrier for the feed-roll E, and therefore when by means of shaft H³ and intermediate gearing the eccentrics H' are turned they either lift or depress the frame E² and its roller. For

instance, if the shaft H^3 be turned to the right the thicker portion of the eccentric will go above the shaft H and lift the frames E , and vice versa.

5 My device for raising and lowering the sand-paper cylinder is substantially the same as that just described. The abraders and feed-rollers all get their motion from a common source of power through proper gearing. After
10 the lumber has been cut down by the cutter-head D , and smoothed by the sand-paper roller B' to polish it and take off any irregularities that may be left by the cutter-head, I provide what I call a "rubber," K , between feed-rollers c
15 and k . This rubber is rectangular, or of any other suitable shape in cross-section, and is covered either with sand-paper or any other polishing medium, and from each end a shaft or pin, m , extends. Lugs M also extend from
20 the end of the rubber into grooves m' of the slides M' on each side of the machine. These slides move up and down in ways m^2 , and each is controlled by a lever, m^3 , which latter is pivoted to the frame at m^4 and the slide at m^5 .
25 A bolt, N , limits the fall of the outer end of the lever, and this lever is provided with flanges n , to receive an eccentric on shaft N' , the operation of lifting and dropping the lever, to give the pad or rubber more or less
30 pressure, being the same as that of the feed-roll E and sand-cylinder.

O is a shaft that extends from one side of the machine to the other, and carries arms O' , that are bifurcated at their upper ends and straddle the pins m of the rubber, as shown in Fig. 15; and one of these arms projects down below
35 shaft O , as shown in Fig. 6, and is loose-wristed to an eccentric or crank, P , on a shaft, P' , that is turned from the sand-cylinder shaft by a pulley, P^2 , and belt P^3 .
40

Near each corner the main frame is formed with a sort of well, R , which has an inwardly-projecting lug, R' , and the wells are to receive each a standard, R^2 , that projects down from
45 the presser-frame. These standards have three vertical sides, and a lug, R' , projects in between two sides of each. Each standard has also a strengthening flange, S , and a bearing in which a shaft, S' , is collared. The upper
50 end of each shaft S' is provided with a bevel-pinion, S^2 , while its lower end is screw-threaded, the threaded portion entering a screw-threaded hole in a lug, R' . All of the bevel-pinions S^2 are connected by shafting T
55 and bevel-wheels T' , and one of the shafts is provided with a crank, T^2 , from which all of the shafts are operated simultaneously. The rolls of the presser-frame have their bearings in blocks U' , that are suspended in the
60 hollow side members, U^2 , of the frame by bolts

V , springs V' being interposed between the blocks and the nuts V^2 , to give the yielding pressure required, while the degree of pressure is regulated by means of said nuts V^2 .

Having thus fully described my invention, 65 what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the feed-roller, of a frame for supporting the bearings of its shafts, said frame slotted and flanged as described, and the eccentrics and gearing for
70 raising said frame.

2. The combination, with the rubber having a lug at each end and projecting pins, of an adjusting-support, oscillating arms, and a
75 lever wristed to an operating-eccentric, as set forth.

3. The presser-frame having hollow standards, and the main frame having wells for the standards, and inwardly-projecting lugs, in
80 combination with the vertical adjusting-shafts, as set forth.

4. The combination, with the stand or frame having the wings A' , with bearings at their upper ends, of the main frame trunnioned in said
85 bearings and having the openings 1 2, substantially as and for the purposes described.

5. The combination, with the stand or frame and the main frame trunnioned thereon, as described, of the front feed-roll and the sand-
90 paper cylinder journaled in adjustable slides on the main frame, the shafts a^2 and H , with their eccentrics and worm-wheels, and the shaft a^6 H^2 , with its worms a^5 a^8 , for actuating the gears and eccentrics and adjusting the
95 slides, as set forth.

6. The combination, with the feeding-roll, the sand-paper cylinder, and their adjustable bearing-slides, the worm-shaft, and the shafts carrying the eccentrics and worm-wheels, of
100 the cutter-head, the adjustable bearings for the same, and the hinged connection between one end of said cutter-head and the contiguous bearing, as specified.

7. The combination, with the rubber having a lug and projecting pins at each end, of the adjustable support M' , for said rubber, the pivoted arm m^3 , having flanges n , shaft N' , carrying a worm-wheel and eccentric, and a shaft
110 carrying a worm for operating said shaft and actuating the eccentric and arm, as described.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

JAMES L. PERRY.

Witnesses:

S. S. STOUT,
MAURICE F. FREAR.