

(No Model.)

4 Sheets—Sheet 1.

J. L. PERRY.
WOOD POLISHING MACHINE.

No. 447,047.

Patented Feb. 24, 1891.

Fig. 1

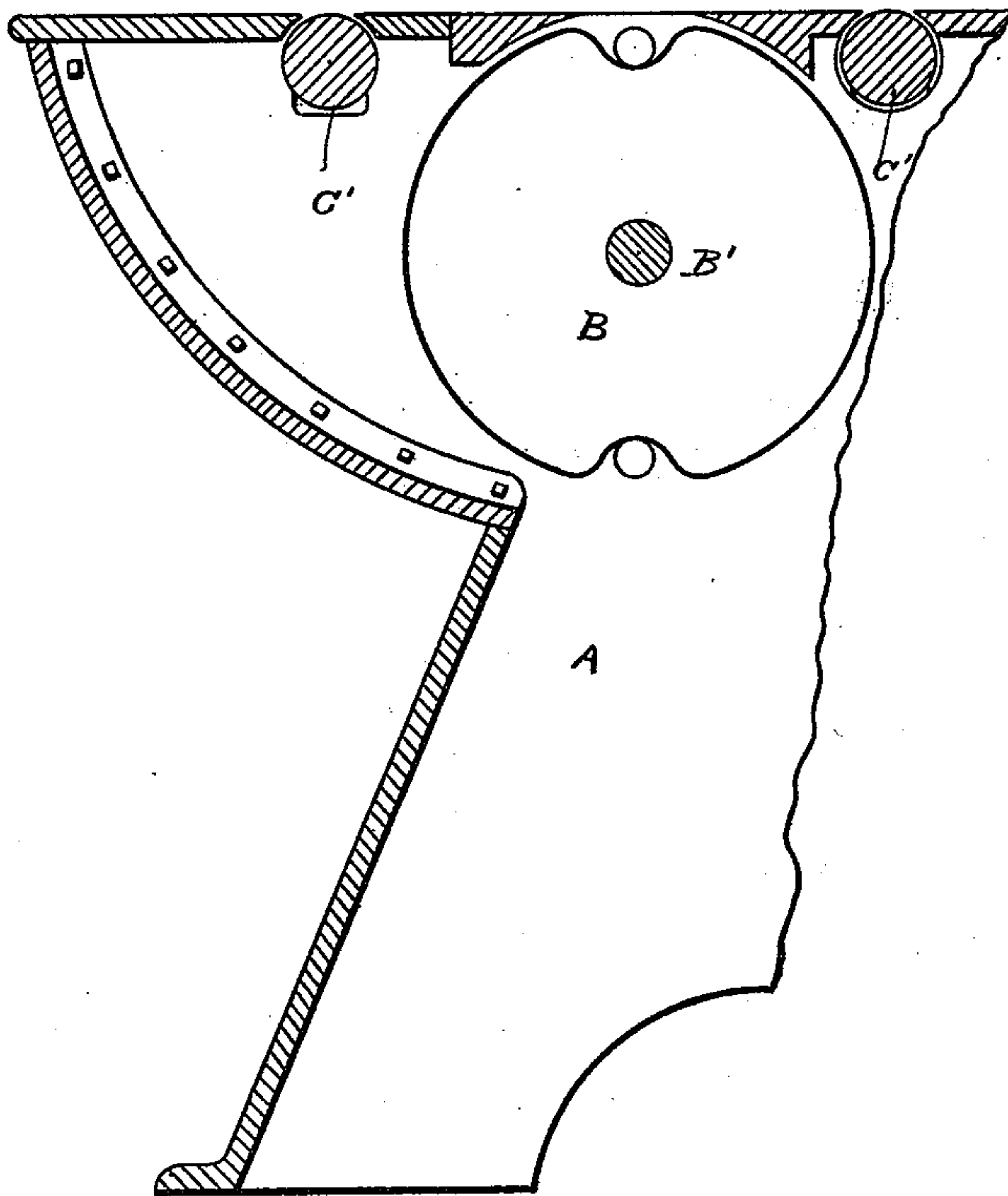


Fig. 2.

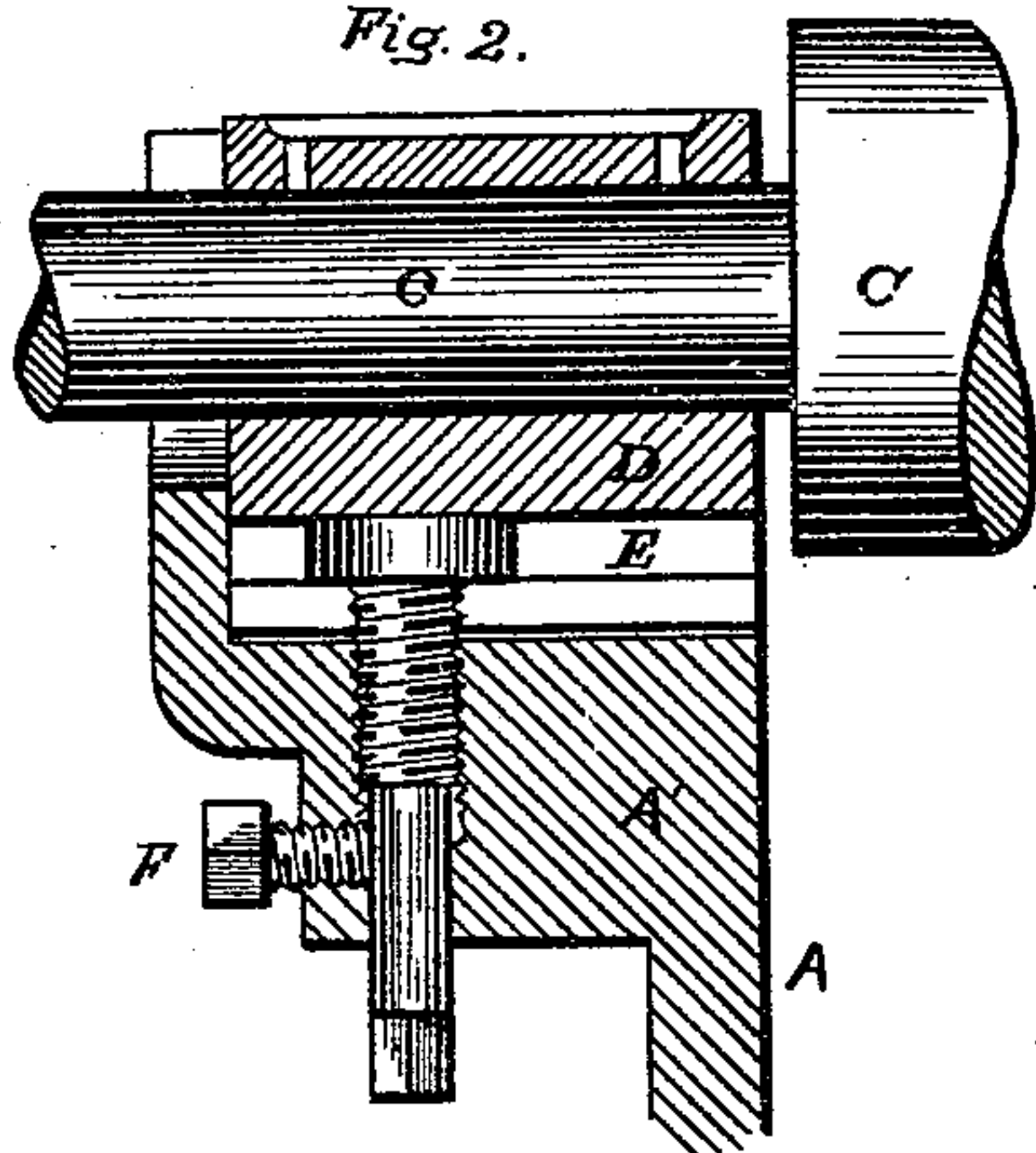
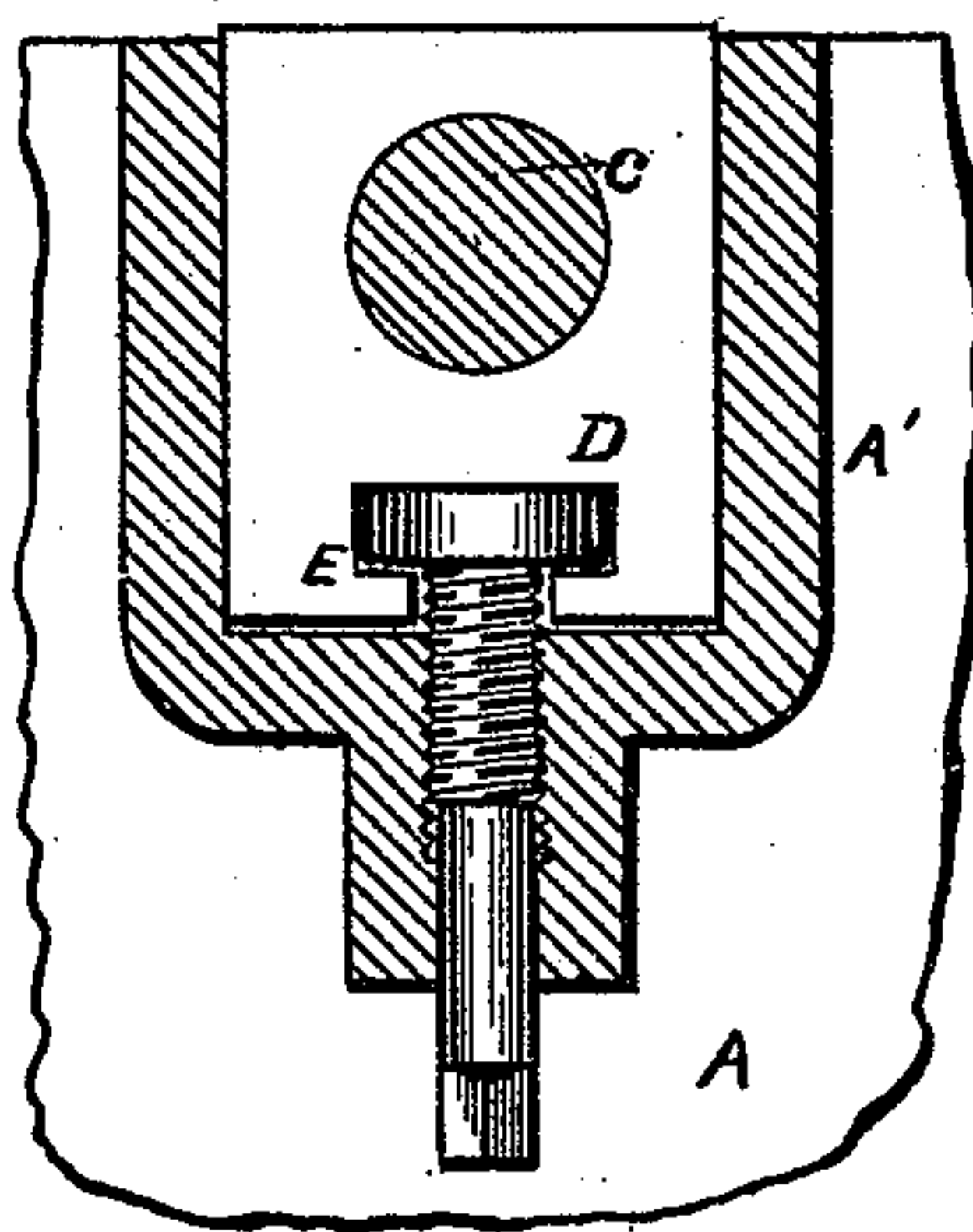


Fig. 3.



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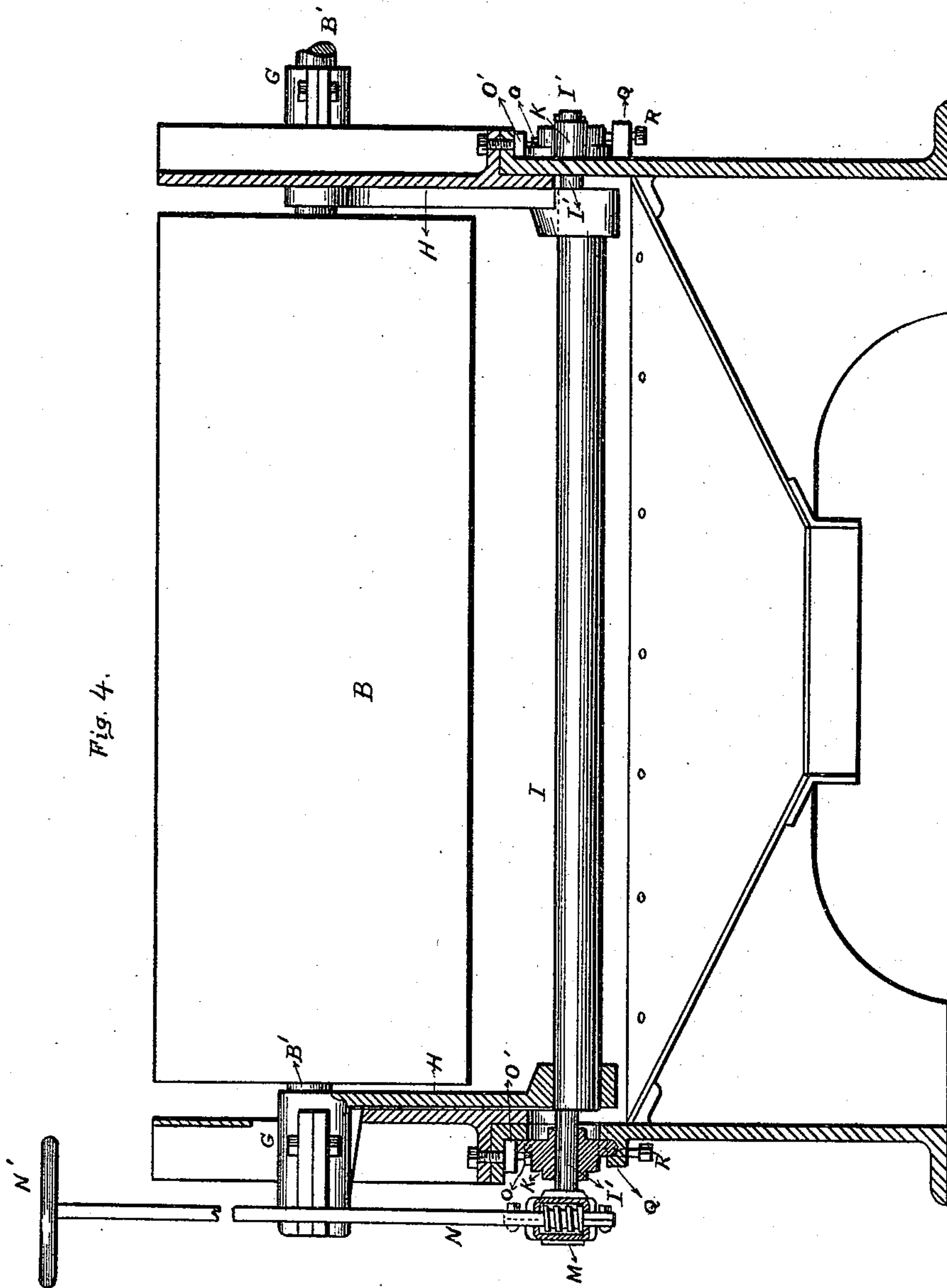
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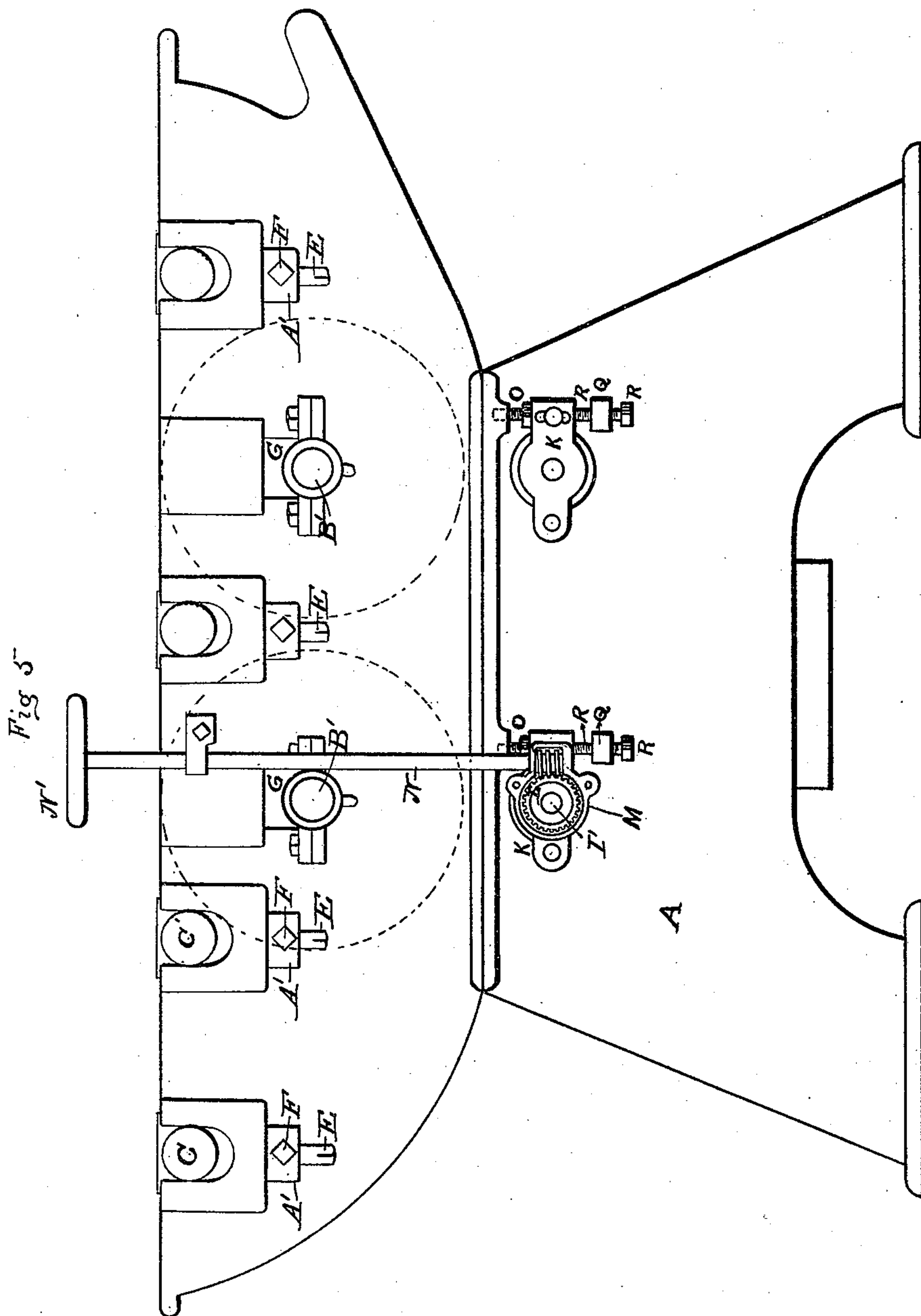
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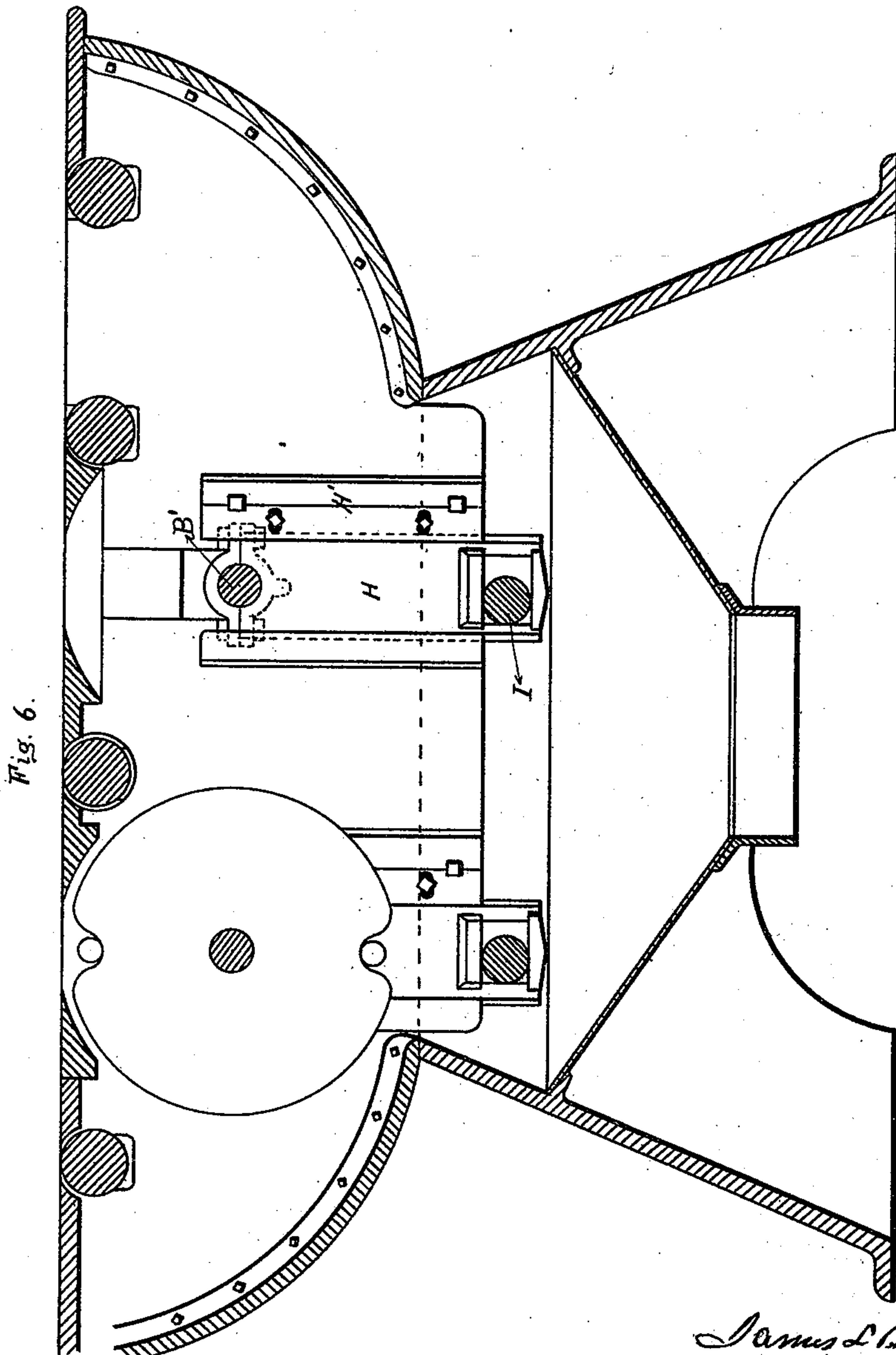
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UNITED STATES PATENT OFFICE.

JAMES L. PERRY, OF WATERTOWN, ASSIGNOR TO THE BERLIN MACHINE WORKS, OF BELOIT, WISCONSIN.

WOOD-POLISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 447,047, dated February 24, 1891.

Application filed March 31, 1888. Serial No. 269,108. (No model.)

To all whom it may concern:

Be it known that I, JAMES L. PERRY, of Watertown, in the county of Jefferson and State of Wisconsin, have invented a new and useful Improvement in Wood-Polishing Machines, of which the following is a specification.

My invention relates to that class of machines used for polishing wood in which a series of cylinders covered with sand-paper are employed and are rotated rapidly, a small part of their periphery being exposed between guard-plates in such manner as to act upon the surface of a board while passing along the top of the frame and over the said cylinders. Feed-rolls are placed on each side of the sand-cylinder, which, in like manner, are exposed through the guard-plates, and by their rotation in contact with the board carry it forward over the surface of the sand-cylinders.

The first part of my invention relates to a device for raising and lowering the feed-rolls by means of the vertically-adjustable bearings which carry the journals of the feed-rolls.

The second part of my invention relates to the mechanism for adjusting the height of the sand-cylinder.

In the annexed drawings, making part of this specification, Figure 1 is a vertical section showing one end of the frame and a cylinder and feed-rolls in proper relative position. Fig. 2 is a vertical section showing the means of adjusting the bearing at one end of the feed-roll, the section being made in the line of the length of the feed-roll journal. Fig. 3 is a transverse section of the same. Fig. 4 is a transverse section of the frame and one of the sand-cylinders, showing the mechanism for the adjustment of the cylinder vertically. Fig. 5 is an elevation of the frame and mechanism for raising and lowering the cylinders; and Fig. 6 is a longitudinal section of the frame, showing two cylinders and the adjusting mechanism for raising and lowering the same.

A is a part of the main frame, showing the location therein of the first of the series of sand-cylinders B and two of the feed-rolls C and C'. At the ends of the feed-rolls are

formed lugs A' on the main frame to receive the bearings D for the feed-roll journals c, which are set in the same and supported upon the heads of bolts E, which are received in longitudinal T-formed grooves cut in the lower faces of the bearings, and the bodies of which bolts are tapped into holes formed in the bottom of the lugs, both being suitably threaded, and have their lower ends squared to receive a socket-wrench, by means of which the bolts may be turned, so that they may be raised or lowered, thus giving vertical adjustment to the bearings of the feed-rolls and supporting the same. This adjustment of the feed-rolls permits the operator to raise or lower the rolls and bring them into proper alignment with the frame and restore them to alignment in case of wear upon the journals or other disturbance. When properly adjusted, the bolts are fixed in place by the set-screws F, which thus hold the bearings and roll in place. This adjustment of the bearing is shown as adapted to one of the lower feed-rolls; but the same adjusting device may be adapted to other bearings, and I therefore desire to cover it independently of the particular roll in connection with which I have shown it. Usually bolts are turned by force applied to their heads. In this instance, however, the bolt and head are turned by force applied to the outer end of the bolt—that is to say, at some point on its body other than the head, the office of the head in this case being to support and confine the bearing.

In the drawings only two sand-cylinders are shown; but more may be added. The present purpose is merely to show the mechanism used for independently adjusting each end of a sand-cylinder and simultaneously adjusting both ends without reference to whether one or more of such cylinders are employed. The sand-cylinder B is suspended upon journals B' B', which extend through vertical slots in the frame and are carried in boxes G G, which are supported upon standards H H, placed inside the main frame at each end of the sand-cylinder and sliding in ways H', attached to the main frame. The standards are enlarged at the lower end and formed to receive the shaft I, which is carried on the eccentrically-placed journals I' I',

which extend outward through vertical slots in the main frame and are held by vertically-adjustable boxes preferably placed on the outside of the frame. One of the journals I' 5 extends through its box K and projects far enough to receive the worm-pinion I, which engages a worm M on the rod N, actuated by a hand-wheel N'. The rod N is carried near its outer end upon a bearing on the main 10 frame. The box K is held in place by a pivot, upon which it may be swung vertically, so as to raise one end of the shaft I. As these boxes are preferably located at each end of the shaft, the independent adjustment of the 15 shaft I, and with it, through the standards H, the sand-cylinder, is provided for. While, however, I prefer to have the journal-boxes K at both ends of the shaft adjustable, it is not absolutely necessary that both shall be 20 adjustable, for the adjustment of one only will change the level of the sand-cylinder, and by raising or lowering one end only of shaft I the cylinder may be adjusted.

The simultaneous adjustment of both ends 25 of the sand-cylinder is provided for by turning the shaft I by means of the worm-gearing and rod N; but that part of the mechanism is not claimed in this application, having been shown in a previous patent to me.

30 The following means are provided for independently adjusting the boxes K, carrying the shaft I: The boxes are confined between a threaded bolt O, tapped into a lug on the main frame above the box, and a similarly-threaded 35 bolt R, in like manner tapped into a lug on the main frame below the box. These bolts may be turned by means of a wrench, and by raising one and lowering the other the boxes and connecting parts may be raised or low- 40 ered for the independent adjustment of the ends of the sand-cylinder.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In combination with the main frame constructed with a lug A', recessed to receive the 45 bearing D of a feed-roll, the roll and its bearing D, having a T-formed groove in its face, and a headed bolt E, having its head received in said groove and its body threaded and 50 tapped through the lug, so that it may be turned by force applied to its outer end, substantially as set forth.

2. In combination with the main frame constructed with a lug A', recessed to receive the 55 bearing D of a feed-roll, the roll and its bearing D, having a T-formed groove in its face, a headed bolt E, having its head received in such groove and its body threaded and 60 tapped through the lug, so that it may be turned by force applied to its outer end, and a set-screw F for securing the said bolt and connected parts in place, substantially as set 65 forth.

3. In combination with the sand-cylinder B, boxes G, standards H, and eccentric shaft 65 I, supporting the same, an independently and vertically adjustable box K, carrying one of the journals of said shaft, substantially as set 70 forth.

4. In combination with the sand-cylinder 70 B, boxes G, standards H, and eccentric shaft I, supporting the same, a swinging box K, carrying a journal of said shaft, and the bolts O and R for independently adjusting the boxes 75 and ends of the shaft, substantially as set forth.

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,
N. E. OLIPHANT.