

No. 803,710.

PATENTED NOV. 7, 1905.

G. QUARMBY.
MACHINE FOR CUTTING BLOCK SOLES.
APPLICATION FILED MAY 10, 1904.

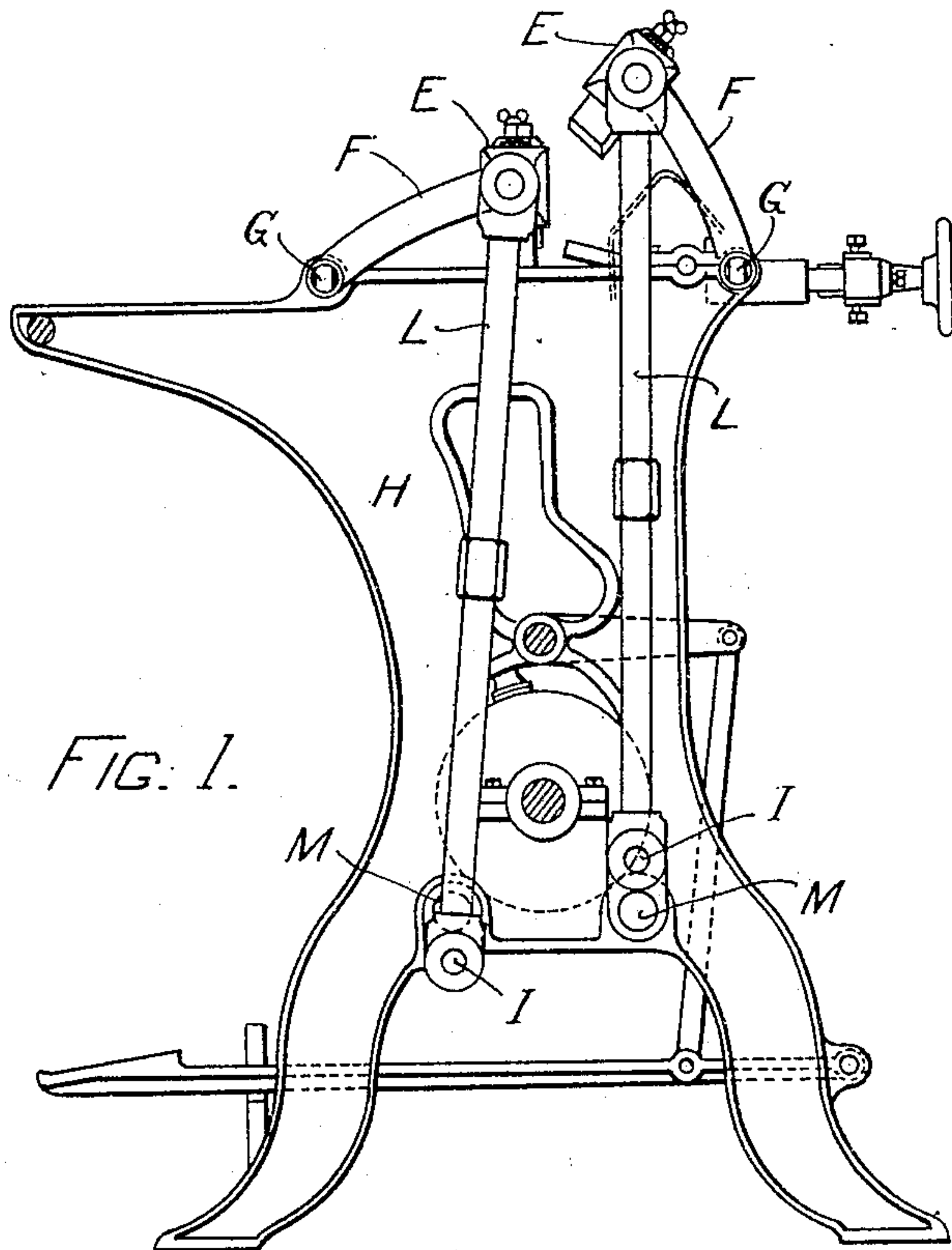


FIG. 1.

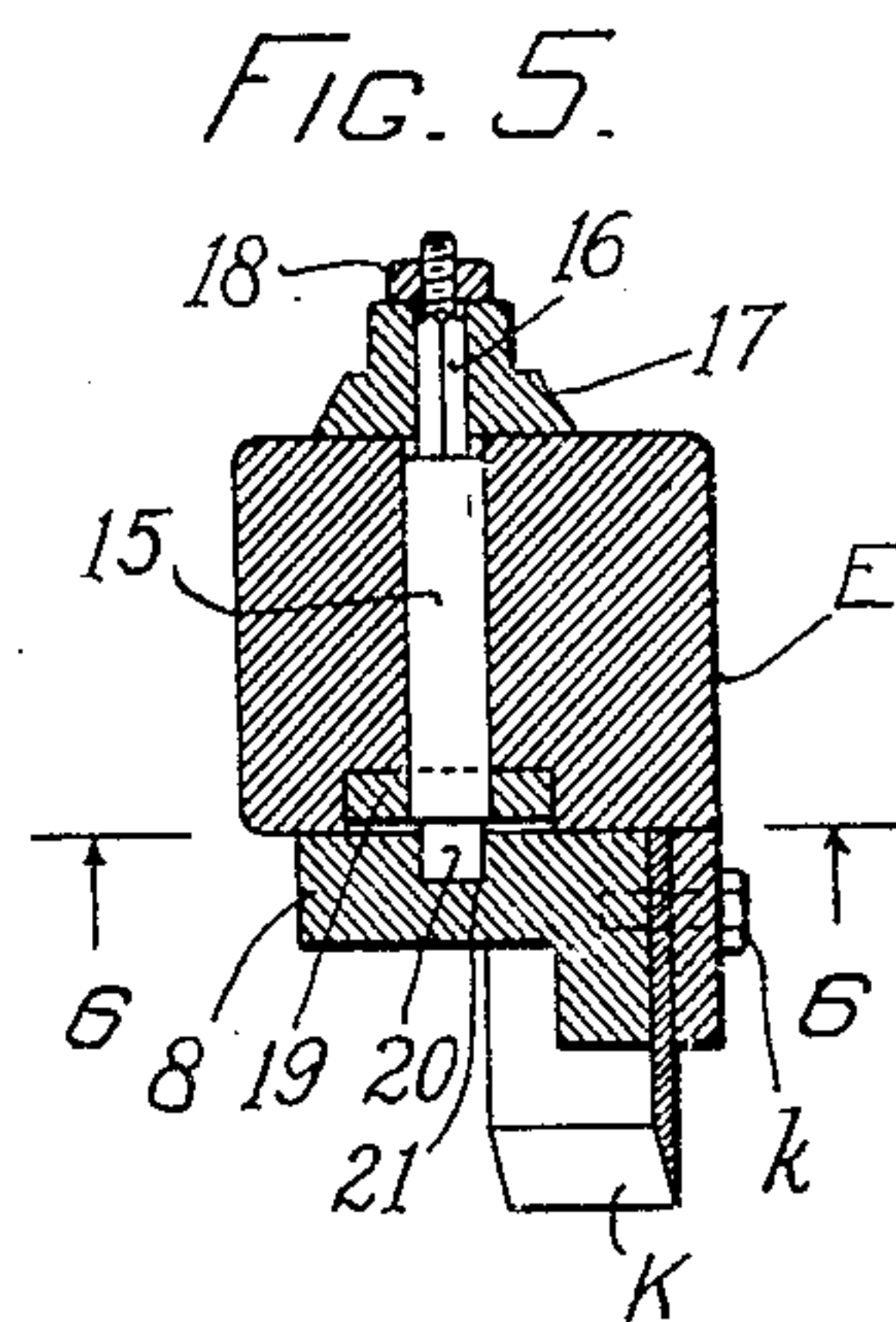


FIG. 5.

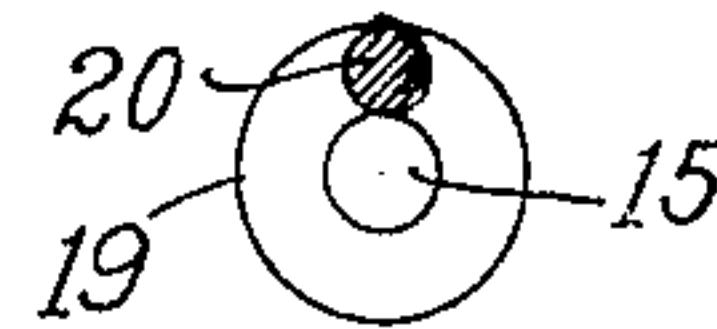


FIG. 6.

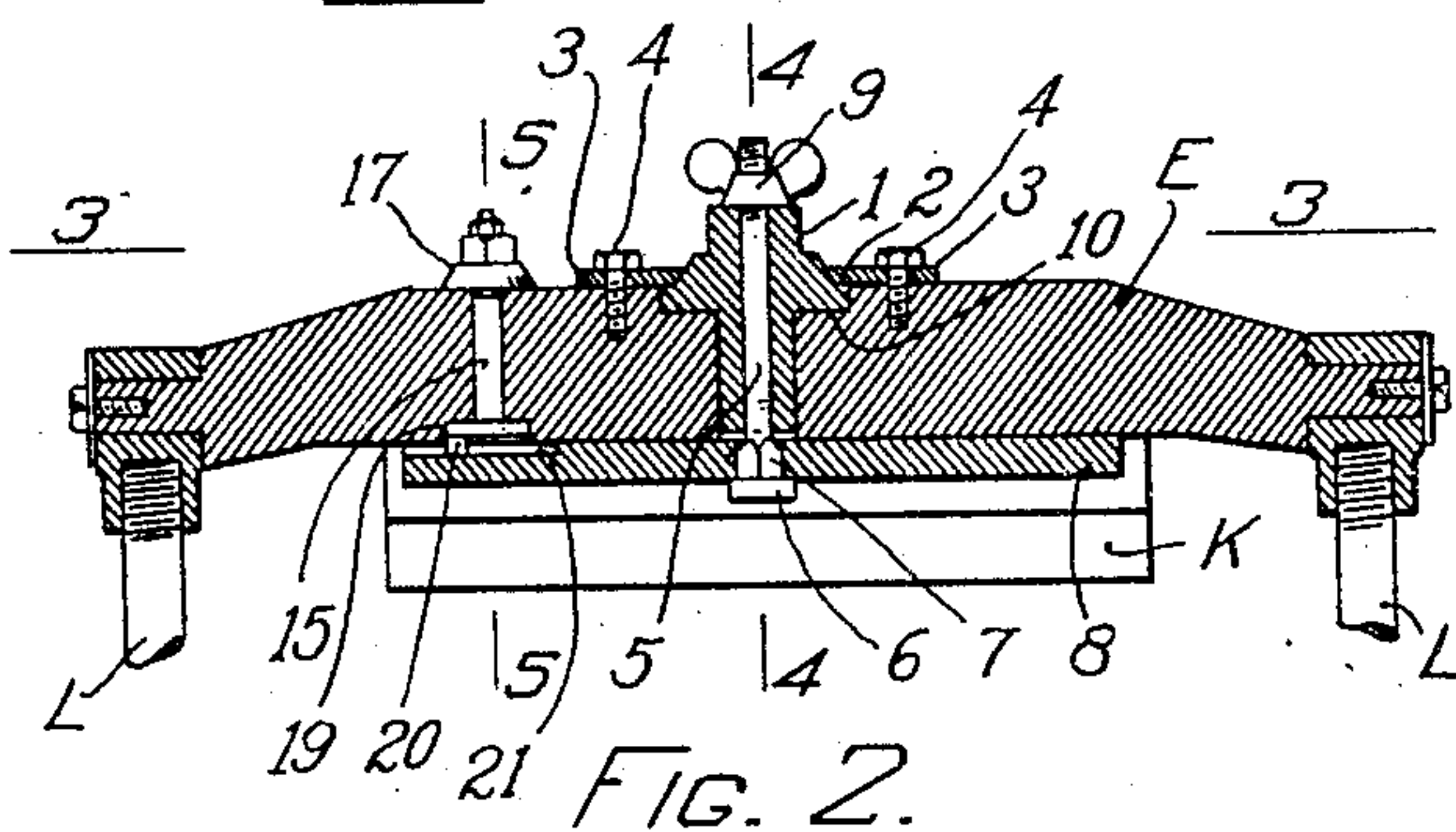


FIG. 2.

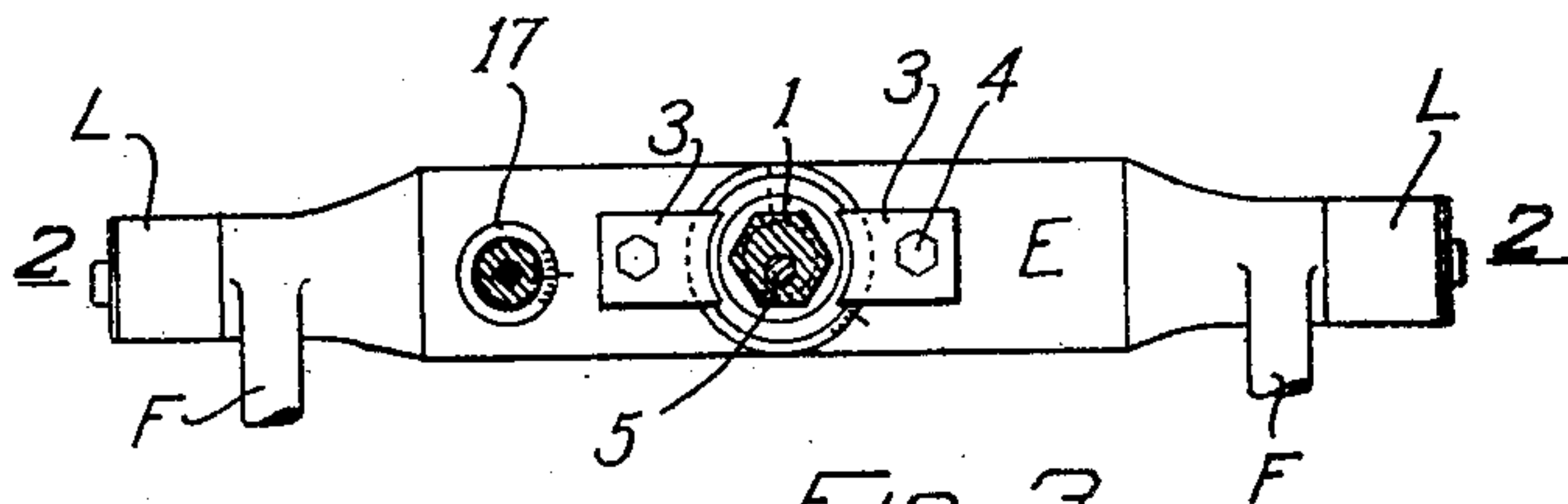


FIG. 3.

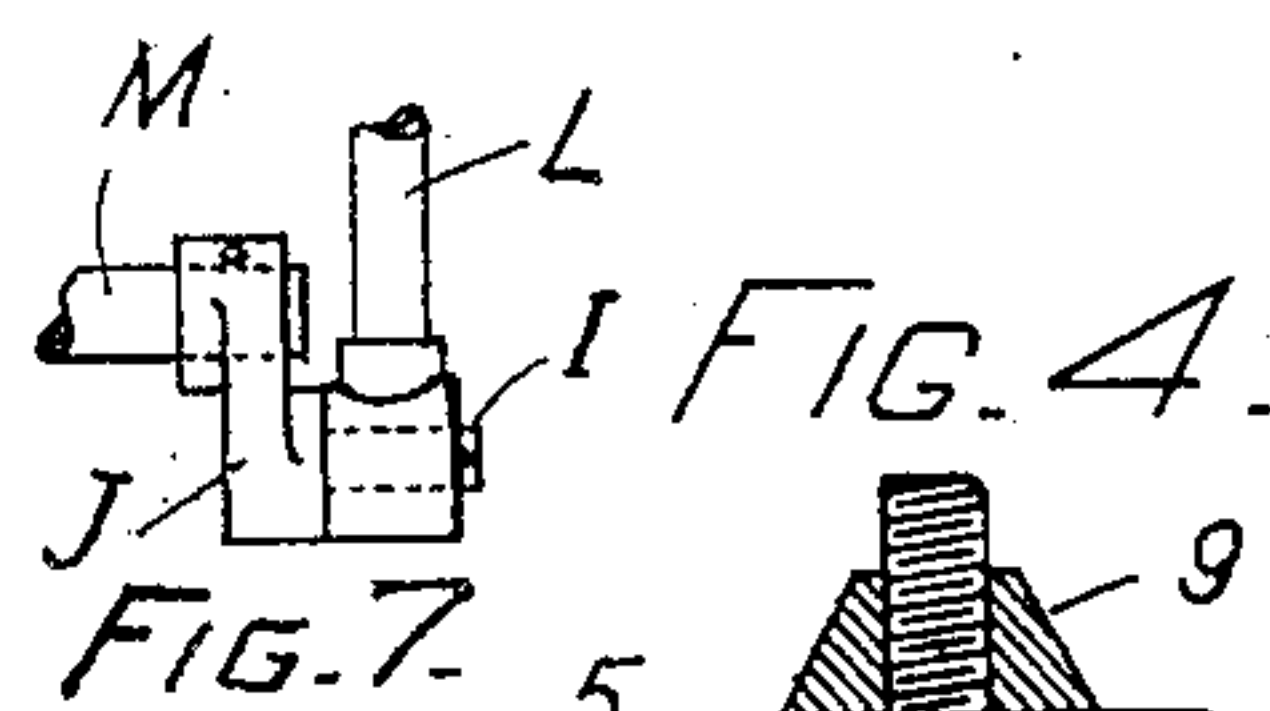


FIG. 4.

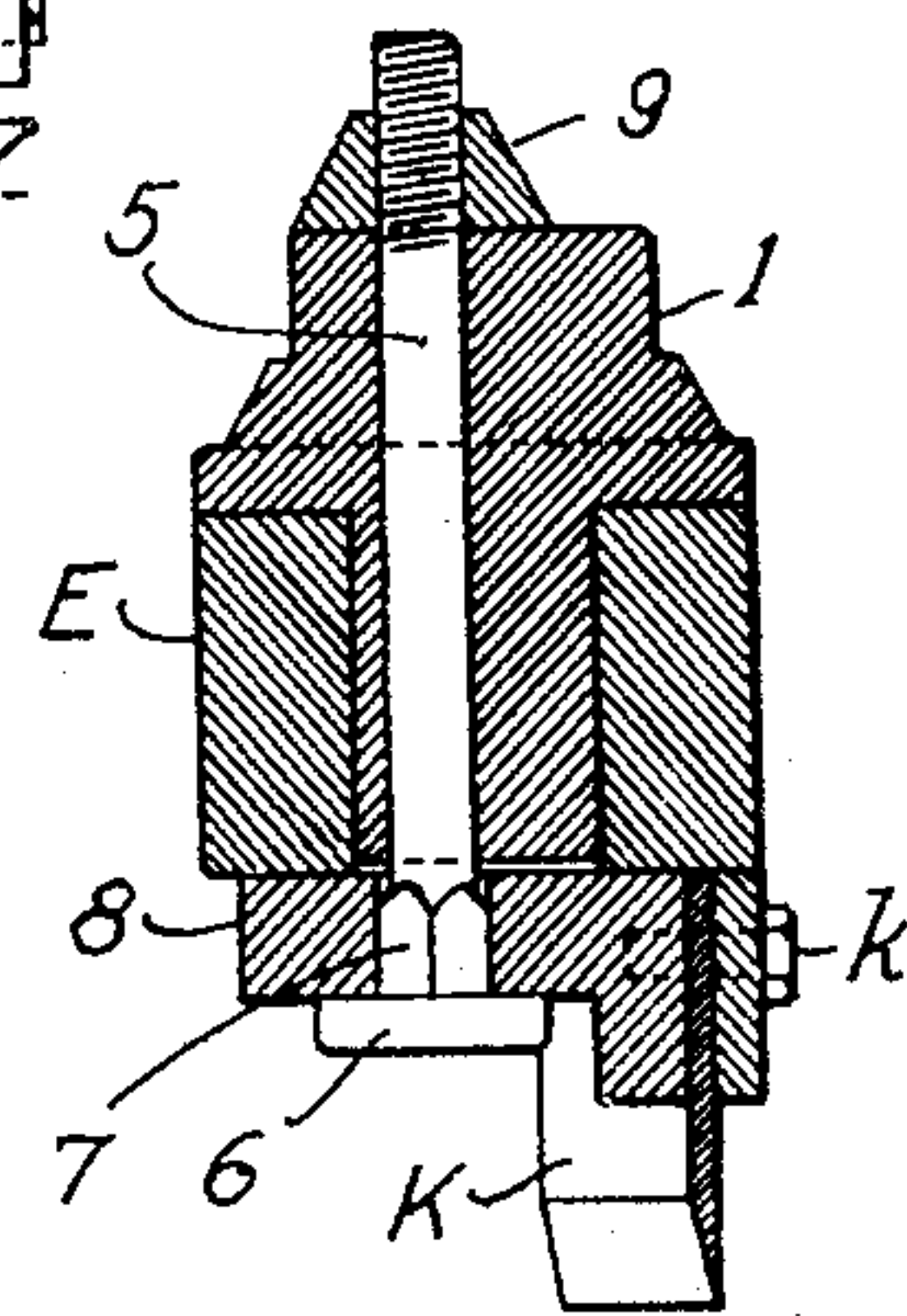


FIG. 7.

WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE QUARMBY, OF SAUGUS, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO JAMES R. CARRET, OF LEXINGTON, MASSACHUSETTS.

MACHINE FOR CUTTING BLOCK-SOLES.

No. 803,710.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed May 10, 1904. Serial No. 207,297.

To all whom it may concern:

Be it known that I, GEORGE QUARMBY, a citizen of the United States, residing at Saugus, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Machines for Cutting Block-Soles, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a side elevation of a block-sole-cutting machine containing my invention. Fig. 2 is a lengthwise central section at line 2 2 of Fig. 3 of the beam and knife-carrier and connecting mechanism and shows the knife in elevation. Fig. 3 is a top plan view of the beam and knife-carrier-adjusting mechanism, partly in section, at line 3 3 of Fig. 2. Fig. 4 is a vertical central section of the combined beam, knife-carrier, and connecting mechanism, showing the knife partially in elevation at a line corresponding to 4 4 of Fig. 2. Fig. 5 is a section through the beam and knife-carrier at line 5 5 of Fig. 2, showing the knife in elevation. This view also illustrates the pin whereby the knife-carrier is adjusted on its pivot. Fig. 6 is an under plan view of the clamp-head of the adjusting-pin, showing the stud that depends therefrom in section at line 6 6 of Fig. 5. Fig. 7 is a side elevation showing the means of operating reciprocating rods that actuate the knife-supporting beams.

My invention relates to machines for cutting block-soles or soles which are cut to an approximation of their final shape by curved knives acting on a strip of sole-leather, substantially in the manner described in United States Letters Patent No. 558,964 to D. T. Knox, of April 28, 1896, for a machine for cutting block-soles, to which Letters Patent reference may be had for further and detailed explanation of the general character and construction of machines of this type and for a description of the construction of one form of machine in which my invention may be embodied. In the Knox patent each beam E has a longitudinal slot within which the shank of the knife-carrier is mounted and made endwise adjustable. The shank of the knife-carrier in the Knox patent construction constitutes what is ordinarily known as the "inner beam" of the machine.

One object of my invention is to simplify and strengthen the construction of the ma-

chine by eliminating from the machine the so-called "inner beam," making one beam do the work of the two in the Knox patent construction and obviating all endwise adjustment of the knife-carrier shank. By my invention I not only strengthen the main beam, but reduce the weight of metal and number of parts required. I also in carrying out my invention provide means for giving requisite adjustment to the knives by swinging the knife-carrier on a pivot without making any endwise adjustment of the knife-carrier.

In the drawings, E represents the knife-supporting beams; F, arms which are affixed to the beams and outwardly connected at G to the supporting-frame H. The beams are moved toward and from the cutting-bed by means of crank-pins I, affixed to cranks J on the power-driven shafts M, the rods L connecting the crank-pins with the ends of the beams.

The mechanism thus far described is old.

In accordance with my invention beam E is provided midway between its ends with a bore which receives a bushing-block 1, having an upper shoulder 2, upon which clamp-plates 3 rest, the plates being held in place on the upper side of beam E by clamp-screws 4. Bushing 1 is bored eccentrically for the reception of the knife-carrier pivot 5, provided at its lower end with a flanged head 6, on which the knife-carrier rests, and provided where it passes through the knife-carrier with a polygonal portion 7, whereby the knife-carrier 8 is held non-rotatively on the pivot, the upper end of which extends through the bushing and receives a clamp-nut 9, whereby the knife-carrier is snugly bound to the beam E and held in place. The upper exposed end of bushing 1 is made polygonal for the application of a wrench when it is necessary to apply one, the shoulder 2 of the bushing riding beneath the inner ends of the clamping-plates 3 when the bushing is turned and the bushing having a projecting shoulder 10 below the upper surfaces of beam E, which is countersunk for the reception of shoulder 10.

To swing the knife-holder slightly on its pivot 5, a rotatable adjusting-pin 15 is mounted in beam E. Its upper end portion 16 is polygonal in cross-section. An adjusting-nut 17 is mounted on this polygonal section 16 and is held in place by a screw-nut 18. The lower

end of the adjusting-pin is provided with a clamp-head 19 fast on it and mounted in and countersunk on the under side of the beam. Clamp-head 19 carries a downwardly-projecting stud 20, which works in a slot 21, extending lengthwise of the upper surface of the knife-carrier. When a wrench is applied to the nut 17, the adjusting-pin 15 may be rotated and the stud 20 caused to travel in the lengthwise slot 21 of the knife-carrier and the knife be adjusted. The knife K is clamped in any suitable manner to the knife-carrier, as at $\frac{1}{2}$.

The purpose of eccentrically mounting the pivot 5 is to permit the various portions of the knife to be varied with proper relation to the curvatures of the opposite edges of the soles.

What I claim is—

In a sole-block-cutting machine, a beam 20 movable from and toward the cutting-beam; a knife-carrier extending parallel with said beam; and means for positively securing the carrier to the beam in any position to which it may be adjusted; the knife-carrier being 25 provided with a pivot mounted eccentrically in a bushing in the beam and held non-rotatively on said pivot; and a clampable mechanism for swinging the knife-carrier on its pivot. 30

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE QUARMBY.

Witnesses:

EDWARD S. BEACH,
E. A. ALLEN.