

No. 839,055.

PATENTED DEC. 18, 1906

R. G. WOODWARD.
PRESSER FOOT FOR SEWING MACHINES.

APPLICATION FILED JAN. 26, 1903.

Fig. 1.

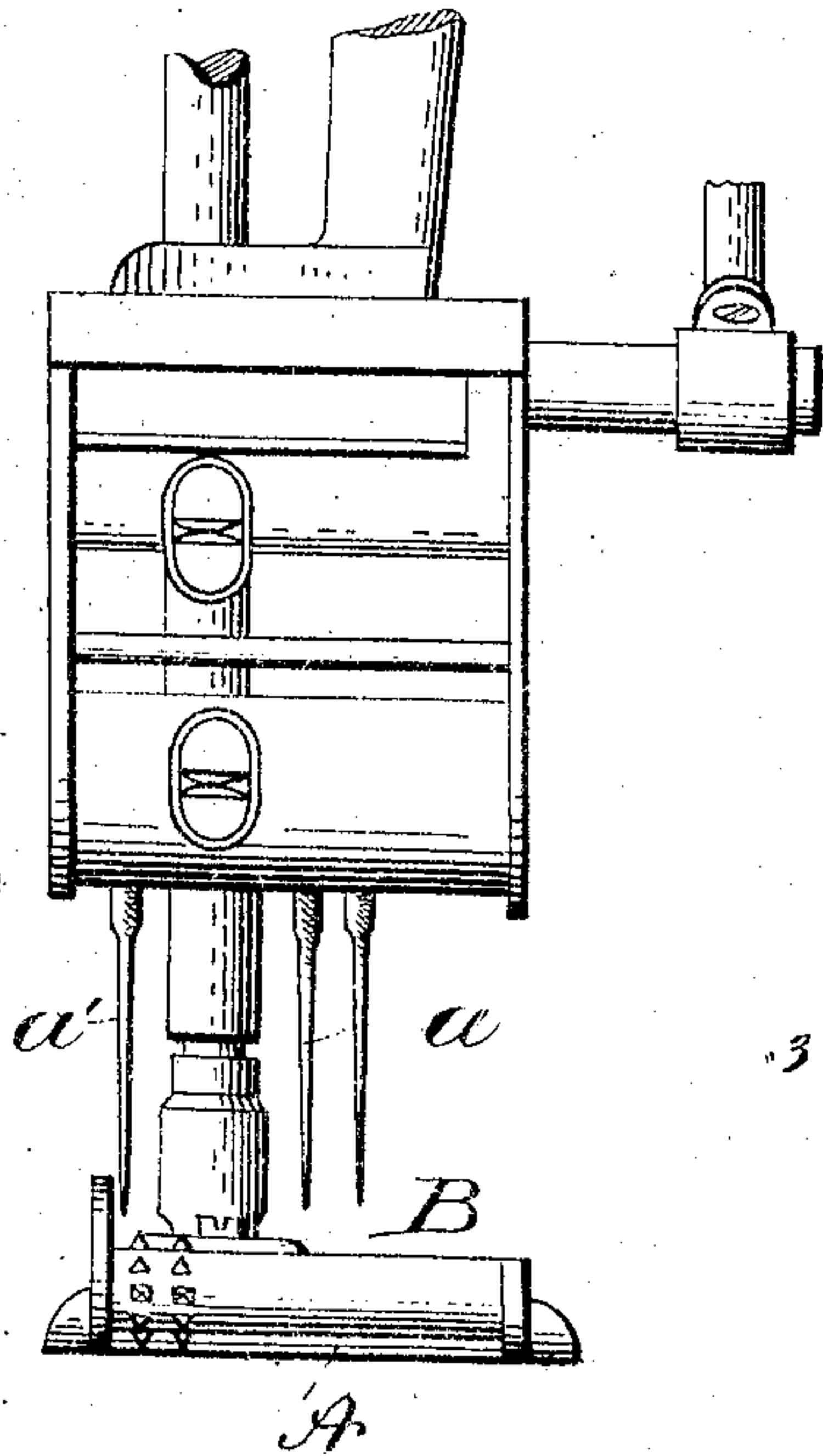


Fig. 2.

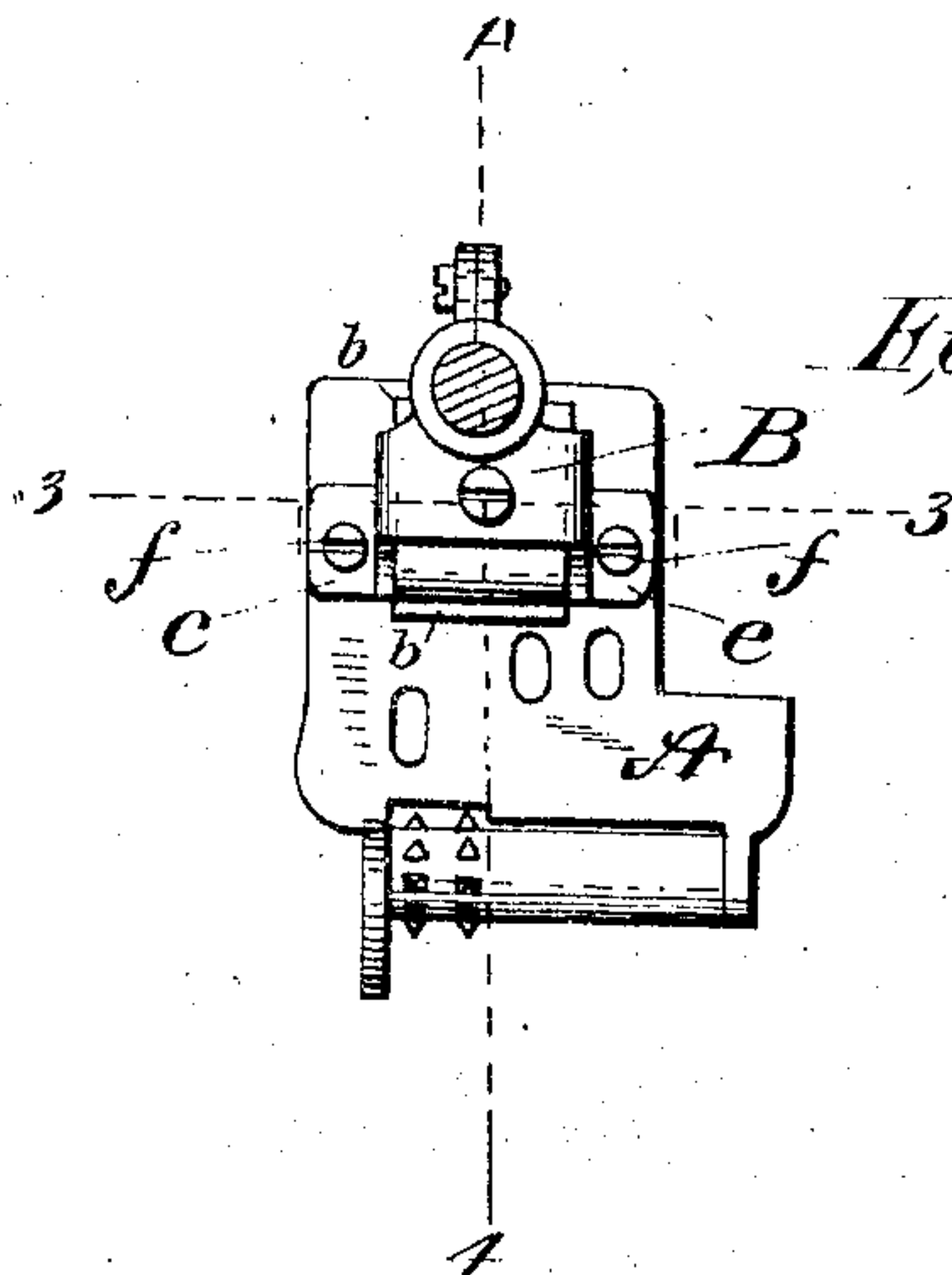


Fig. 3.

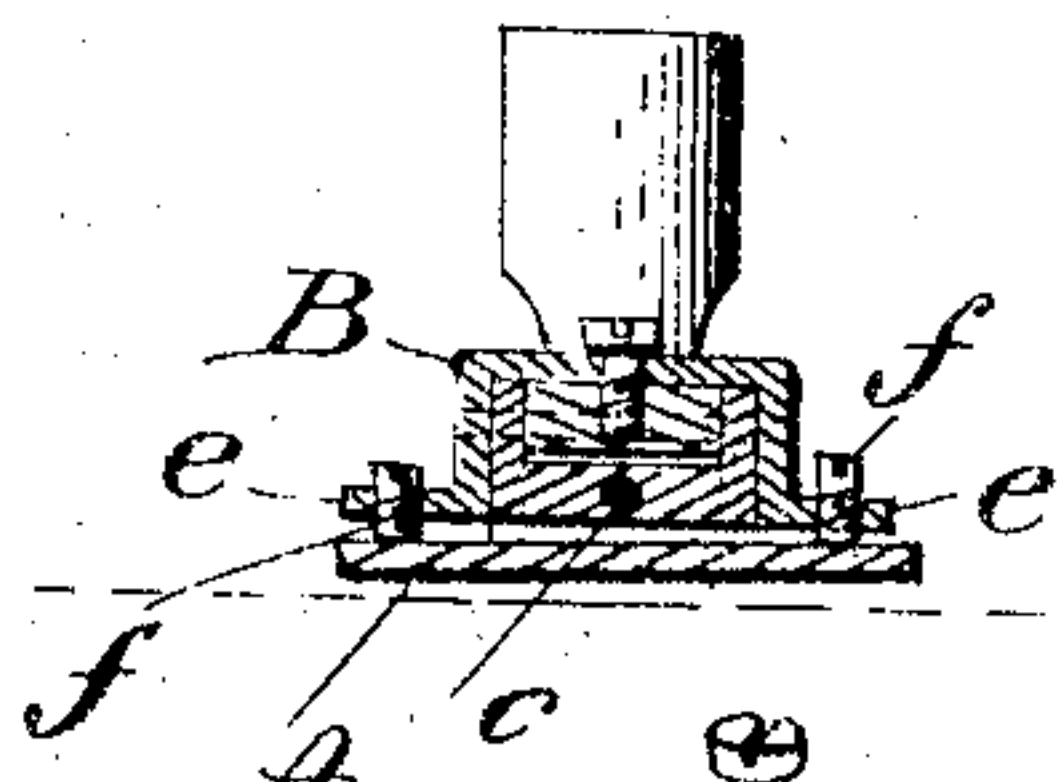


Fig. 4.

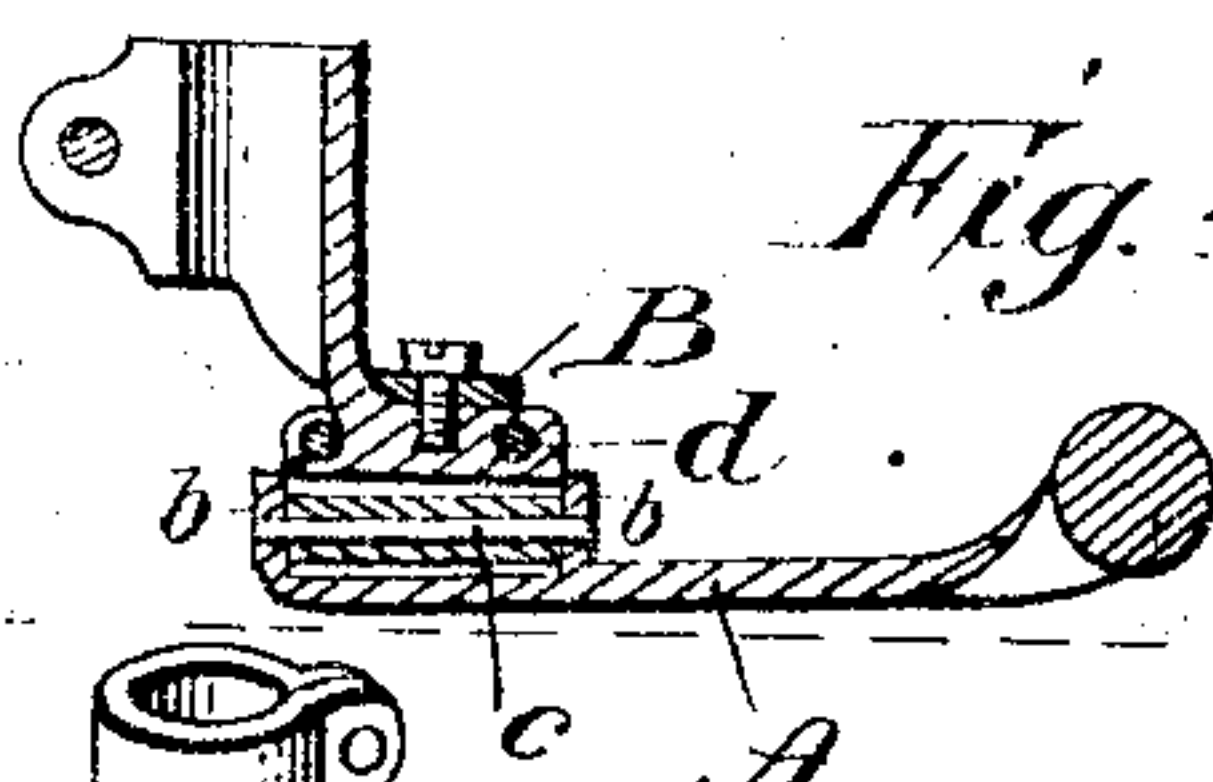


Fig. 6.

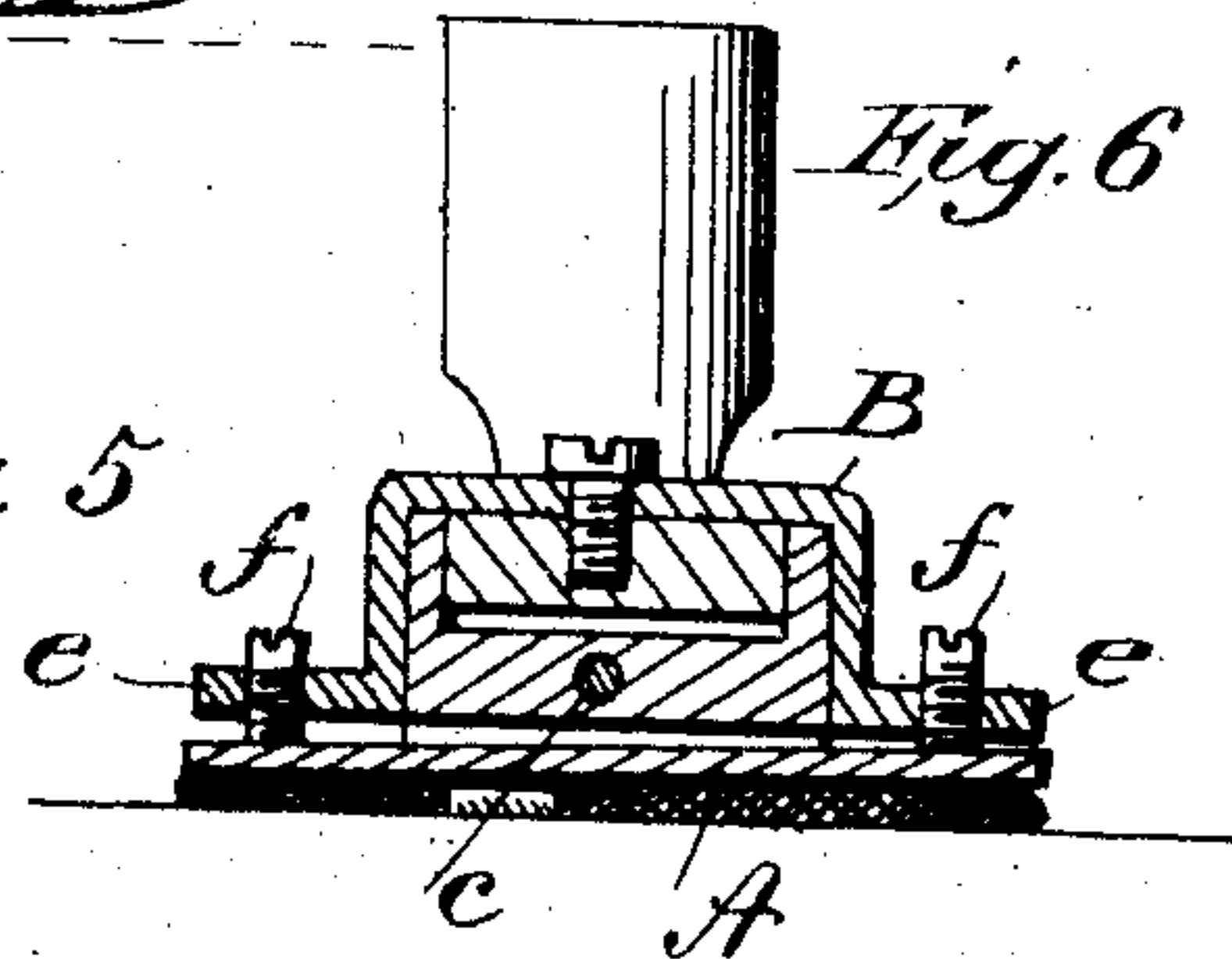
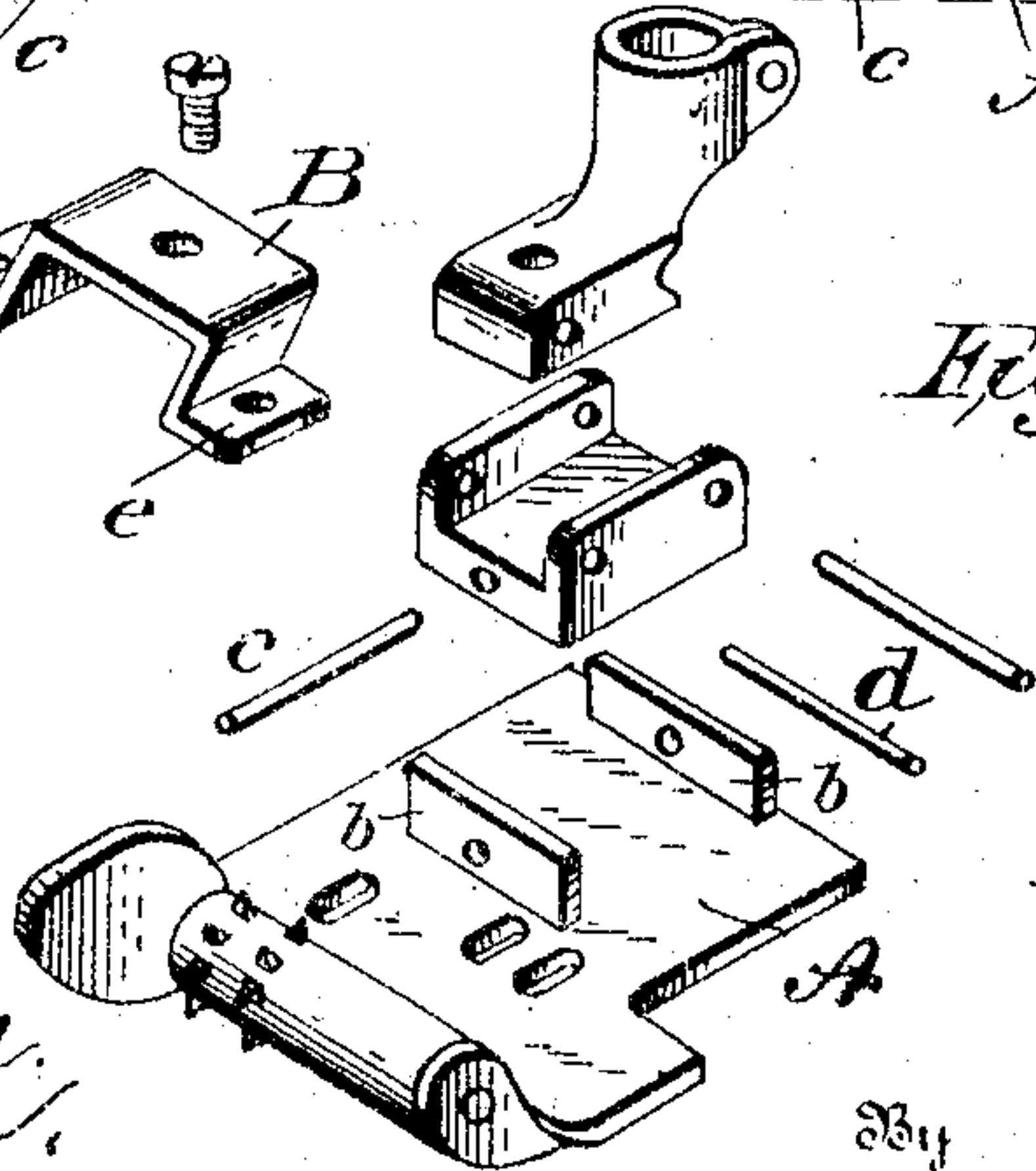


Fig. 5.



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UNITED STATES PATENT OFFICE.

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PRESSER-FOOT FOR SEWING-MACHINES.

No. 839,055.

Specification of Letters Patent.

Patented Dec. 13, 1906

Application filed January 26, 1903. Serial No. 140,620.

To all whom it may concern:

Be it known that I, RUSSEL G. WOODWARD, a citizen of the United States, residing at Waukegan, in the county of Lake, State of Illinois, have invented certain new and useful Improvements in Presser-Foot for Sewing-Machines, of which the following is a description, reference being had to the accompanying drawings and to the letters of reference marked thereon.

My invention relates to an improvement in presser-feet for sewing-machines, and particularly to a presser-foot for use upon machines adapted to sew lace edgings upon the necks or fronts of underwear, from the cross-bars of which edging a tape is drawn alternately over and under said bars. The presser-foot itself may be said to be an improvement upon the type of presser-foot shown in the Pennington and Schott patent, No. 558,459, granted April 14, 1896. It is applied, however, in connection with a sewing-machine having three needles, a pair of which needles is arranged to make the union special twin-needle stitch illustrated in Patent 344,492 and to pass through the right-hand portion of the edge and fabric, leaving the festoons projecting beyond the edge thereof, while the third needle makes the ordinary straightaway stitch and passes through the edges and fabric upon the opposite side of the festoon edging.

The invention is intended to be used in connection with the attachment for guiding edging shown in my application for patent filed April 17, 1902, Serial No. 103,321. In the sewing on of this edging in the use of the ordinary presser-foot it has been found that the feed is apt to pull one side of the edging, where the one side—as, for instance, that to which the festoons are applied and which is secured by the two needles—is thicker than that part which is operated upon by the other needle. If the bottom of the presser-foot is in a horizontal plane, that part of the edging which is thickest will be fed; but because of this the feed is apt not to take hold of the thin part of the goods, and therefore the edging is apt to be distorted.

The object of the present invention is to avoid this difficulty and to provide a construction of presser-foot which can be adjusted and arranged to bear equally on both

sides of the edging and causes it to be fed equally.

The invention consists in the matters hereinafter described, and referred to in the appended claims.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 represents a front elevation of a portion of a sewing-machine, showing my improved presser-foot applied thereto. Fig. 2 is a plan view of the presser-foot. Fig. 3 is a transverse section on the line 3 3, Fig. 2. Fig. 4 is a longitudinal section on the line 4 4, Fig. 2. Fig. 5 is a perspective view of my presser-foot with the parts separated. Fig. 6 is an enlarged view of Fig. 3, showing a piece of fabric under the presser-foot.

In the drawings, *a a* represent the needles of the pair arranged upon the right-hand side of the line of feed.

a' represents the needle making the straightaway stitch arranged upon the opposite side of the line of feed. The presser-foot A is formed with openings for the passage of the needles, and at its forward end is the spur-roller, similar to that shown in the Pennington and Schott patent above referred to. It has two downwardly-extending flanges *b b*, through which and the lower end of the shank of the presser-foot passes a pin *c*, upon which the foot is pivoted to swing on the axis parallel to the direction of feed.

The foot is hinged in the usual way to tilt by the transverse pin *d*. A yoke or bridge piece B is screwed into the lower end of the presser-foot shank, and its downwardly-projecting flanges have horizontal projections *e*, through which pass screws *f*, adapted to bear on the presser-foot near its side edges. By loosening one screw *f* and tightening the other the presser-foot may be tilted on its longitudinal axis, thus allowing for a greater thickness of the edge on one side than on the other, so that the feed will be equal on both sides and the edge will not be distorted.

I have found in practice that this presser-foot possesses a special advantage when used in connection with a machine of the character illustrated in the drawings, in which three needles are used, two arranged in a pair and one separately. It is a fact that in practice when a pair of needles is used upon one side of the foot and a single needle on the other

side the work is not balanced. In other words, there is more resistance upon one side than upon the other, for the reason that on the twin-needle side there is a resistance from a pair of tensions, while upon the other side there is the resistance of only one tension. Consequently it is necessary to have a construction of presser-foot to equalize it. This resistance is sometimes sufficient to draw the work out of line and prevent feeding of the same without distorting the wales in the cloth, which is very objectionable. I consider this feature, therefore, within the scope of my invention and wish to cover it.

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

1. A sewing-machine presser-foot having needle-openings upon opposite sides of the central line, and pivoted to swing upon an axis parallel to the direction of feed, with means for adjusting said foot on its axis, whereby the difference in resistance of the fabric caused by the unequal pull of the threads on opposite sides of the pivot is compensated for; substantially as described.

2. A sewing-machine presser-foot pivoted to swing upon an axis parallel with the direction of feed of the machine, a yoke or plate

secured to the shank of the presser-foot and bearing upon the presser-foot, with means for adjusting said presser-foot upon its axis; substantially as described.

3. A sewing-machine presser-foot pivoted to swing upon its axis parallel with the direction of feed of the machine, a yoke or plate secured to the shank of the presser-foot and adjusting-screws passing through the opposite ends of the yoke, and bearing upon the presser-foot, whereby by loosening one and tightening the other, the foot may be tilted; substantially as described.

4. In combination with a sewing-machine, having a plurality of needles arranged unequally upon opposite sides of the central line of feed, a presser-foot, pivoted to swing upon an axis parallel to the direction of feed, with means for adjusting said foot on its axis whereby the fabric may be fed uniformly and without distortion; substantially as described.

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

RUSSEL G. WOODWARD.

Witnesses:

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