

(No Model.)

3 Sheets—Sheet 1.

J. W. POST.
SEWING MACHINE.

No. 312,509.

Patented Feb. 17, 1885.

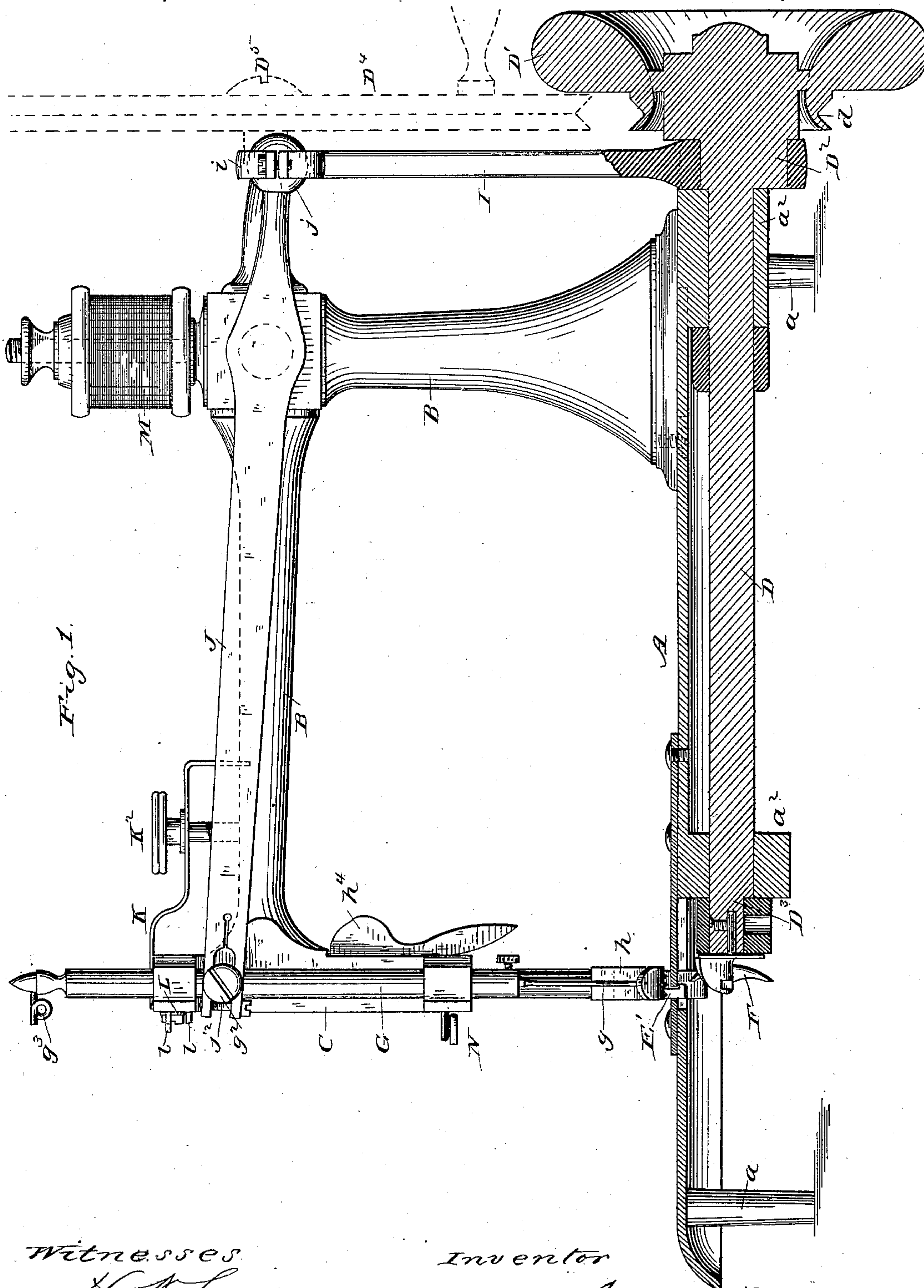


Fig. 1.

Witnesses

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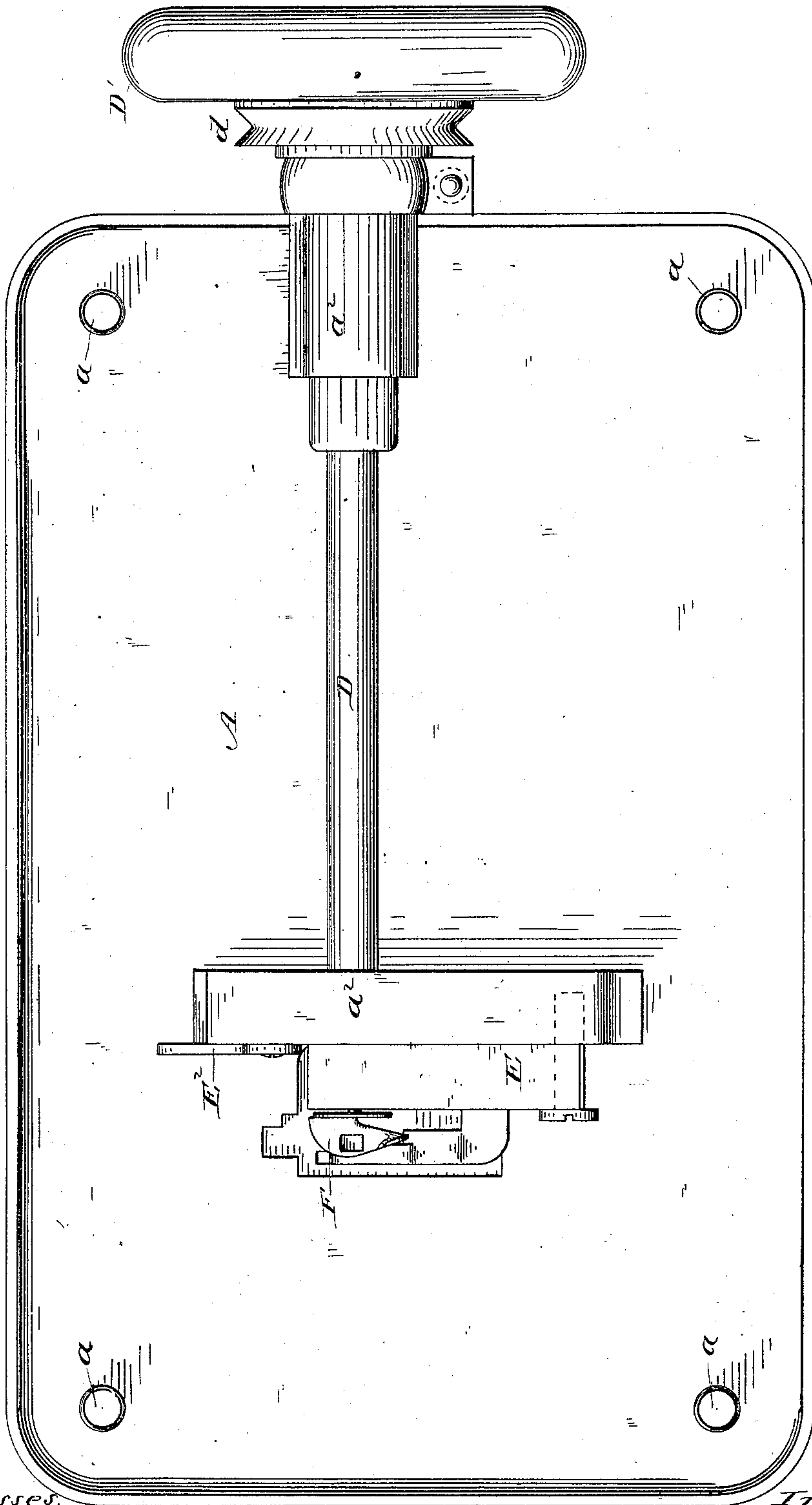
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Fig. 2



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Fig. 4.

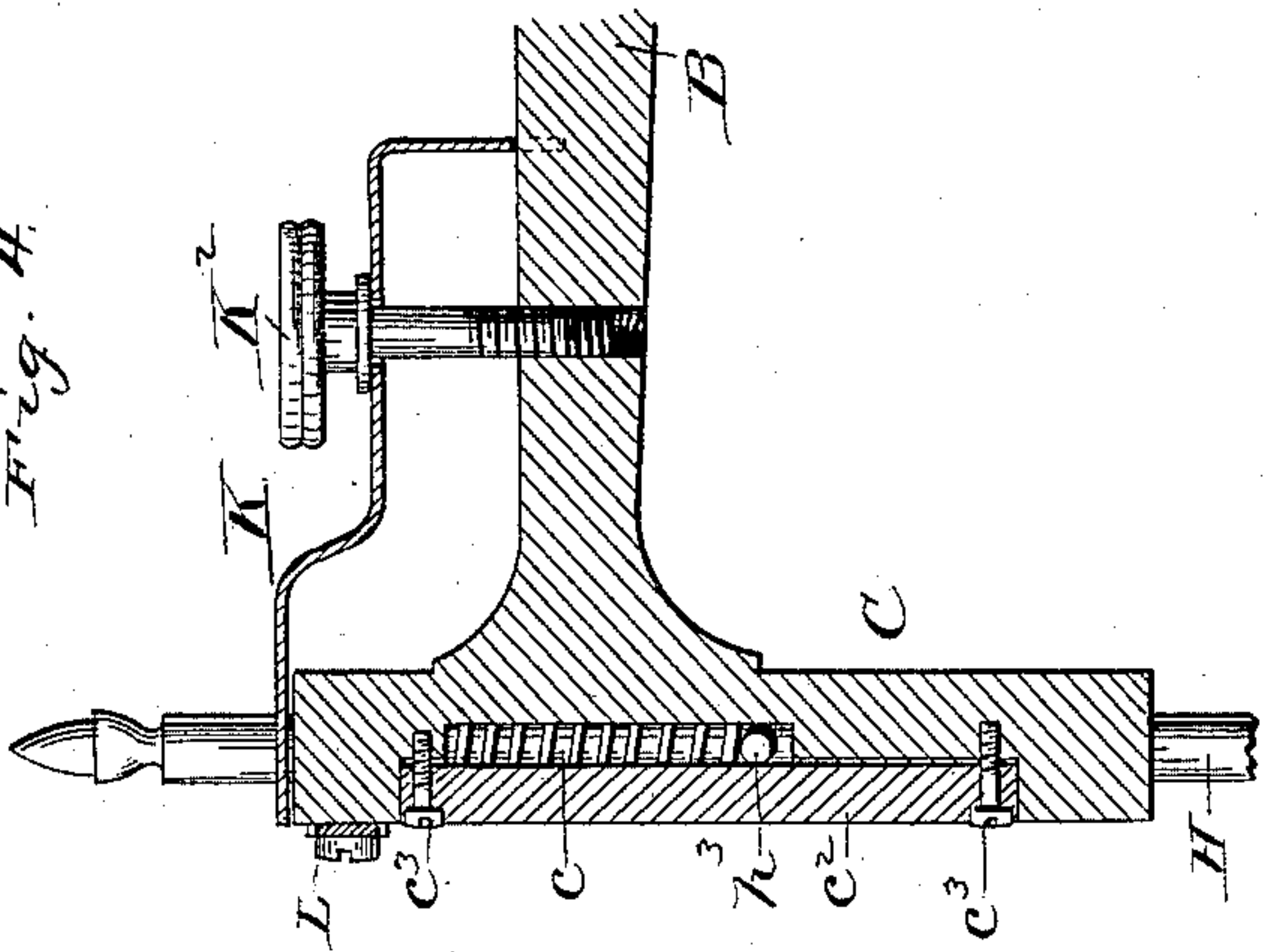


Fig. 5.

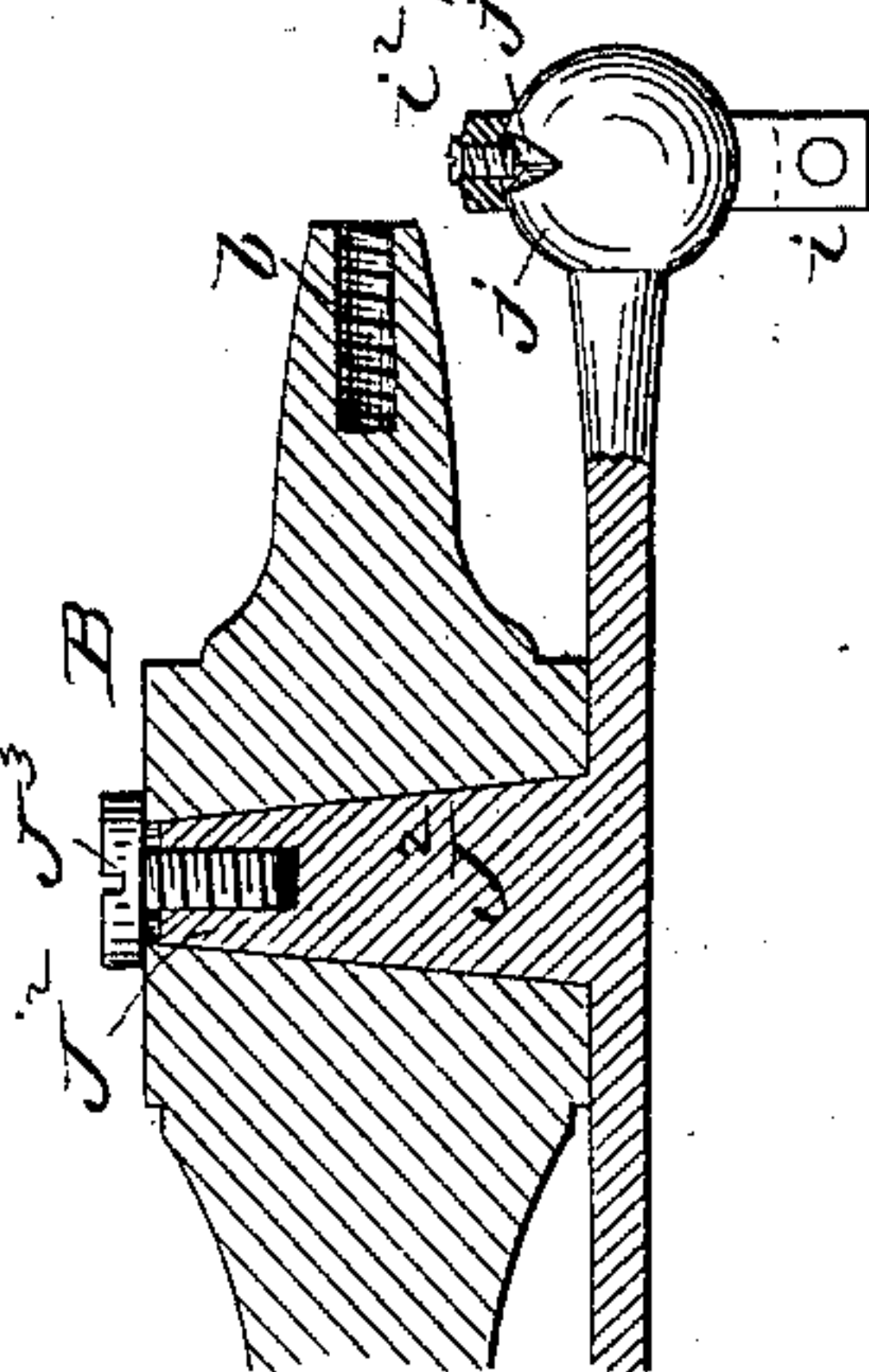


Fig. 3.

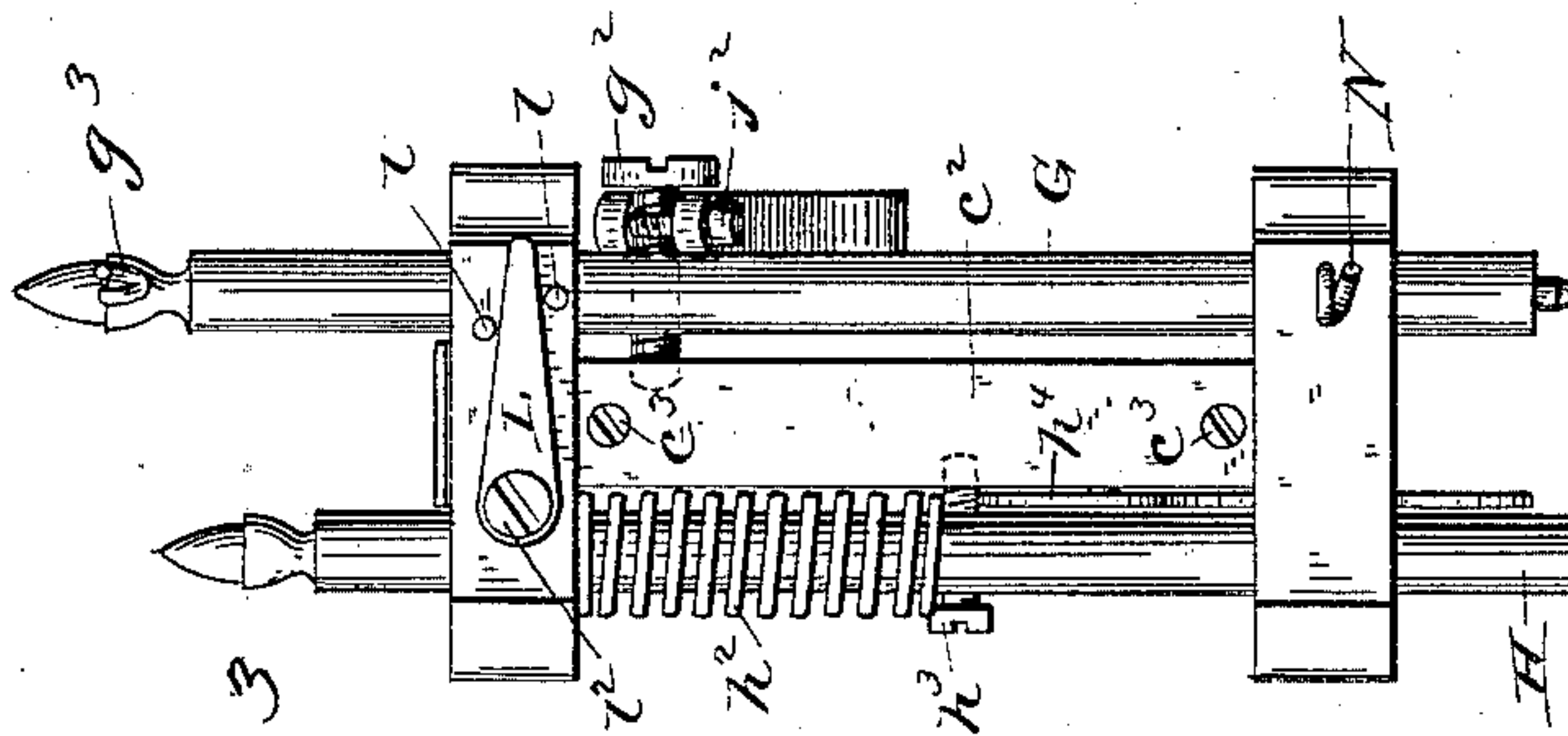
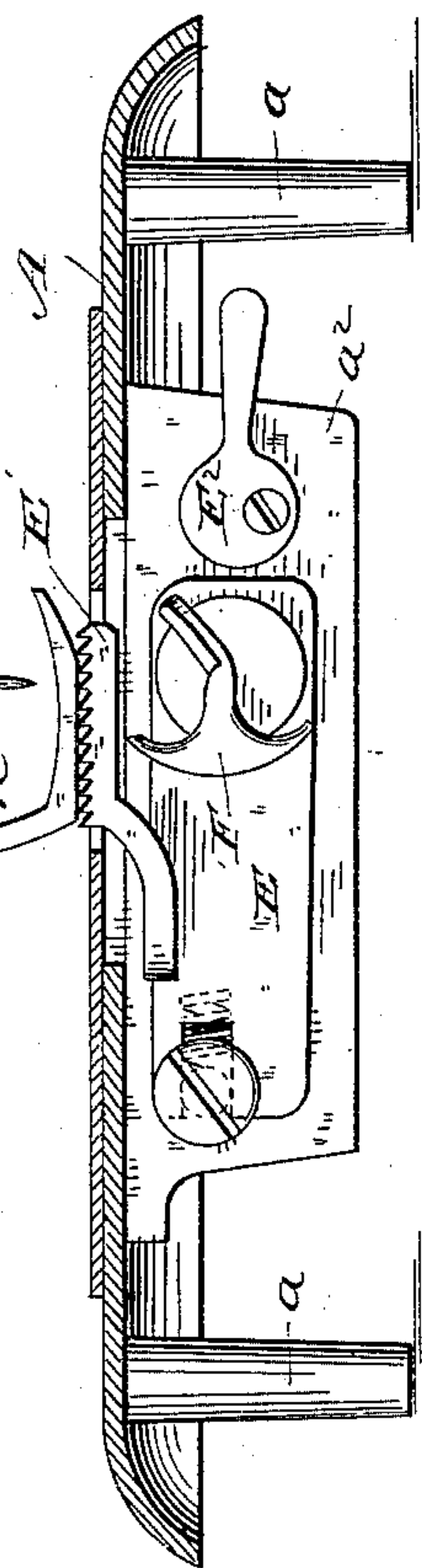
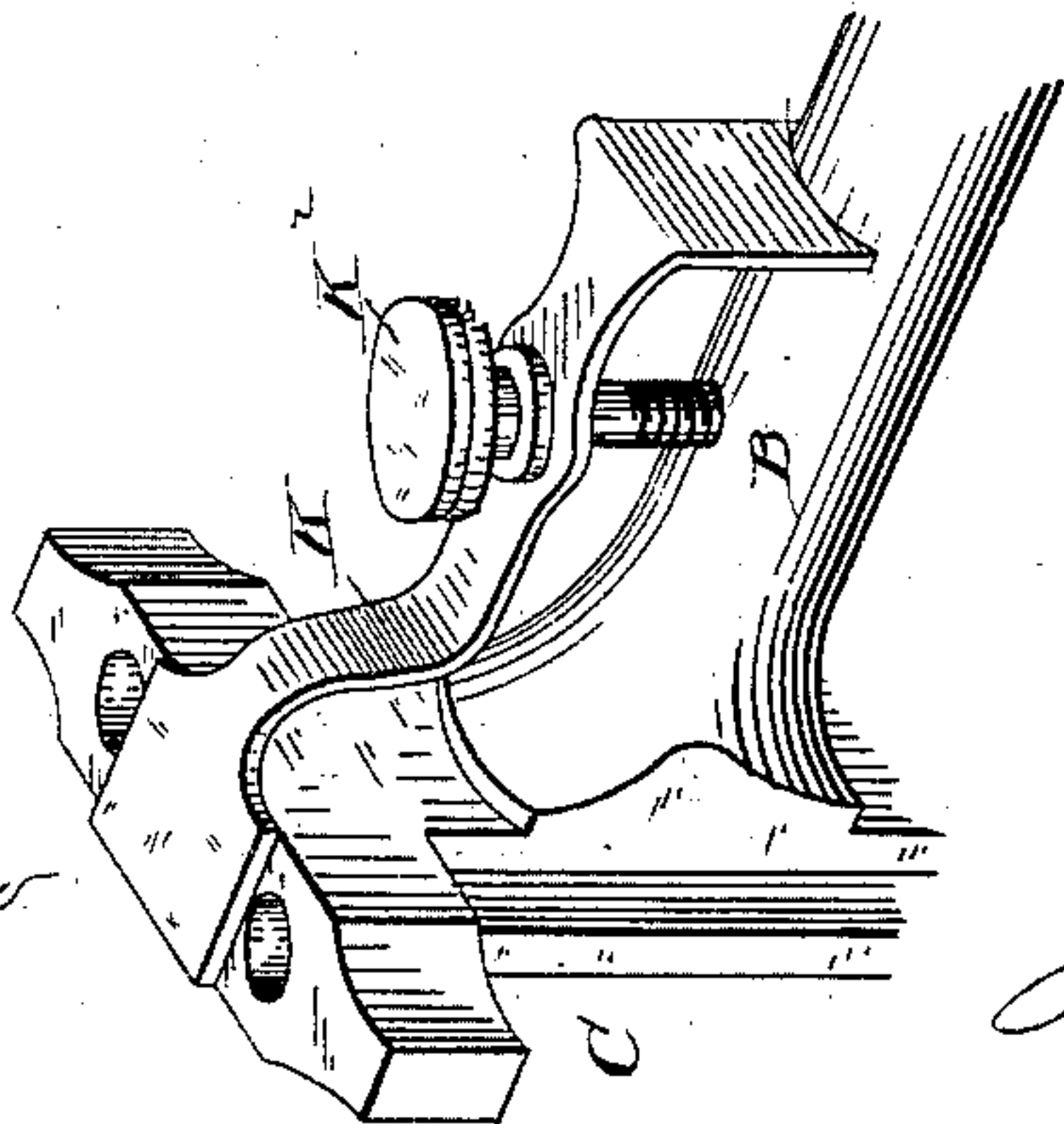


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN W. POST, OF NEW YORK, N. Y.

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 312,509, dated February 17, 1885.

Application filed July 14, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. POST, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Sewing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The object of my invention is the production of a sewing-machine which, while it is so simple in construction that it may be sold at the price usually asked for what are known as "toy" sewing-machines, is so efficient in
15 operation that it will sew as well as many of the high-priced "family" sewing-machines.

In the accompanying drawings, Figure 1 is a sectional side elevation of a sewing-machine embodying my invention. Fig. 2 is a reverse
20 plan view of the same. Fig. 3 is a front elevation with the bed-plate in section. Fig. 4 is a sectional view of the head and a portion of the bracket-arm. Fig. 5 is a sectional detail of the needle-lever and its bearing, and
25 Fig. 6 is a perspective detail of the tension device.

A is the bed-plate, to which is secured the bracket-arm B, the latter being formed solid and in one piece, the head C of said bracket-arm being preferably formed integral there-
30 with, as shown.

Cast integral with the bed-plate A are small legs *a* and lugs *a*², the latter affording bearings for the driving-shaft D, which is preferably cast in one piece with the fly-wheel D',
35 having a driving-pulley, *d*, and the needle-operating eccentric D².

On the forward end of the driving-shaft is formed an eccentric, D³, for operating the feed-
40 bar E, the latter carrying a feed-dog, E', of ordinary construction. The eccentric D³ works in a slot in said feed-bar in a well-known manner, and moves the same forward in opposition to the stress of a coiled spring arranged
45 in a recess in said bar and against the pin on which the latter is pivoted. The throw of the feed-bar is regulated by an adjusting-lever, E².

To the forward end of the driving-shaft a rotary chain-stitch hook or looper, F, is se-
50 cured in a well-known manner.

In the head C of the bracket-arm are formed vertical bearings for the needle-bar G, carry-

ing the usual eye-pointed needle, *g*, and the presser-bar H, having a presser-foot, *h*, of ordinary construction, said presser-foot being
55 yieldingly held upon the work by a coiled spring, *h*², encircling the presser-bar, and the latter being raised, when required, by a lifting-lever, *h*⁴. The needle-bar G receives its movement from the eccentric D² on the driv-
60 ing-shaft through the connecting-rod I and needle-lever J, the latter being provided at its rear end with a ball, *j*, which is surrounded by a yoke, *i*, on the upper end of the connecting-rod. To prevent said yoke from com-
65 ing off from said ball, a set-screw, *i*², is passed through the former into a seat or recess, *j*¹, in the latter, as clearly shown in Fig. 5. The forward end of the needle-lever is provided with a fork embracing a screw-pin, *g*², on the
70 needle-bar, the prongs of the fork being adjusted to take up wear by a screw, *j*², passing through the same. The needle-lever J is pivoted on a stud or pin, J², preferably formed conical and integral with said needle-lever, as
75 shown in Fig. 5, said pin fitting in a conical bearing in the bracket-arm B, and being held in said bearing by a screw, J³. As the pin or stud J² is slightly shorter than the bearing in the bracket-arm, it is obvious that any wear
80 of the said stud J² or its bearing may be compensated for simply by tightening the screw J³.

By arranging the adjusting-screw J³ at the back of the bracket-arm, or on the side of the
85 said arm opposite to that on which the needle-lever is placed, a projecting nut or screw-head on the front of the machine is avoided, thus giving this part of the machine a neat and smooth front.

The tension device consists of a spring, K,
90 secured to the top of the bracket-arm B by a single screw, K², by which the stress of said spring may be adjusted. The rear end of the tension-spring K is bent at a right angle, the lower end of the vertical portion of said rear
95 end being preferably formed with a concave seat fitting on the round bracket-arm. The forward end of the tension-spring K bears on the top of the head C, the thread being passed between said spring and the upper surface of
100 said head. A supplementary or check tension-spring, L, is secured to the front of the head C by a single screw, L², by which the stress of said spring may be adjusted, the free end of

said spring L being steadied between two pins, l , preferably arranged in different vertical planes, as shown in Fig. 3, so that they will serve as guides for the thread, which passes between them beneath the spring L. A wire loop, g^3 , secured to the upper end of the needle-bar G, serves as a take-up to tighten the stitches.

To prevent the needle and presser bars from turning in their bearings, the head C is provided with a slot, c , into which the ends of the screw-pins g^2 and h^3 , passing through the needle and presser bars, respectively, project. One wall of this slot is preferably formed by a removable plate, c^2 , secured to the head by screws c^3 .

It is obvious that any wear of the pins g^2 and h^3 in the slot c may be compensated for by tightening the screws c^3 , thus enabling a single adjustable device to take up the wear of both of these pins. The thread passes from the spool M between the outer end of the tension-spring K^2 and the upper surface of the head C, thus receiving its requisite tension. From the tension-spring the thread passes through the take-up loop g^3 , thence beneath the check tension-spring L and through the guide-eye N to the eye of the needle.

If it is desired to drive my machine by hand, a driving-pulley, D^4 , (indicated by dotted lines in Fig. 1,) provided with a handle, may be secured to the rear end of the bracket-arm B by a screw, D^5 , entering a threaded socket, b , Fig. 5, in said arm. A belt will run from the pulley D^4 to the pulley d on the driving-shaft.

As the operation of my machine in sewing is essentially the same as that of the well-known Willcox & Gibbs chain-stitch machine, it will be fully understood by those skilled in the art without further description.

I do not herein claim the tension devices

above described, as this part of my invention is embraced by my application, Serial No. 153,652, filed January 22, 1885, which is a division of this application.

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

1. In a sewing-machine, the combination, with a bracket-arm having a conical bearing, of a needle-lever having a conical fulcrum-stud formed integral therewith, said stud being slightly shorter than said bearing, and means arranged on the side of said bracket-arm opposite to the said lever for securing and adjusting said stud in said bearing, substantially as described.

2. The bracket-arm B, provided with a conical bearing, in combination with the needle-lever J, having a conical fulcrum-stud, J^2 , formed integral with said lever, said stud being slightly shorter than said bearing, and the securing and adjusting screw J^3 , arranged on the side of said bracket-arm opposite to the said lever, substantially as described.

3. The combination, with the head C, having a slot, of the needle and presser bars provided with pins entering said slot, and a single and adjustable device for compensating for the wear of said pins in said slot, substantially as described.

4. The combination, with the head C, having the slot c , of the needle and presser bars having pins entering said slot, and the adjustable and removable plate c^2 , substantially as and for the purposes set forth.

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

JOHN W. POST.

Witnesses:

WARREN C. STONE,
WM. E. ROGERS.