

J. F. HASKINS.

Sewing-Machine Attachments for Making Button Holes.

No. 146,000.

Patented Dec. 30, 1873.

Fig. 1.

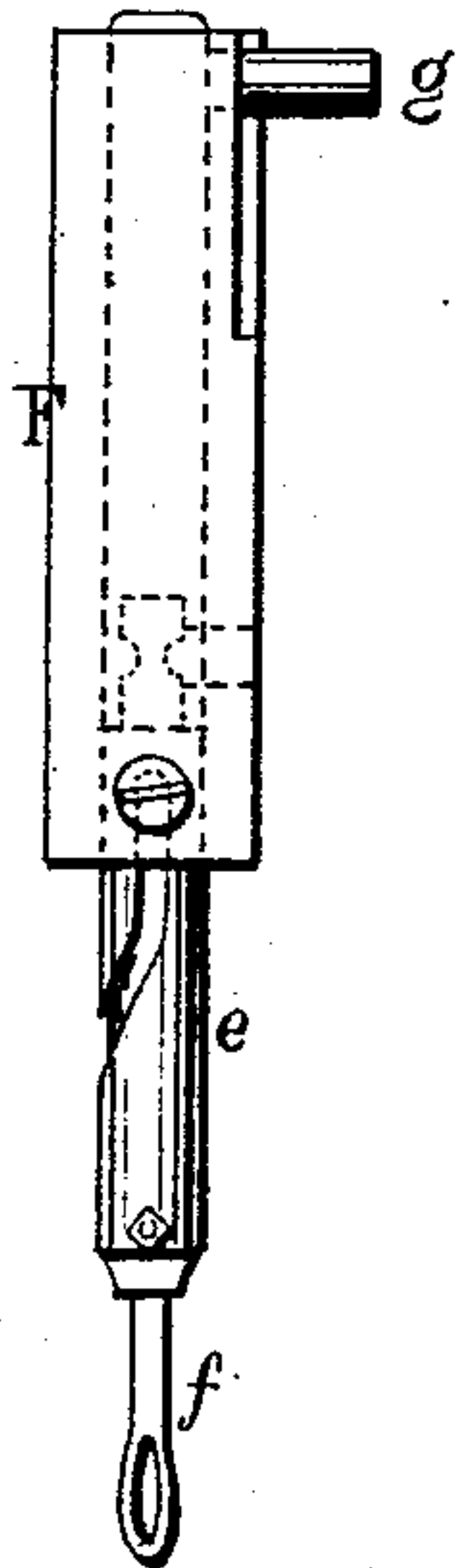


Fig. 2.

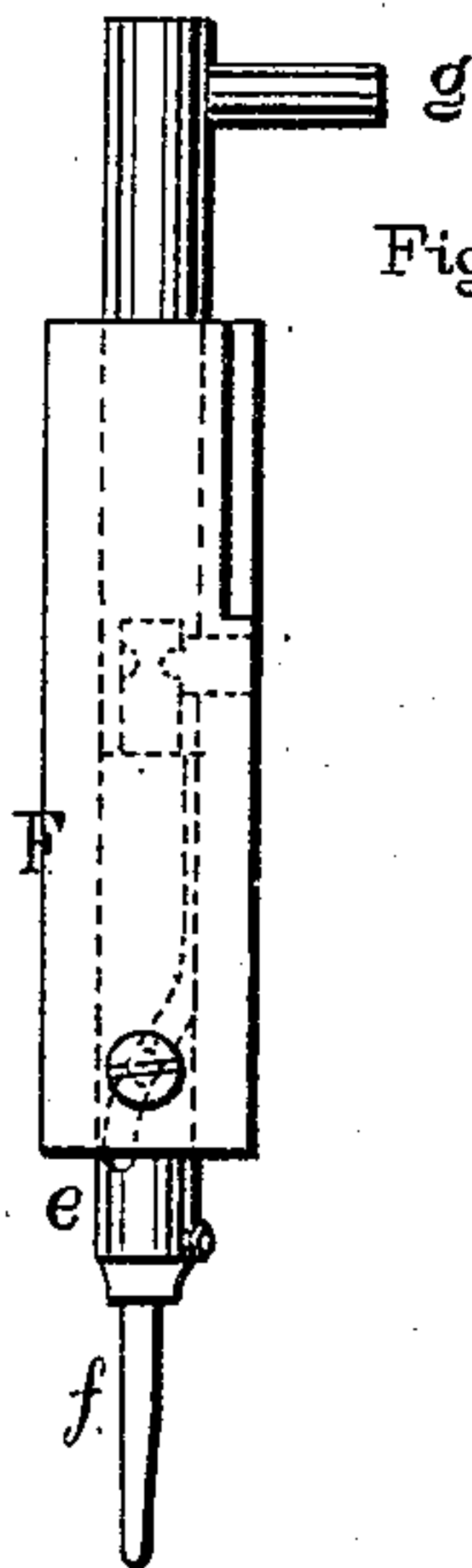


Fig. 3.

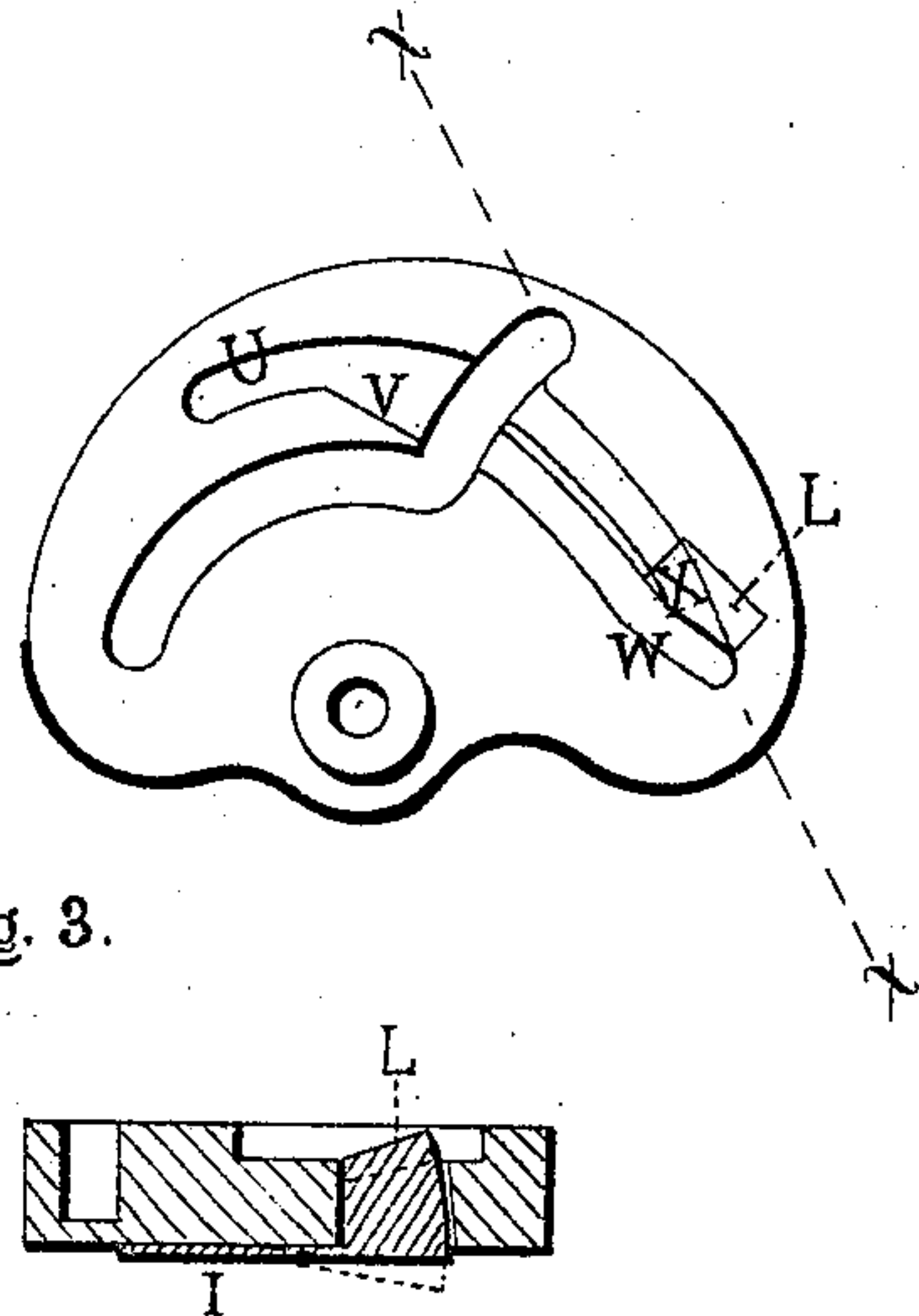


Fig. 4.

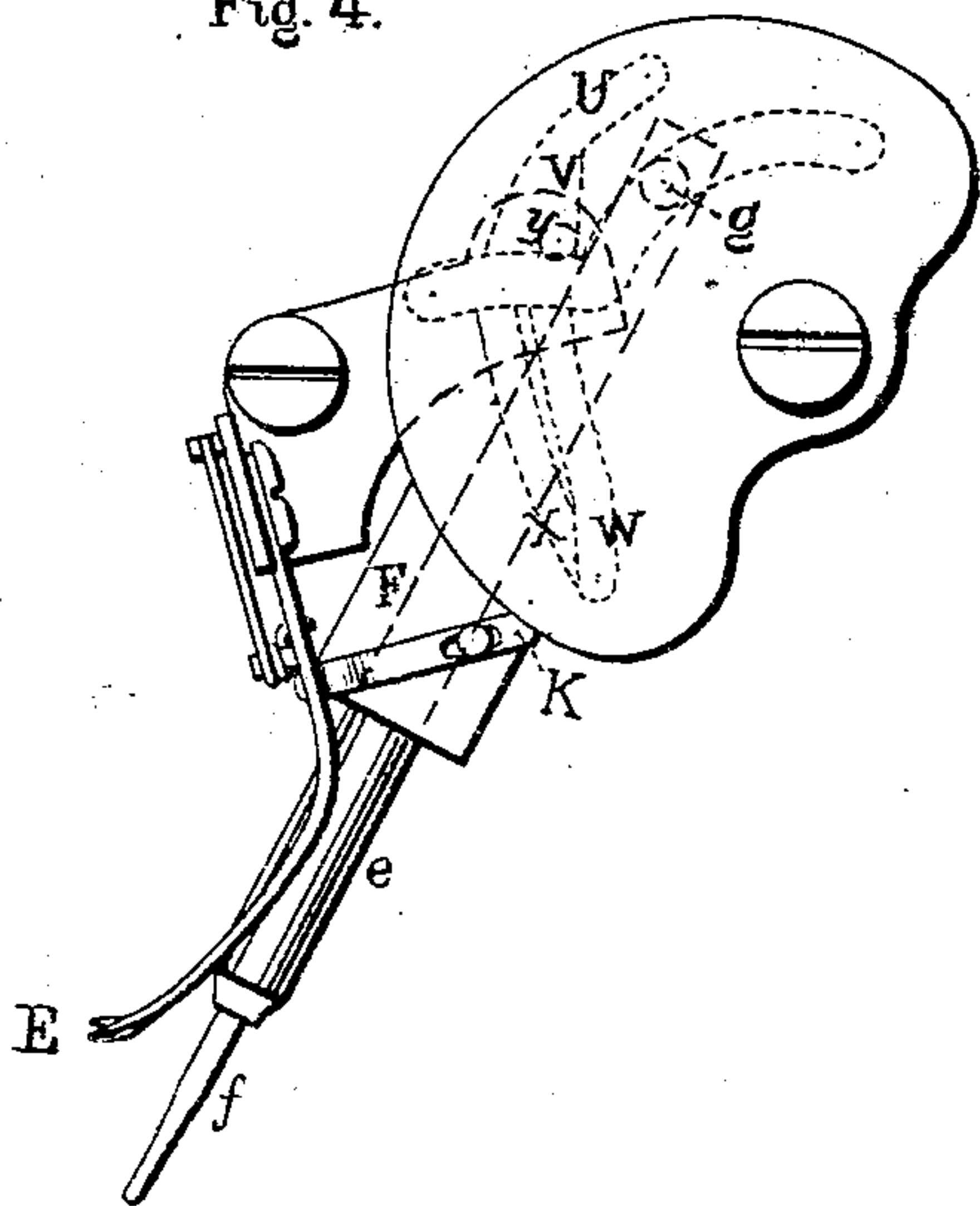
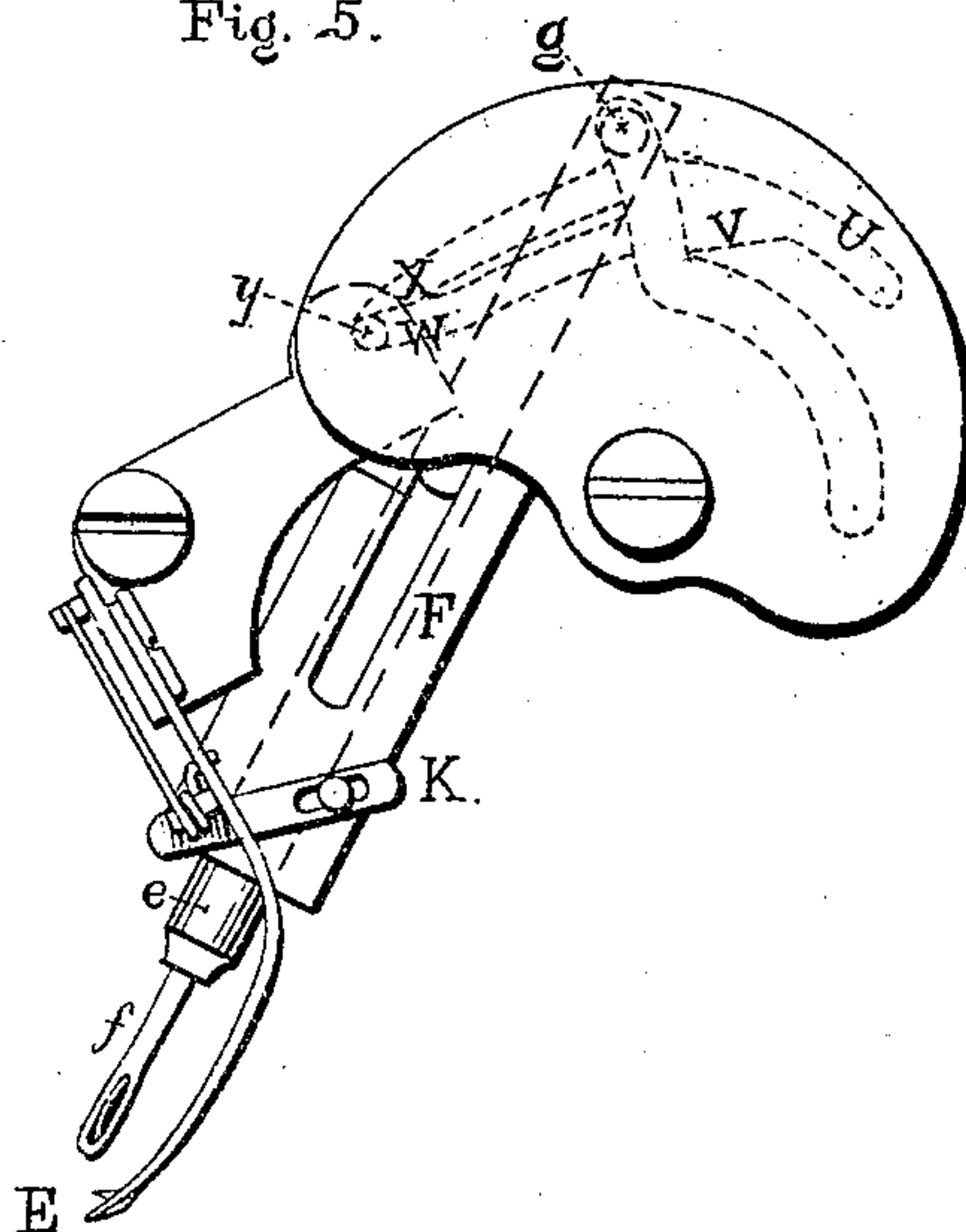


Fig. 5.



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Fig 6

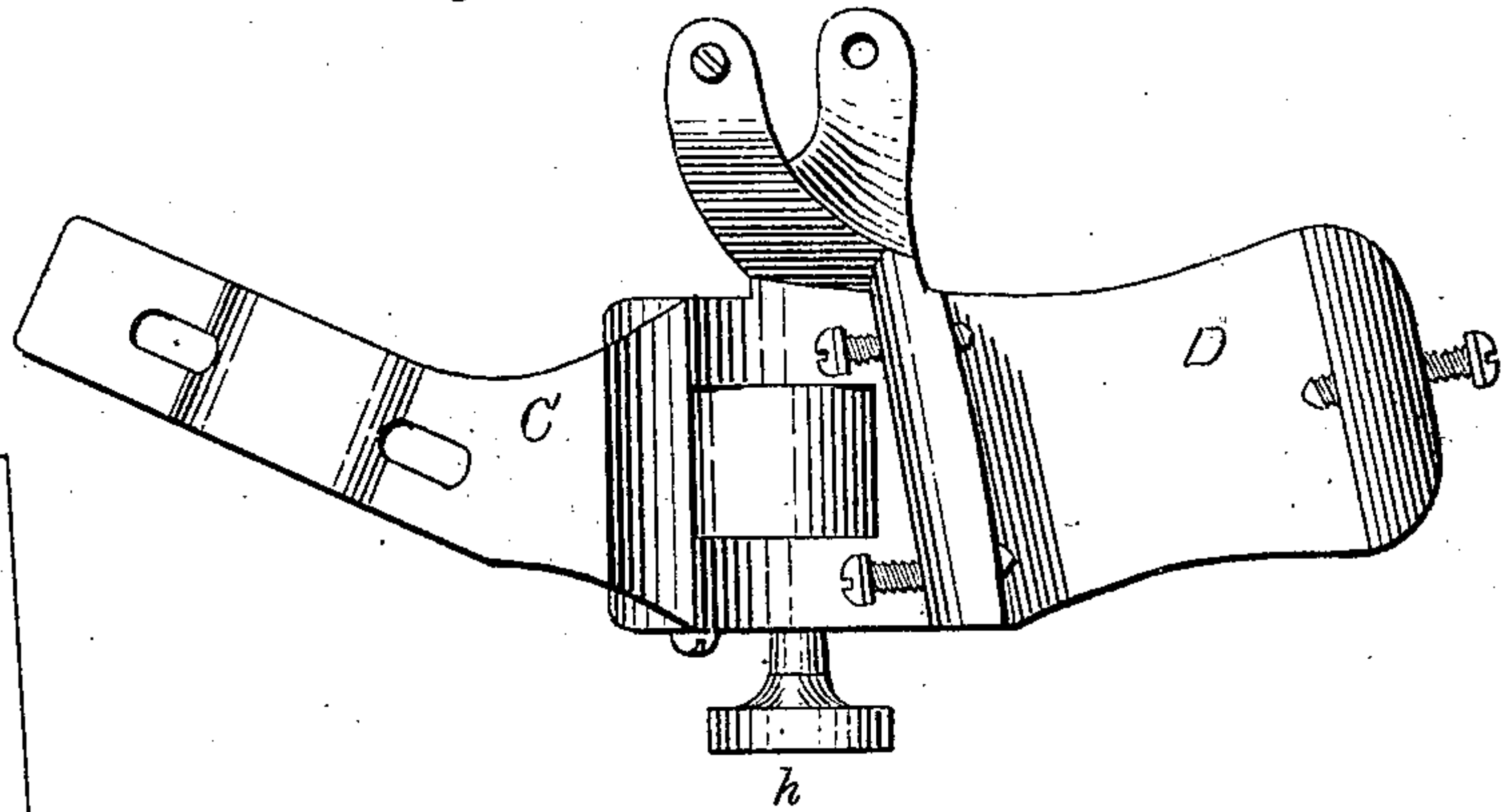


Fig 7

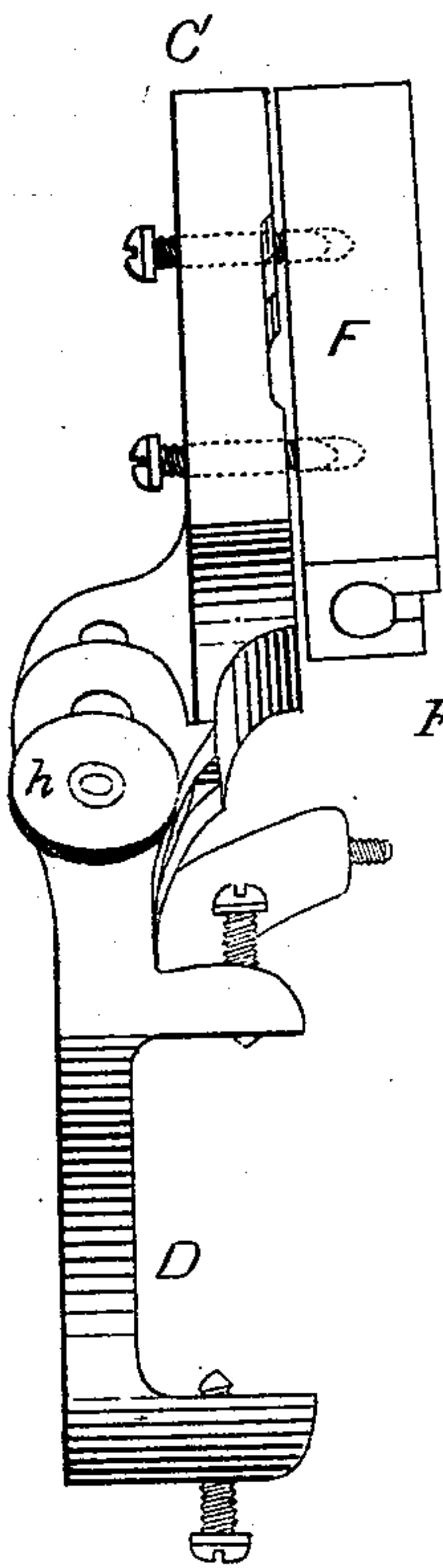


Fig 8

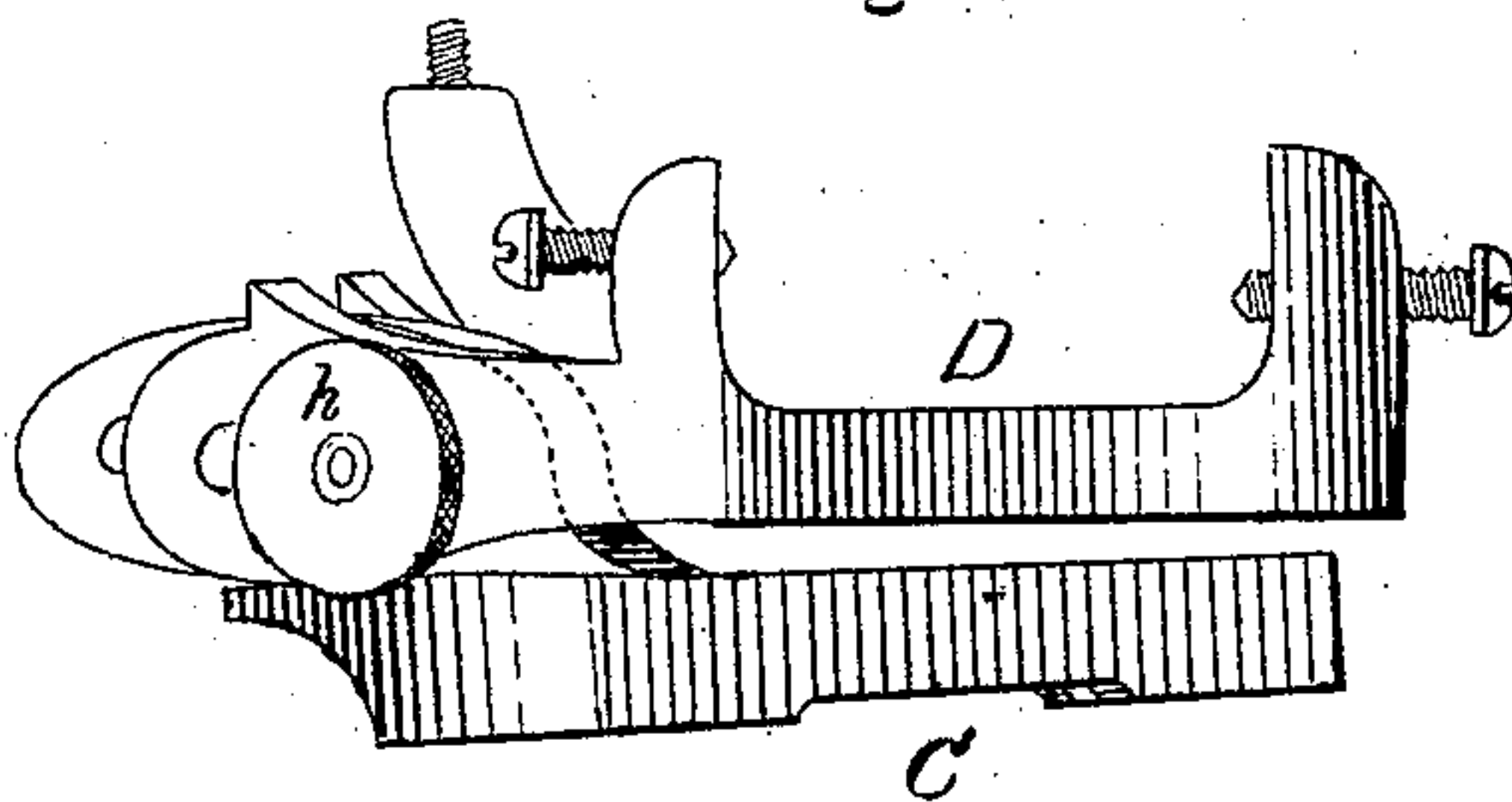
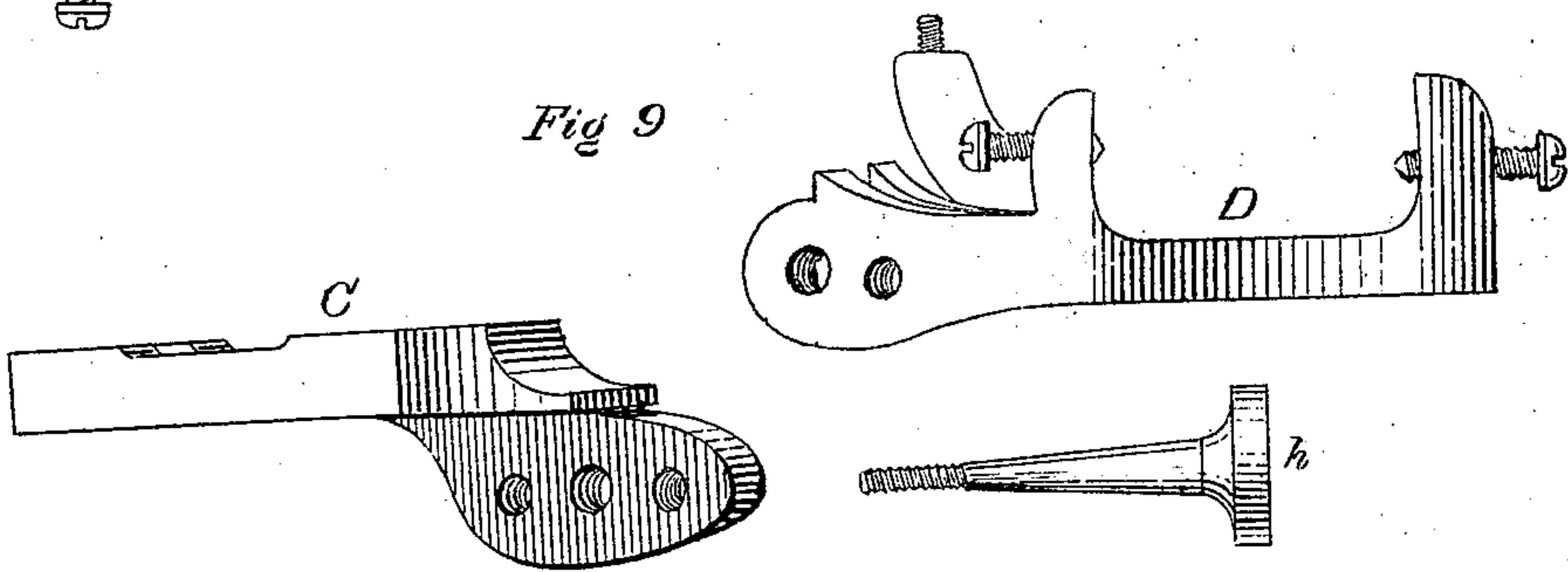


Fig 9



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Fig 10

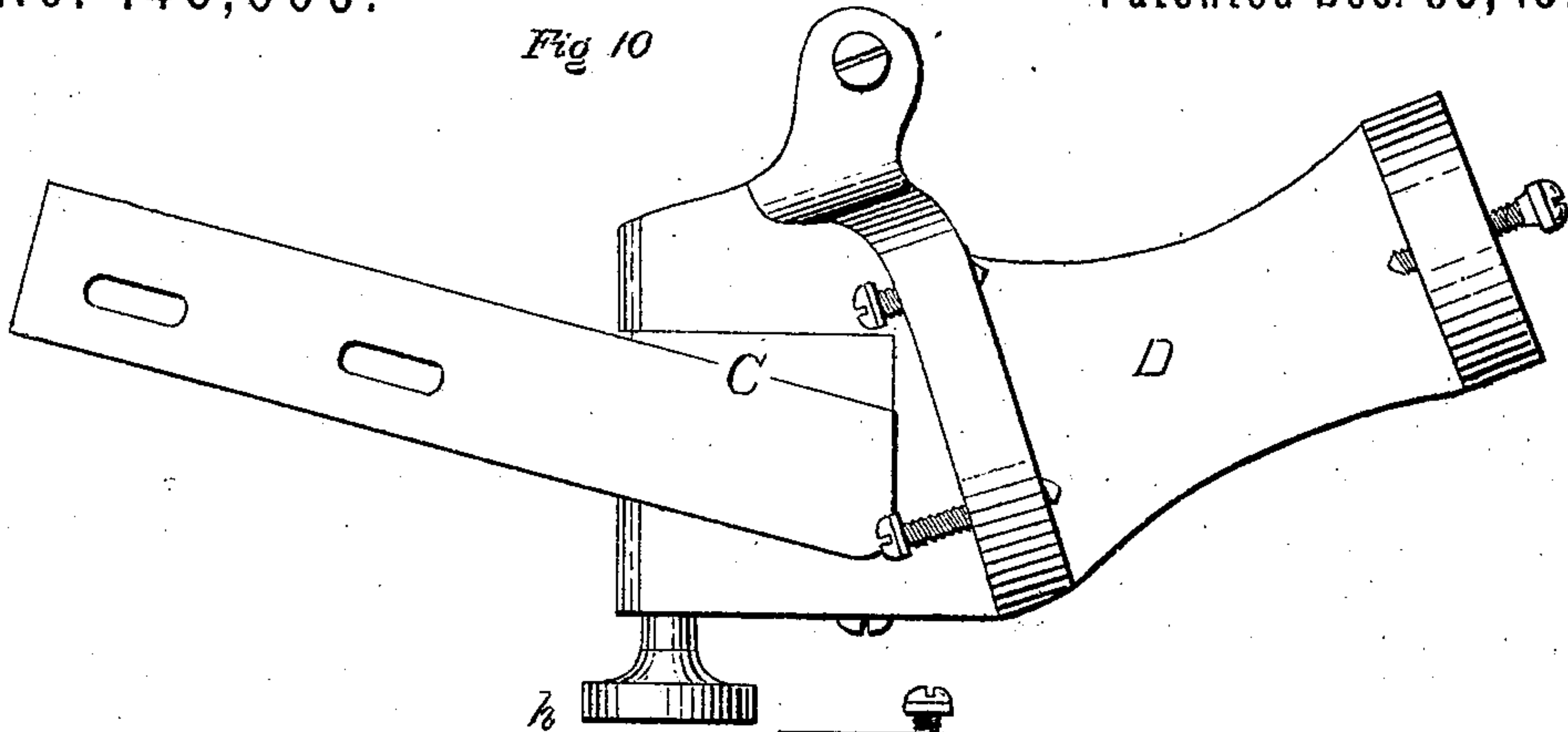


Fig 11

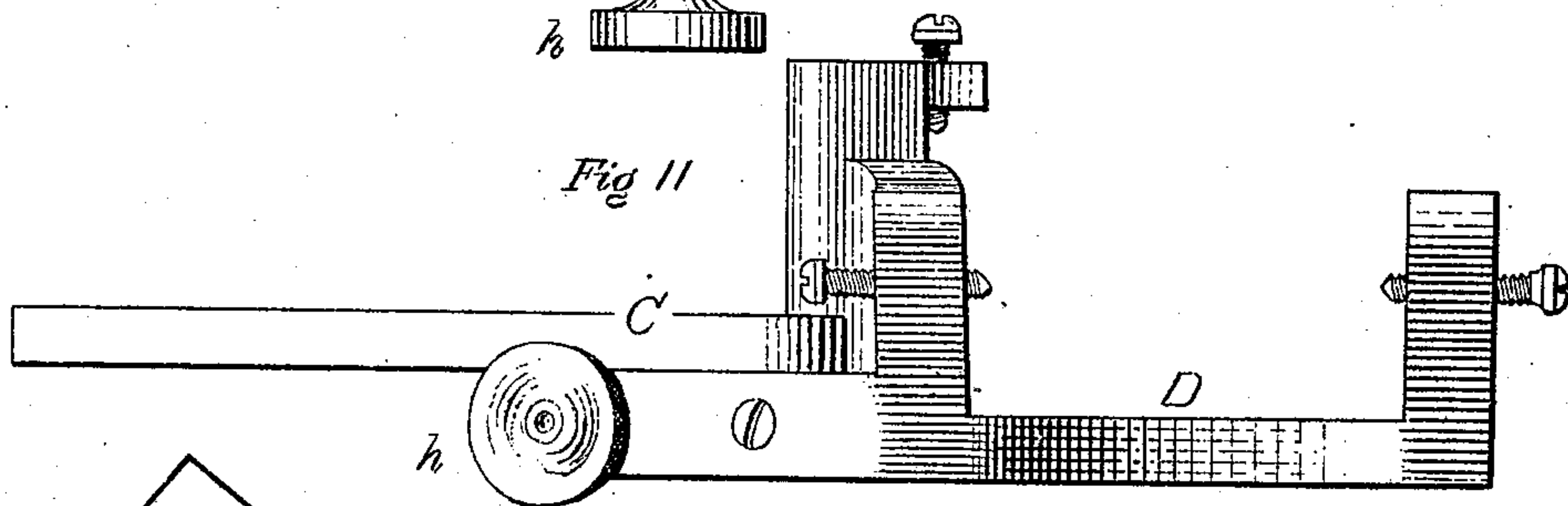


Fig 12

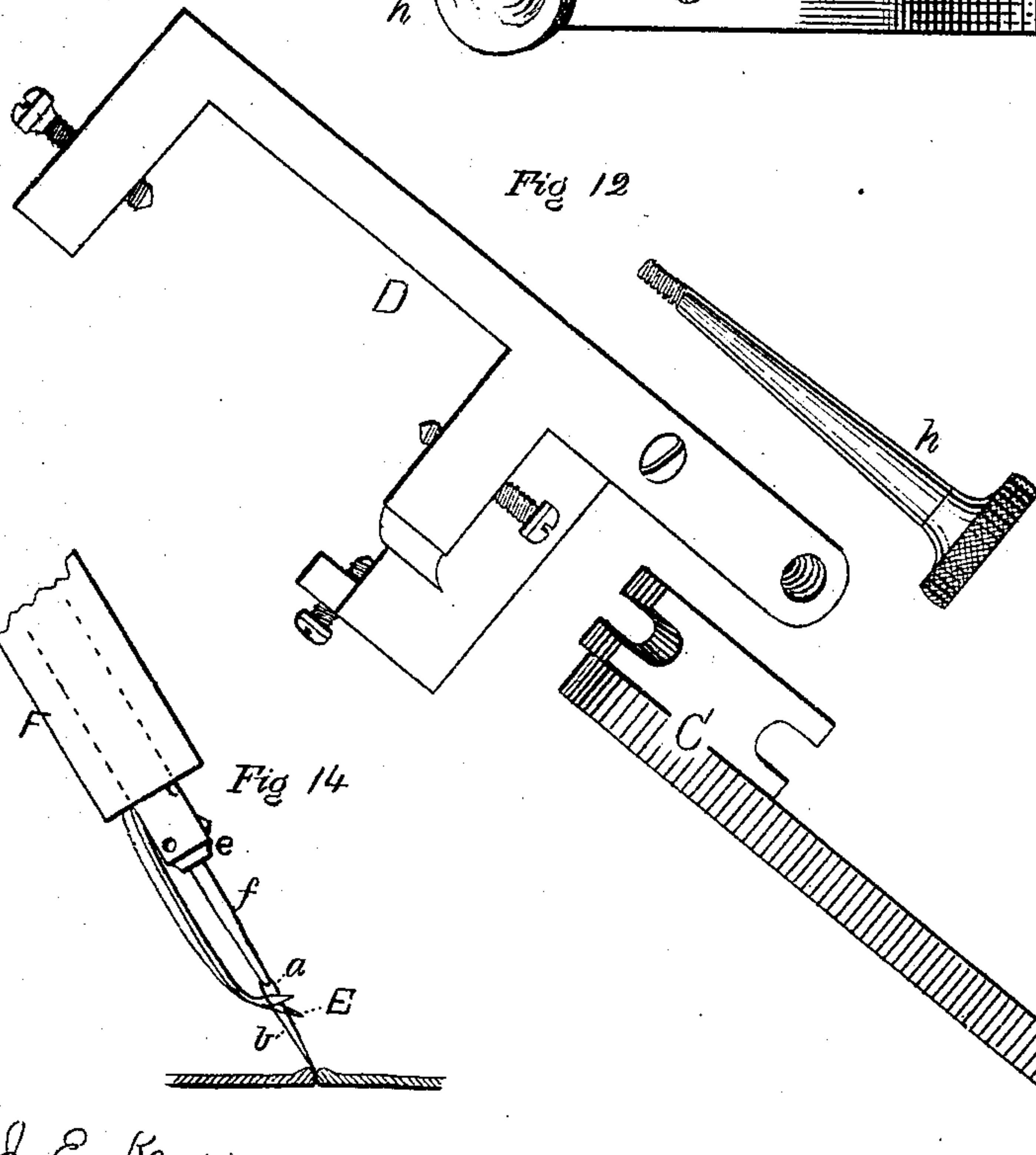


Fig 13

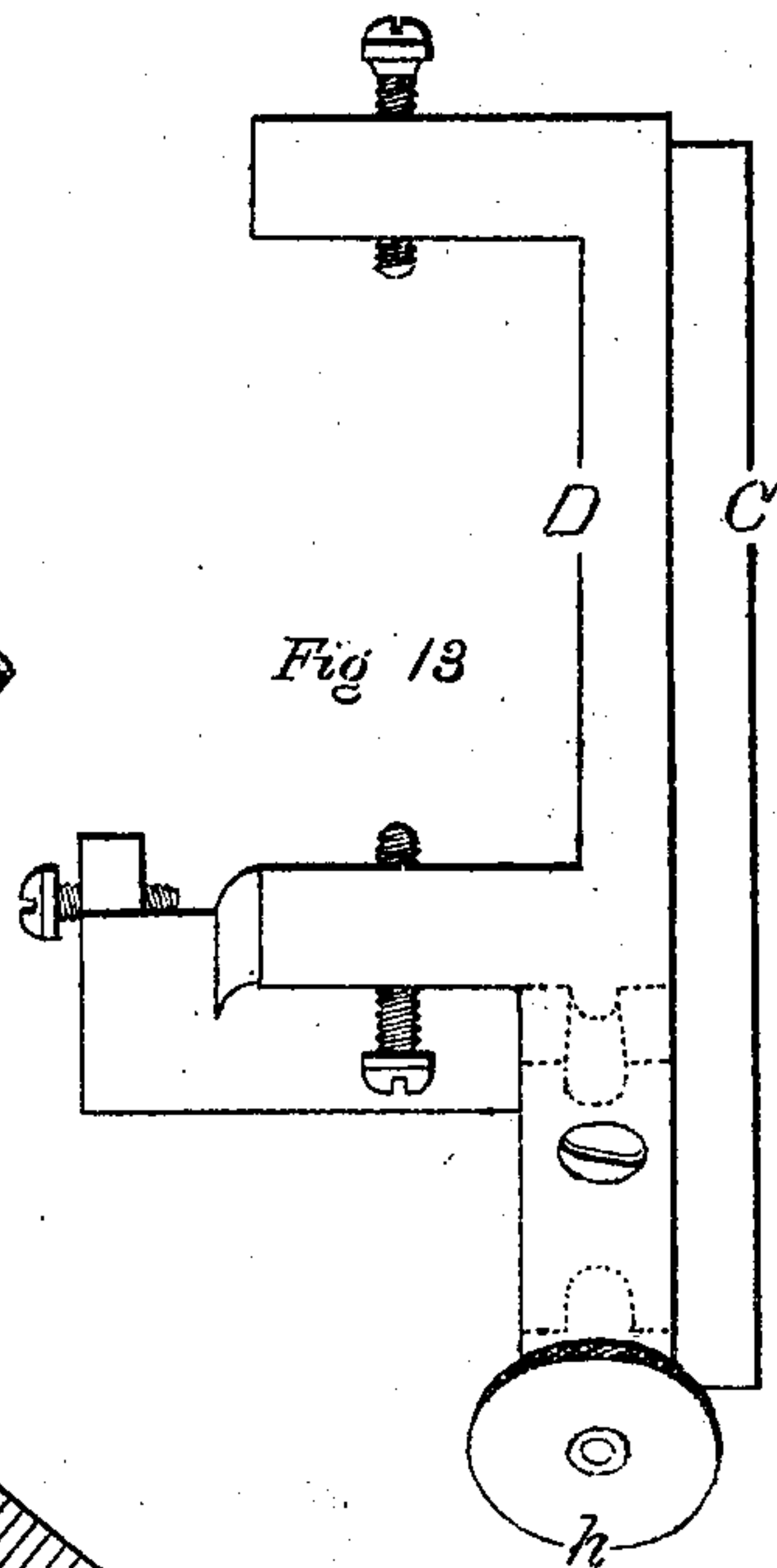
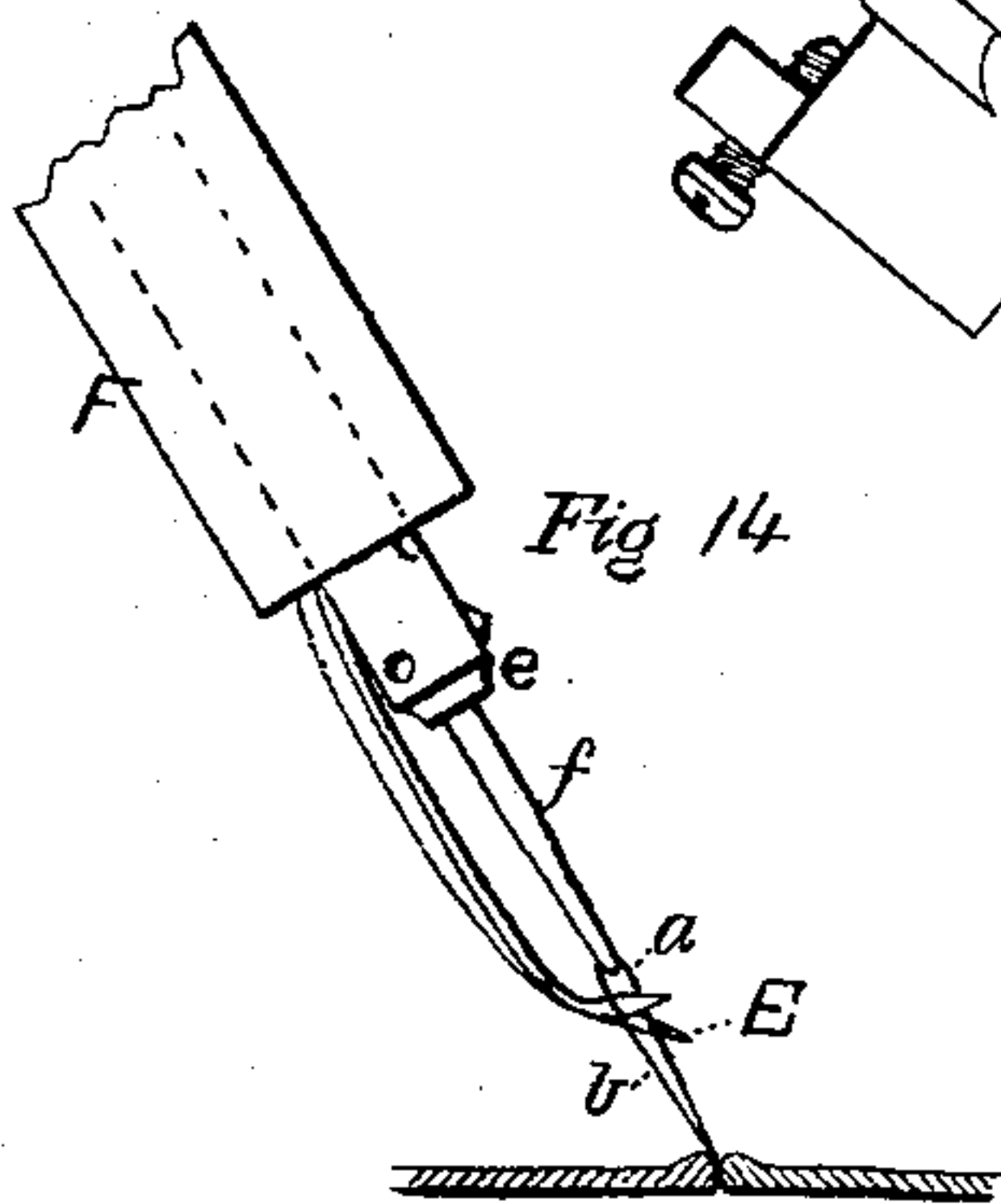


Fig 14



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UNITED STATES PATENT OFFICE.

JOHN F. HASKINS, OF FITCHBURG, MASSACHUSETTS.

IMPROVEMENT IN SEWING-MACHINE ATTACHMENTS FOR MAKING BUTTON-HOLES.

Specification forming part of Letters Patent No. **146,000**, dated December 30, 1873; application filed September 11, 1873.

To all whom it may concern:

Be it known that I, JOHN F. HASKINS, of Fitchburg, Massachusetts, have invented certain Improvements in Attachments to Sewing-Machines for Making Button-Holes, of which the following is a specification:

My invention is an improvement upon the Howard and Jackson attachment, described in Letters Patent No. 103,745, dated May 31, 1870. In that attachment, when the looper is drawn up, the upper part of the thread *a*, forming the loop, is almost directly above the lower part *b*, as illustrated in the diagram, Fig. 14. The upper part of this thread *a* must be caught by the end of the finger E, and there is much practical difficulty in so regulating the motion of finger E that there will be no danger of its catching both these threads, and yet make it certain to catch thread *a*, for the end of finger E must move back far enough to get behind thread *a*; but if it moves even a very little more than this, there is great danger of its catching thread *b* as well.

The first part of my invention relates to this practical difficulty, and consists in so changing the relative positions of threads *a* and *b* at the time the finger moves back that the finger E may be thrown well back, and thus make it certain to catch thread *a* without danger of its catching thread *b*. This is accomplished by giving the looper a motion on its axis in addition to its reciprocating motion, which carries the thread *a* toward and the thread *b* from the path of the end of the finger E. The mechanical means used for effecting this are so simple that they will be clearly understood from the drawings without further description. (See Figures 1 and 2.)

The second part of my invention relates to the method of actuating the finger E, and consists in substituting a pin, *y*, and cam-slots for the pins, stops, cams, and catch used in the Howard and Jackson attachment as now constructed.

On reference to Figs. 3, 4, and 5, it will be seen that, during the time the sewing-needle is in the fabric, the pin *y* is in the concentric portion of the slot U, and the finger does not move; but when the sewing-needle has risen and the thread-catcher has moved upward and revolved, the pin *y* moves into and through

the slot X, and thus throws the finger E back past the end of the thread-catcher, so as to catch the thread. At the end of the slot the pin *y* rides over the bolt L, moving against the spring I, and, passing it, is prevented by the bolt from passing back through the slot X, as this cam turns in the opposite direction, and is forced into and through the slot W, thus throwing forward the finger E over the face of the cam K to the other side of the sewing-needle, where it remains until the needle has gone through its loop, when it is thrown back out of the way by striking the incline of the slot at V, which throws it into its original position.

The third part of my invention is an improvement in the bed-plate of the attachment. In the Howard and Jackson attachment all the parts are attached to a bed-plate, which is secured in the desired position by means of set-screws; but when it is removed, it is difficult for an unskillful person to replace it and readjust it with the necessary accuracy. My invention consists in making the bed-plate in two portions, one detachable from or moving on the other, so that while one part is always firmly attached to the overhanging arm, the other part may be readily put and kept out of the way, and when replaced will invariably assume and be held in its former position without requiring adjustment. I effect this by making the bed-plate in two parts, C and D, which can be fitted together and brought up snug in the same relative position each time by means of a pin, wedge, or screw. In the attachment shown in the drawings, a tapering thumb-screw is used, and thus the movable part of the bed-plate is brought into the desired position in relation to the fixed part without affecting the adjustment of the fixed part. When the screw has been taken out, the movable part may be swung back and another hole in the movable part brought opposite the holes in the fixed part D, so that by putting in the screw again the attachment is kept out of the way. The fixed part is adjusted by set-screws, in the usual way, and need never be separated from the sewing-machine. By this means the attachment is easily put out of the way or replaced, and when replaced is always in position. Instead of swinging the

movable part, the hinge may be dispensed with, and the lower part C' of the bed-plate with the attachment removed wholly from the machine or placed as shown.

What I claim as my invention is—

1. The improved looper, having an eye in which it receives the needle and retains the thread, and having a motion on its axis in addition to its reciprocating motion, as specified.
2. The finger E, in combination with the pin y and cam, substantially as described.
3. The compound bed-plate, made in two

parts, C and D, combined together substantially as described.

4. The compound thread-catcher and its actuating mechanism, the finger E and its actuating mechanism, and the compound bed-plate C D, all combined together substantially as described.

JOHN F. HASKINS.

Witnesses:

FRED. FOSDICK,
J. E. MORSE.