

No. 687,777.

Patented Dec. 3, 1901.

W. N. PARKES.
COMBINED NEEDLE AND PRESSER BAR.

(Application filed Jan. 3, 1900.)

(No Model.)

Fig. 1.

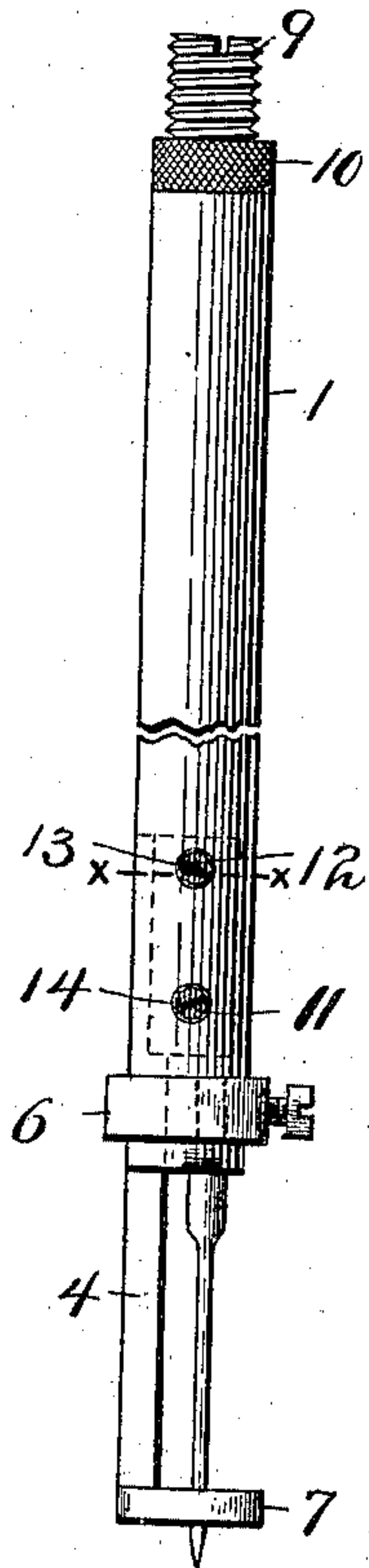


Fig. 2.

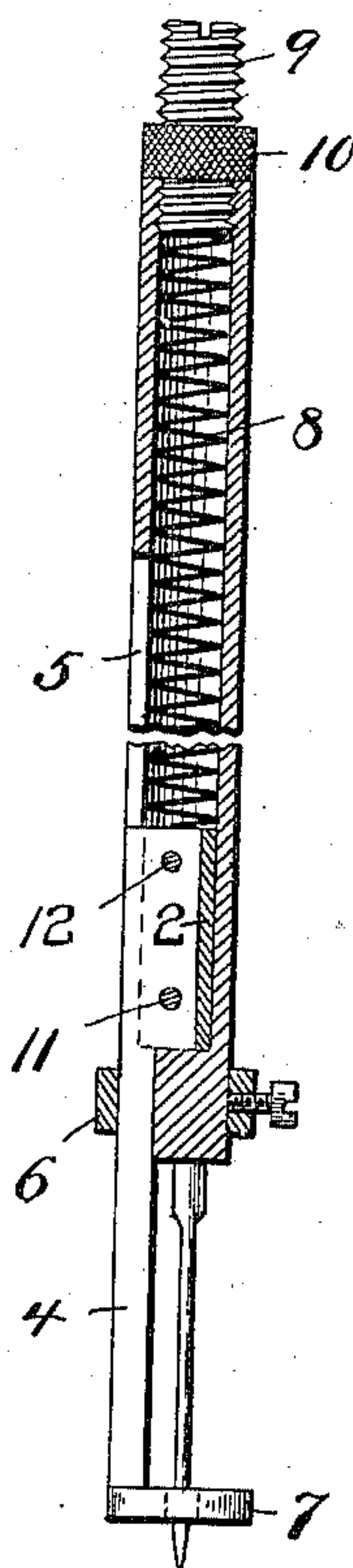


Fig. 3.

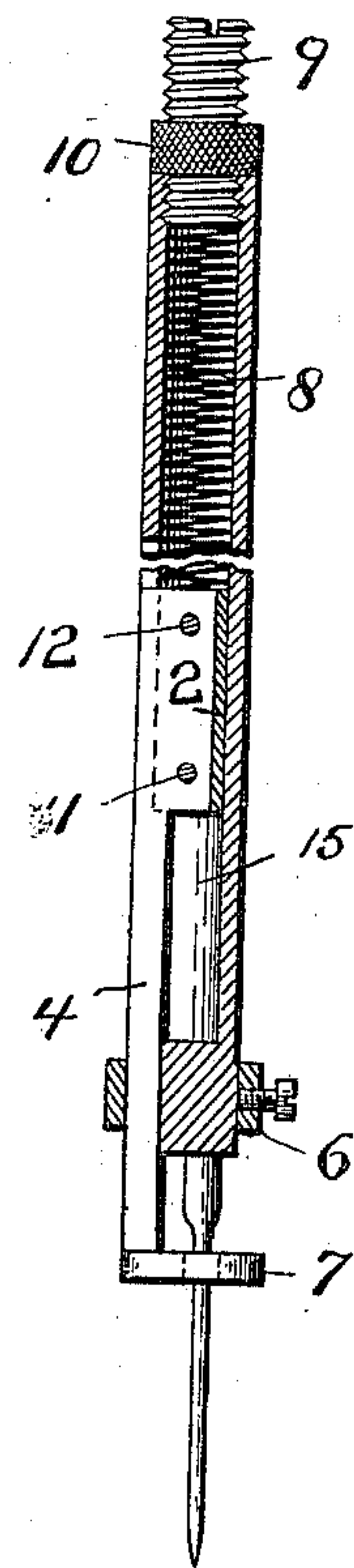


Fig. 4.

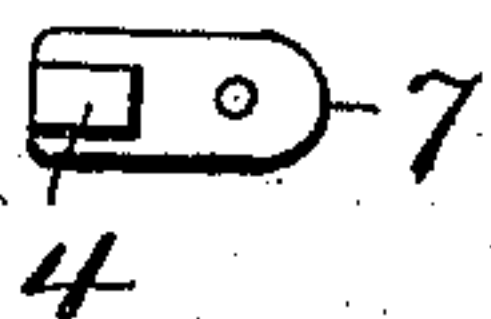
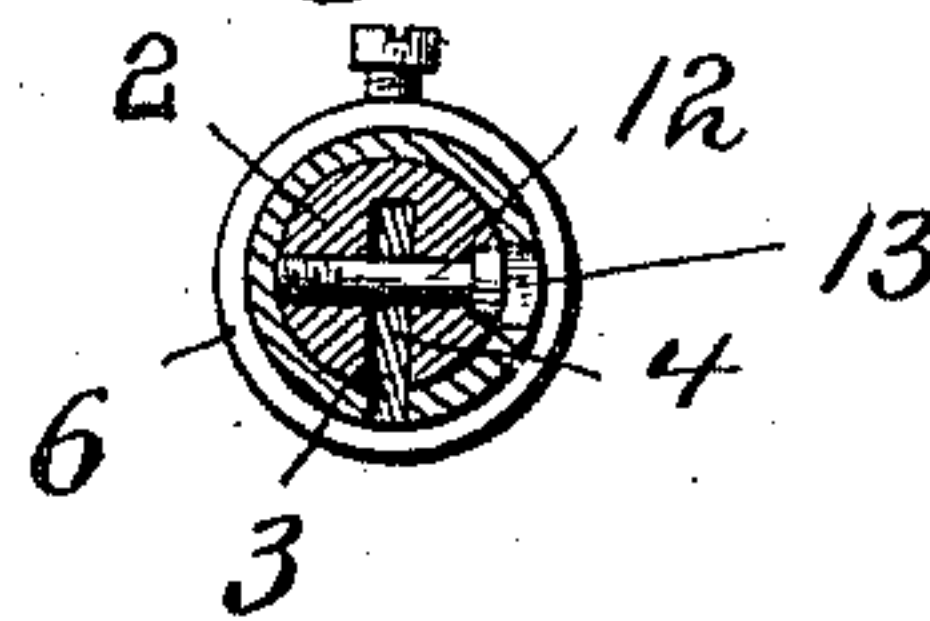


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM N. PARKES, OF BROOKLYN, NEW YORK.

COMBINED NEEDLE AND PRESSER BAR.

SPECIFICATION forming part of Letters Patent No. 687,777, dated December 3, 1901.

Original application filed May 18, 1899, Serial No. 717,292. Divided and this application filed January 3, 1900. Serial No. 198. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM N. PARKES, a citizen of the United States of America, residing in the borough of Brooklyn, New York city, county of Kings, and State of New York, have invented new and useful Improvements in Needle-Bars and Presser-Bars, of which the following is a specification.

On May 18, 1899, I filed an application for a patent on a sewing-machine, Serial No. 717,292, of which this application is a division.

My invention has reference to needle-bars and presser bars and feet.

The nature and objects of the invention will be best understood when described in connection with the accompanying drawings, in which—

Figure 1 is a side view, on an enlarged scale, of a needle-bar (broken away intermediate of its length) embodying my invention. Fig. 2 is a section exposing the arrangement and position of the parts within the needle-bar when it is in its elevated position, and Fig. 3 is a section exposing the position of the same parts when the bar is in its lower position. Fig. 4 is a top plan view of the presser bar and foot. Fig. 5 is a section on line *xx*, Fig. 1.

In the drawings, 1 represents the needle-bar, in which is formed from its upper end down to near its lower end a cylinder 15, as shown in Figs. 2 and 3. In the lower portion of the cylinder is located a round presser-bar 2, in which is formed a longitudinal slot 3. In the side of the needle-bar is formed a slot or way 5, which extends from the lower end up, as shown in Figs. 2 and 3. In the way 5 is adapted to reciprocate the shank 4 of a presser-foot 7, the shank having a portion extending into the slot 3 of the presser-bar 2, as shown in Figs. 2, 3, and 5, which portion, in connection with screws 11 and 12, serves as a means for securely fastening the shank to the presser-bar. A spring 8, located above the presser-bar in the cylinder 15, normally depresses the said presser-bar, a screw 9 serving as a means for regulating the pressure of the spring on the bar and nut 10 to lock the screw 9 in position. The upper internal part of the cylinder 15 is threaded for the reception of the screw 9.

The presser-bar 2 retains the shank 4 in the way 5, and a collar 6 serves as an additional means for retaining the said shank in the said way, especially the lower end of the shank. The screws 11 and 12 pass freely through the presser-bar on one side of the slot 3 and have a seat in the said bar on the other side of the said slot, as shown in Fig. 5. Holes 13 and 14 are made through the side of the needle-bar, as shown in Figs. 1 and 5, as a way for getting the screws 11 and 12 into their position. Having the shank of the presser-foot attached to the side of the presser-bar or eccentrically with respect to the center of the said bar and said shank riding in a way formed in the side of the needle-bar or eccentrically with respect to the center of the said needle-bar prevents the presser-foot shank, and consequently the foot, from turning.

The presser-foot 7 can be made separate from the shank 4 and then attached in any usual manner to the said shank, or the shank and foot can of course be made from one piece. The needle is held in the lower end of the bar by any usual means.

In the present example I have shown the length of the shank 4 of the presser-foot of such an extent that the foot remains in engagement with the work until the point of the needle is just about to become disengaged from the same or until after the eye of the needle has been drawn above the material.

Locating the presser-bar and spring inside of the needle-bar has many advantages over locating them on the outside, among which I might mention the use of practically the entire length internally of the needle-bar, which gives me a good substantial bearing for the presser-bar to ride in and an opportunity to use a long presser-bar spring and at the same time leaves the entire outside surface of the needle-bar for use, as in an ordinary needle-bar.

This needle-bar and presser-bar combination is especially advantageous in use in any machine when it is desired to hold the work in an extended position in a frame and to move the frame, for the reason that the work is entirely free from any pressure from the foot when it moves. It is also very advantageous for the further reason that if the

needle-bar is moved laterally the presser-foot moves with it, and therefore the needle-hole through the presser-foot can be much smaller and the foot can be also much smaller.

5 What I claim as new is—

1. A hollow cylindrical needle-bar having a slot formed longitudinally therein, a presser-bar adapted to be reciprocated within the cylinder of the needle-bar, a presser-foot having a shank adapted to reciprocate in the
10 aforesaid slot and to connect with the presser-bar, means for connecting the shank of the presser-foot to the presser-bar, and yielding means interposed between the needle-bar and
15 the presser-bar whereby the presser-foot is normally pressed from the needle-bar so as to engage the work.

2. A hollow cylindrical needle-bar, a presser-bar (having a longitudinal slot formed therein) adapted to reciprocate in the cylinder of the
20 said needle-bar, a presser-foot having a shank, means for connecting the said shank in the aforesaid slot, and a spring interposed between the presser-bar and the needle-bar whereby the presser-foot is normally pressed
25 from the needle-bar so as to engage the work.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIAM N. PARKES.

Witnesses:

EUGENIE P. HENDRICKSON,
GEORGE EISENBRAUN.