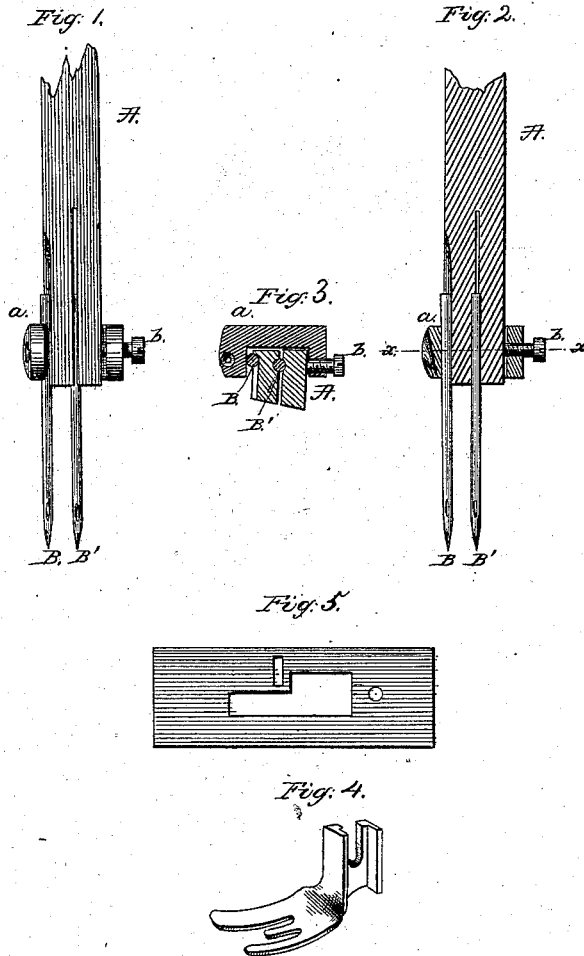


N. HAYDEN.
Needle-Bar for Sewing-Machines.

No. 216,849.

Patented June 24, 1879.



WITNESSES:

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NATHAN HAYDEN, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN NEEDLE-BARS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 216,849, dated June 24, 1879; application filed March 7, 1879.

To all whom it may concern:

Be it known that I, NATHAN HAYDEN, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Needle-Bars for Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of a portion of a needle-bar embodying my improvement. Fig. 2 is a longitudinal section, and Fig. 3 a transverse section through line *xx* of Fig. 2, of the same; Fig. 4, a view, in perspective, of a presser-foot adapted to my invention; Fig. 5, a view of a throat-plate also adapted to my invention.

My invention relates to an improvement in needle-bars for sewing-machines of that class in which two needles are attached to and operated by the needle-bar, so as to sew two seams at once. This form of machine is specially applicable to the sewing of gloves, shoes, quilts, corsets, overalls, and all other heavy goods which are required to be strongly connected; but the difficulty has been to provide sufficient means for securing the two needles and preserving their adjustment, so as to permit them to be practically employed.

My invention is found in connection with that means of securing the needle in which the lip of a clamp draws, from the action of a screw, the needle tightly against the recessed lower end of the needle-bar; and the improvement consists in drilling longitudinally the lower end of the needle-bar for the reception of the additional needle, and then slitting said bar longitudinally through such drilled portion, so that the two lower ends of the needle-bar form clamping-jaws, which bind and hold securely the second needle by the clamping action of the same clamp and screw which are employed to hold the first needle.

In the drawings, A represents a needle-bar, which may be of any suitable pattern, and adapted to fit any ordinary machine. The lower end of this needle-bar is fitted with two needles, B B', of which B is secured in a common and well-known way—that is to say, the lower end of the needle-bar on that side is recessed to form a seat, and a clamp, *a*, and set-screw *b* are provided, and so arranged that the lip of the clamp opposite the screw is

drawn by the action of the latter against the needle B, as arranged in the recess, so as to clasp and hold the same.

Now, for securing the other needle in a parallel position, I drill a longitudinal hole at or near the center of the lower end of the needle-bar, of a sufficient size and depth to form a socket for the needle end. I then slit said lower end of the needle-bar with a saw directly through the drilled hole. The lower end of the needle-bar is thus transformed into a pair of spring clamping-jaws for the second needle, which, when the first needle is clamped, are also closed by the same action, to securely hold the second needle located between the same.

This means of securing the second needle, it will be seen, furnishes for both sides of said needle a long bearing, and forms an efficient and reliable means for holding it in parallel position with the other needle. In connection with this needle-bar, a special form of presser-foot, Fig. 4, and throat-plate, Fig. 5, is provided, which, when fitted to any of the ordinary shuttle machines, constitute all the change that is required to adapt such machines to sewing a double seam.

I do not claim, broadly, a needle-bar having two needles, nor yet the fastening of a single needle in the slitted end of the needle-bar by a clamp and screw; but by arranging two needles in a slitted bar, in connection with a single clamp and screw, it will be seen that both needles are held with the same degree of security and by the same means, which contributes both to the ease of adjustment and the quality of the work, since one needle is not liable to become more loose than the other.

As a modification of my invention, both needles may be arranged in slits in the lower end of the bar, and secured by the same clamp.

Having thus described my invention, what I claim as new is—

The combination of a slitted needle-bar, two needles, and a single clamp and screw adapted to compress and retain both needles with equal security, substantially as described.

NATHAN HAYDEN.

Witnesses:

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