

(No Model.)

J. W. PACKARD.
SEWING MACHINE NEEDLE.

No. 279,498.

Patented June 12, 1883.

Fig. 2

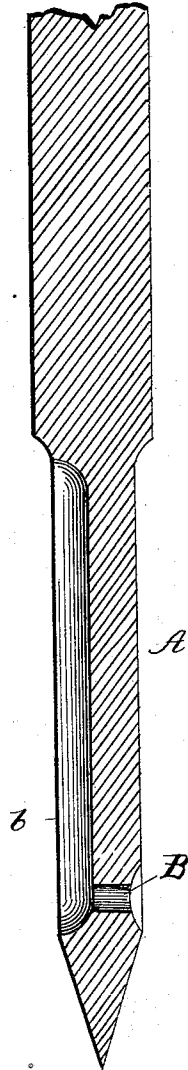


Fig. 3

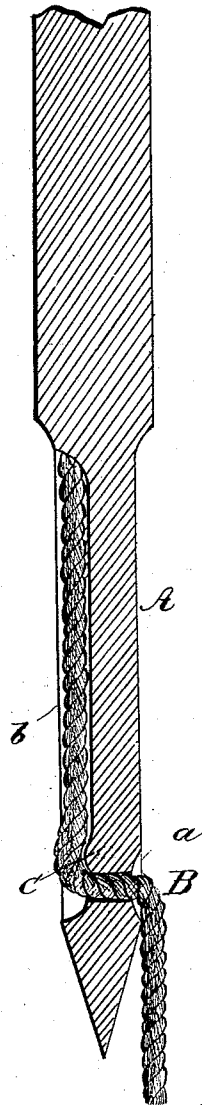
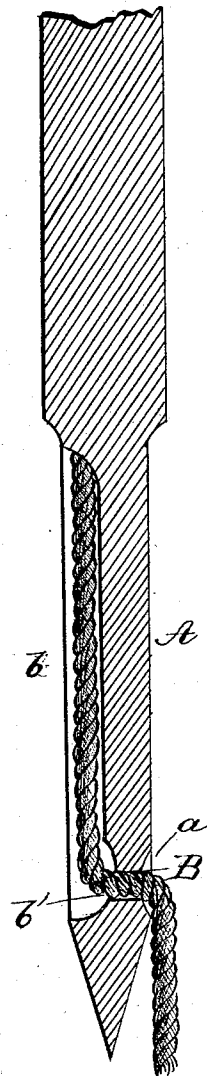


Fig. 1



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES W. PACKARD, OF BROCKTON, MASSACHUSETTS.

SEWING-MACHINE NEEDLE.

SPECIFICATION forming part of Letters Patent No. 279,498, dated June 12, 1883.

Application filed August 14, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES WALLACE PACKARD, of Brockton, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Sewing-Machine Needles; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a longitudinal sectional view of my improved sewing-machine needle; and Figs. 2 and 3 are similar views of sewing-machine needles as they heretofore have been manufactured.

Similar letters of reference indicate corresponding parts in all the figures.

My invention contemplates a certain improvement in sewing-machine needles, having for its object to avoid breaking the thread and to make it practicable to use a coarser thread in the same sized needle than heretofore.

In the accompanying drawings, the letter A represents the body of the needle. B is the eye. *a* is the short groove, and *b* is the long groove.

In my improved needle, as shown in Fig. 1 of the drawings, it will be seen that the long groove *b* is sunk or depressed deeper at the eye than at any other point, forming a well or recess, *b'*, while by reference to Figs. 2 and 3 of the drawings, showing the old-style needles, it will be seen that the long groove is either of an even depth throughout, or even shallower at the eye, as in Figs. 2 and 3, respectively.

Persons using sewing-machines will have observed that breaking of the thread invariably happens at the eye. This is caused by the friction of the thread against the fabric, the thread in the old style of needle being out of the groove at the eye, thus bringing it to bear against the side of the hole made therein by the needle. By doing away with the offset, as shown at *c* in Fig. 3, now in general use, and making the groove deeper at the eye, the

thread, by giving it increased room, is perfectly protected at that point, and consequently does not break. To avoid the breaking of thread by using the old-style needle it has been found necessary to use a much too coarse needle, which weakens and cuts away the fabric at the seam by making too large holes in it.

I am aware that sewing-machine needles have been made without the shoulder or offset *c* in the long groove or rill, having this of even depth throughout the length of the needle-blade, as shown in Fig. 2 of the drawings; but this construction does not overcome the objection. It is at the eye, where the thread forms its two bends in passing through the needle, that the greatest thread-room is required, and by making the entire length of the long groove sufficiently deep to fully accommodate the thread at that point the upper part of the needle, which has to sustain the greatest strain, is unnecessarily and unduly weakened, a comparatively shallow rill serving every purpose for that part of the needle, so that by making the needle with the long groove deeper at the eye I obtain a needle of the same or greater strength than by the old construction, and capable of holding a heavier thread without breaking than the old-style needle of the same size.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

In a sewing-machine needle, the well *b'*, located at the lower end of the long groove *b*, opposite to and communicating with the short groove or recess *a* through the needle-eye B, substantially as and for the purpose shown and described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JAMES WALLACE PACKARD.

Witnesses:

ARTHUR JUDSON PARRY,
GEORGE WALTER HOLBROOK.