R. M. ROSE.

Darning-Attachment for Sewing-Machines.

No. 198,687. Patented Dec. 25, 1877.

Fig. 1.

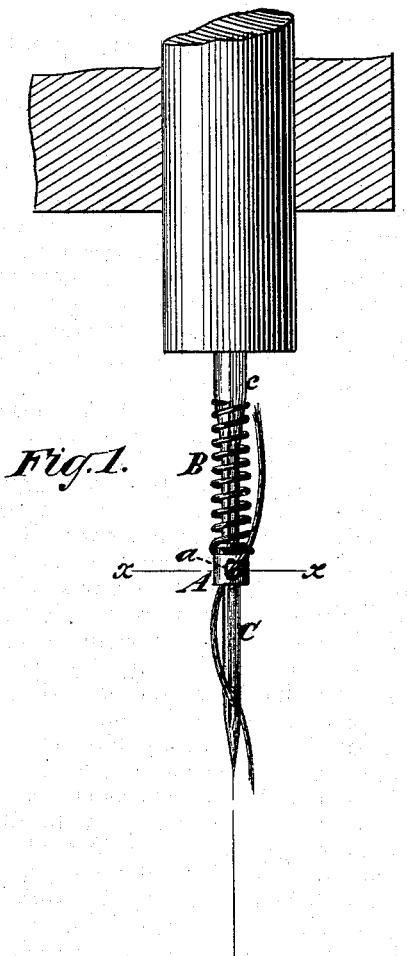

Fig. 2.

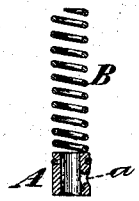

Fig. 3.

Witnesses
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REUBEN M. ROSE, OF BROOKLYN, NEW YORK, ASSIGNOR TO THE WILSON SEWING MACHINE COMPANY, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN DARNING ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **198,687**, dated December 25, 1877; application filed October 16, 1877.

To all whom it may concern:

Be it known that I, REUBEN M. ROSE, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Darning Attachment 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 drawing, forming part of this specification.

This invention relates to a novel, simple, and cheap attachment to be directly connected with the ordinary needle, needle-bar, or other needle-carrier of any sewing-machine, to constitute a presser, which operates to hold the material to be darned on the throat-plate or work-supporting table or bed of the machine during the operation of interlacing the thread or threads to form the stitch, and during a portion of the withdrawing movement of the needle, but which is lifted from the material by the needle, needle-bar, or needle-carrier, so as to relieve the material from pressure while the needle is out of it, and leave it free to be moved any required distance in any direction by hand.

The improvements will be hereinafter described in detail.

The accompanying drawings exhibit my invention in the form which I at present consider most simple, cheap, and effective.

Figure 1 is an elevation of the needle and a part of the needle-bar of a sewing-machine with the darning attachment applied to the needle. Fig. 2 is a vertical section of the darning attachment, and Fig. 3 is a horizontal section of the same on the line *x x* of Fig. 1.

The darning attachment, in the form represented, consists simply of a collar, A, which fits loosely to the needle, and a spiral spring, B, firmly secured at one end to the said collar. The said collar has in one side a lateral opening or eye, *a*, large enough for the free passage of a thread.

This attachment is represented as attached directly to the needle C, the upper part, *c*, of which is somewhat enlarged, as has been customary in the needles for many kinds of sewing-machines, and the free end of the coil of the spring B being large enough to clamp itself on the said enlarged portion *c*. The attachment is applied to such needle by simply slipping it, with the free end of the spring foremost, over such needle from the point thereof, and pushing the spring onto the taper of the enlarged portion *c*, the eye *a* of the collar A being set opposite the long groove of the needle, which, in operation, is farthest from the shuttle or looper.

In the normal condition of the spring, the collar A occupies a position about half-way up the needle.

To perform the operation of darning, the ordinary presser of the sewing-machine is raised up from its operative position and secured, the feed is adjusted for the shortest motion, the needle-thread is passed inward through the eye *a*, down to and through the eye of the needle, and the machine is operated as for ordinary sewing. As the needle descends, the collar A, descending with it, comes down upon the material around the eye of the throat-plate, and acts like an ordinary presser during the latter part of the descent of the needle, the spring being compressed by the continued descent of the needle after the collar or presser comes in contact with the material. As the needle rises, the collar or presser is held down by the spring until the latter has extended itself to its full length, and is then raised from the material by the continued upward movement of the needle. After the needle has been entirely withdrawn from the material, the latter is moved by hand, independently of the machine-feed, any required distance, in any direction desired, to make a new stitch.

The attachment is susceptible of some modification—as, for instance, the spring B might be attached to the needle-bar or needle-carrier, instead of to the needle itself, and the presser A, though preferably in the form of a collar, which surrounds the needle, and to which the needle forms a guide, might be in some other form, if organized to be confined to a position near the needle.

I claim—

1. The collar A, having an eye, *a*, and pro-

vided with a spiral spring, B, both spring and collar being adapted to fit upon a sewing-machine needle, substantially as and for the purpose set forth.

2. The combination, with a sewing-machine needle, of the collar A, having an eye, *a*, and the attached coiled spring B, having its upper end constructed to grasp the enlarged portion *c* of the needle, for permitting of the easy removal of the attachment, substantially as described

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