

I. M. ROSE.

SEWING MACHINE NEEDLE FOR EMBROIDERING.

No. 103,664.

Patented May 31, 1870.

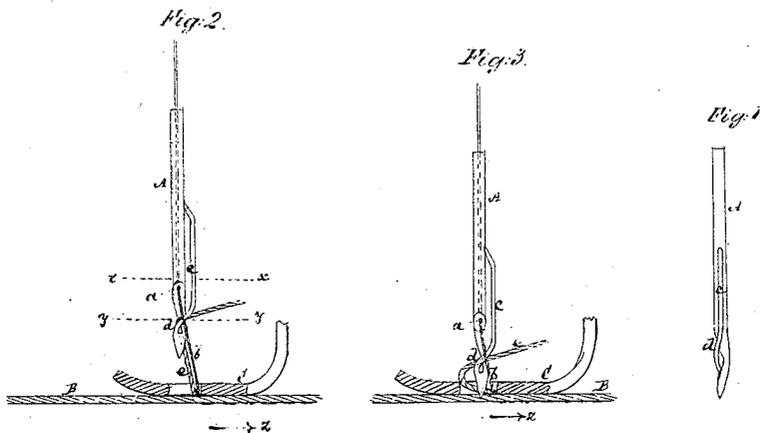


Fig. 6.



Fig. 1.



Fig. 5.



Witnesses:
Thos. Haynes
Fred. Trench

I. M. Rose

United States Patent Office.

ISRAEL M. ROSE, OF BROOKHAVEN, NEW YORK.

Letters Patent No. 103,664, dated May 31, 1870.

IMPROVEMENT IN SEWING-MACHINE NEEDLE FOR EMBROIDERING.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, ISRAEL M. ROSE, of Brookhaven, in the county of Suffolk and State of New York, have invented a new and useful Improvement in Sewing-Machine Needles for Embroidering; 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, and in which—

Figure 1 represents a longitudinal view of my improved needle prior to being threaded or applied to a sewing-machine, and

Figures 2 and 3, similar views of the same when in operation, and at different portions of its stroke, to illustrate its formation of the stitch.

Figures 4 and 5, transverse sections thereof, taken, respectively, as indicated by the lines *x x* and *y y* in fig. 1.

Figure 6 is a plan view of a series of stitches in illustration of the work produced by said needle.

Similar letters of reference indicate corresponding parts.

My invention relates to the production of an embroidery-stitch in which a separate thread, which does not pass through the cloth or fabric to be embroidered, is used as the embroidery-thread, and is retained in place upon the surface of the fabric by threads, which produce an ordinary sewing-stitch.

It is alike applicable to single and to double-thread sewing-machines.

The invention consists in a peculiar construction of the needle, which, in addition to its being eye-pointed, for working the sewing-thread, is also formed with a slotted guide up its one side, and twisted toward the point below the eye of the needle, to receive through it the embroidering-thread, and whereby, and without the aid of any special mechanism or separate device, the reciprocating action of the needle, in combination with the ordinary feeding-movement of the fabric, is caused to turn the embroidering-thread, and lay it in loop form on the surface of the fabric, and each stitch of the needle-thread made to secure two loops of the embroidering-thread.

Referring to the accompanying drawing—

A represents the reciprocating needle, and

a, its eye, with the needle-thread *b* passing there-through, for operation, as regards the production of the sewing-stitch, in the ordinary manner of either single or double thread sewing-machines, as the fabric B, held down by a presser-foot, C, is fed over the table in the direction, as indicated in figs. 2 and 3, of the arrow *z*.

In addition to the eye, *a*, in the needle, for the passage of the needle-thread, said needle A is formed with a slotted guide, *c*, up its one side, arranged to extend to a point below the eye *a*, at or near the point of the needle, where it and the needle are twisted, as at *d*.

This slotted guide *c* serves to receive through it the embroidering-thread *e*, which is drawn or fed by each stroke of the needle from a bobbin carried by the machine.

Said slotted guide is arranged, relatively to the line of feed, and to the eye of the needle, as represented in figs. 2 and 3, so that, in the ascent of the needle, the straight portion of the slotted guide *c* passes freely by, or without drawing on the embroidering-thread *e* after the latter has been fastened at its end to the fabric; but, on the twisted portion *d* coming in contact with it, said portion draws on the thread *e*, to take the necessary supply from the bobbin, and to cause it, as it were, to be twisted to a suitable extent around the needle, drawing the same onto the shoulder of the twist near the point of the needle, whereby, in the next descent of the needle, and as the embroidering-thread *e* leaves the twisted portion *d* to enter the straight portion of the slotted guide *c*, and as the needle approaches or commences to penetrate the fabric, said thread is left in the form of a loop on or over the fabric, and through which the needle-thread *b*, by the continued descent of the needle, is passed.

Fig. 2 represents the needle as completing its up-stroke, to draw on and give twist to the embroidering-thread, as described, and

Fig. 3, the needle as descending, to leave a loop in said thread, behind it, on the face of the fabric, and which, in the further descent of the needle, remains open by reason of the straight portion of the slotted guide then passing by it through the fabric, so that the needle-thread *b* passes easily through it, and interlocks with a previous needle-thread loop below the fabric, or has a secondary thread passed through its loop, to, in the next ascent of the needle, complete the needle-thread stitch, and to tighten or close the loop of the embroidering-thread on the face of the fabric, and whereby each stitch of the needle-thread is made to connect two loops of the embroidering-thread, as clearly represented in fig. 6 of the drawing.

In this way, an embroidery-stitch of a fine and ornamental appearance is produced and secured, without the aid of special mechanism, but simply by such a construction of the needle as gives to it an action that is similar to partially rotating the

needle as it is reciprocated, in order to lay the loop on the fabric for the needle-thread to pass through.

Such a needle may be applied to a sewing-machine of ordinary construction, and said machine thus made to embroider without alteration of any of its parts.

What is here claimed, and desired to be secured by Letters Patent, is—

An eye-pointed sewing-machine needle, formed with a slotted guide, *c*, up one of its sides, extending below the eye *a* of the needle, and shaped to produce a twist, *d*, at its lower extremity, substantially as and for the purpose specified.

I. M. ROSE.

Witnesses:

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