

R. H. JEWETT.

Sewing Machine.

No. 39,658.

Patented Aug. 25, 1863.

Fig. 4

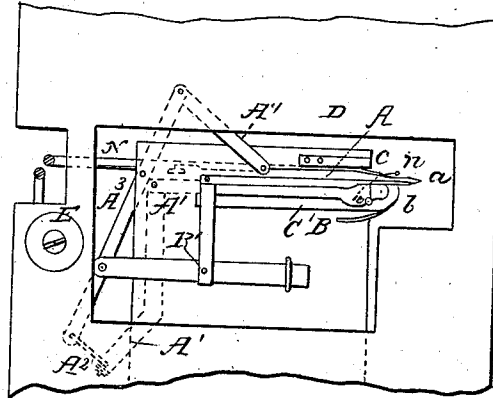


Fig. 2

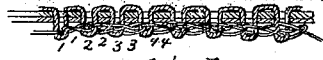
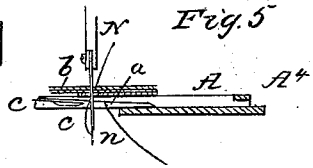
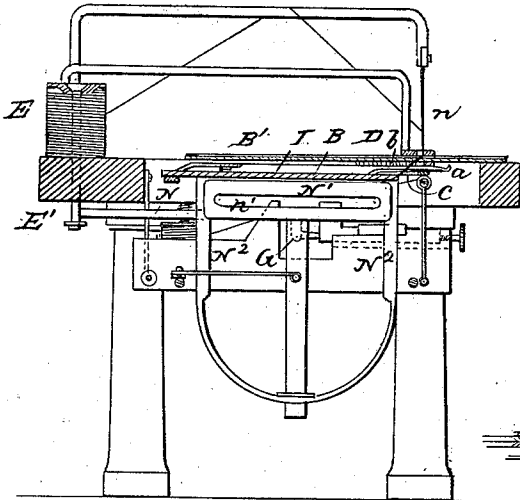
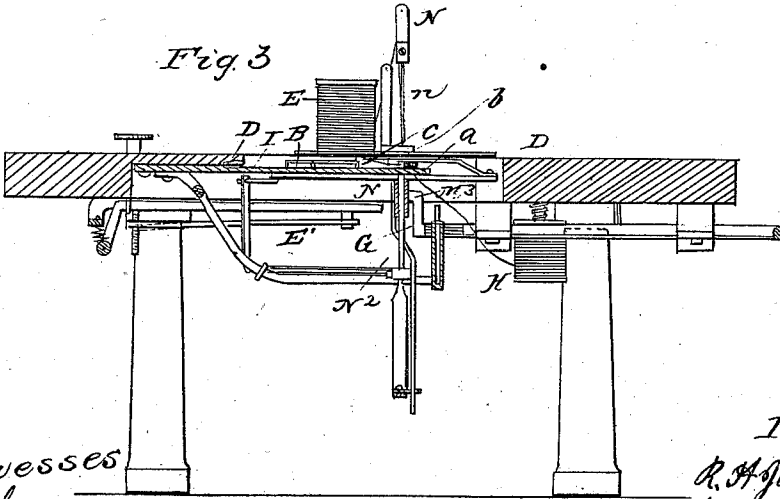


Fig. 1

Fig. 3



witnesses
J. W. Adams
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UNITED STATES PATENT OFFICE.

R. H. JEWETT, OF VERSAILLES, ILLINOIS.

IMPROVED STITCH FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 39,658, dated August 25, 1863; antedated March 1, 1863.

To all whom it may concern:

Be it known that I, R. H. JEWETT, of Versailles, in the county of Brown and State of Illinois, have invented a new and Improved Stitch 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 exhibits the structure of the stitch as exhibited by cutting the cloth in the line of the sewing. Figs. 2 and 3 are vertical sections, at right angles to each other, of a machine for making my improved stitch. Fig. 4 is a plan of the principal working parts of the machine as exhibited by removing a portion of the bed-plate. Fig. 5 is a side view of the parts of the machine by which the threads are interlaced to produce the stitch.

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

This invention consists in a stitch of novel character, produced with two threads by passing one thread through the cloth or other material to be sewed from one side thereof in a series of loops, and enchainning the other thread on the opposite side of the said material in a series of loops in such manner that each of the latter passes through one of the protruding loops of the first thread and receives the succeeding loop of its own series in a manner hereinafter more fully described, such stitch being very strong and possessing great elasticity.

To illustrate the structure of the stitch, I have represented the two threads of which it is composed—the one in black outline and the other in red—in Fig. 1. To explain the process by which it is made, I have numbered the loops of each thread 1 2 3, &c., in the order in which they are formed, and will speak of the thread which passes through the cloth, represented in black outline, as the upper thread, and of the other one, represented in red outline, as the under thread. The stitch is commenced by passing a loop of the upper thread through the cloth, then passing through the said loop a loop of the under thread, next passing a second loop of the upper thread through the cloth, then passing a second loop of the under thread first through the first loop of the same thread and afterward through the second loop of the upper thread, next passing a third loop of the upper thread through the cloth, and

then passing a third loop of the under thread first through the second loop of the same thread and afterward through the third loop of the upper thread, and so on indefinitely, passing every succeeding loop of the under thread first through the preceding loop of the same thread and afterward through the corresponding loop of the upper thread, and so enchainning two loops of the under thread between every two loops of the upper thread.

The devices employed to produce the stitch may be various; but in all cases an eye-pointed needle will be required to perforate the cloth and carry through it the loops of the upper thread, a second needle or its equivalent to carry the loops of the under thread through the loops of the upper one, and means for enchainning the loops of the under thread.

In the machine represented the devices consist of the eye-pointed perforating-needle *n* for carrying the upper thread, working substantially like the perforating-needle of other sewing machines, the eye-pointed under needle, *a*, for carrying the under thread, and the looper *b* and loop-extender *c*.

The upper needle, *n*, may be applied and operated as in other sewing-machines. It is represented as carried by an arm, *N*, rigidly attached to a frame, *N'*, which slides in vertical guides *N² N²* under the bed-plate *D*, and is driven by a crank, *N³*, on the main shaft *G*, said crank working in a slot, *n'*, in the said frame. It is supplied with thread (represented in red color) from a spool, *E*, arranged on the bed-plate, and having applied to it a tension apparatus, *E'*, which may be of any known or suitable construction.

The under needle, *a*, is straight, and has a horizontal reciprocating motion below the bed-plate, advancing as the upper needle is being withdrawn and retiring as the upper needle descends through the cloth. This needle is carried by a bar or slide, *A*, which derives motion from the frame *N'* through a lever, *A'*, link *A²*, lever *A³*, and rod *A⁴*. Thread (represented in blue color) is supplied to this needle from a spool, *H*, under the bed-plate.

The looper *b* and loop-extender *c* are both pointed instruments, attached to separate bars or slides *B* and *C*, and work parallel with the under needle, *a*, below the bed-plate. These slides *B* and *C* derive motion from the lever *A³*, to which they are connected by a T-shaped

slide, B'. The looper *b* works in a groove in the side of the needle *a* farther from the line of motion of the upper needle, *n*, and its point is directed the same way as the point of the needle *a*. It works always in the opposite direction to the needle *a*, always advancing as the latter recedes, and vice versa. The loop-extender is arranged lower than the needle *a*, its point directed the opposite way to the points of the said needle and the looper. It is represented in Fig. 4 of hook form; but this is only to give it the requisite direction, the operating portion being straight and taper. It moves with the looper *b*, and in the same direction; but, owing to their points being directed opposite ways, one is always advancing while the other is retiring.

The operation of the needles, looper *b*, and loop-extender *c* in forming the stitch is as follows: After the upper needle, *n*, has passed a loop through the cloth, and while it is being withdrawn therefrom, the loop-extender *c* advances into the loop and extends it laterally, and by means of a shoulder, 10, formed upon it pushes it to a position for the needle *a* to enter and pass its eye through said needle *a*, having previously taken a loop of the under thread from the looper *b*. The needle *a* now has upon it a loop of each thread, and as these lie in a notch provided in the said needle back of its

eye the looper *b* passes them. The point of the looper moves over the needle *a* and behind its eye, thus taking a loop of the under thread, onto which the other loops are dropped by the withdrawal of the needle *a*.

The feed mechanism may be the same as in other machines. That which is represented is a modification of the needle-feed, the needle *n* and all the stitch-making devices having a horizontal movement with the vibrating feed-plate I; but this needs no particular description, as it is not essential to the success of my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

The stitch produced with two threads by passing one thread through the cloth or other material to be sewed from one side thereof in a series of loops, and enchaining the other thread on the opposite side of the said material in a series of loops in such manner that each of the latter passes through one of the protruding loops of the first thread and receives the succeeding loop of its own series, as herein specified.

R. H. JEWETT.

Witnesses:

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RICHARD MARRS.