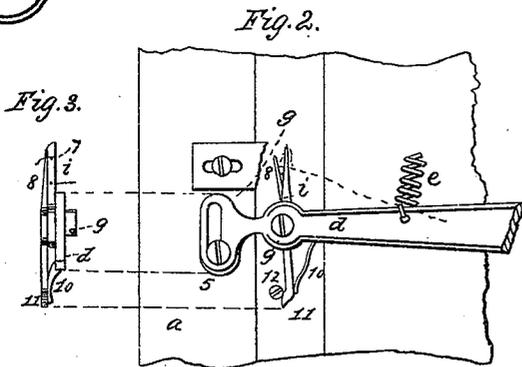
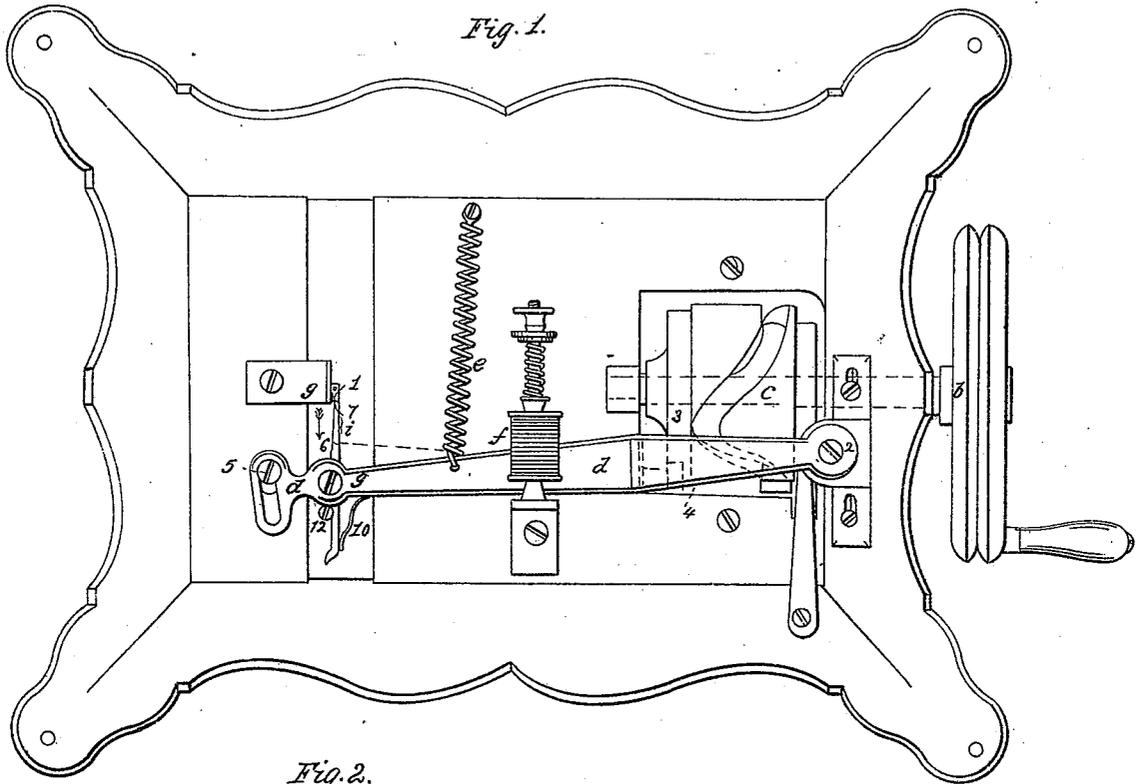


J. THOMSON.
Sewing Machine.

No. 20,742.

Patented June 29, 1858.



Witnesses:
N. H. Gillett
David A. Raymond

Inventor:
John Thomson

UNITED STATES PATENT OFFICE.

JNO. THOMSON, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 20,742, dated June 29, 1858.

To all whom it may concern:

Be it known that I, JOHN THOMSON, of Worcester, in the county of Worcester and State of Massachusetts, have invented, made, and applied to use a certain new and useful Improvement in Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making part of this specification, wherein—

Figure 1 is an inverted plan of a sewing-machine as fitted with my improvements. Fig. 2 is a similar plan of a portion of my machine showing the looper in a different position; and Fig. 3 is a side view of said looper detached.

Similar marks of reference indicate the same parts.

In many machines that have heretofore been constructed a vertical reciprocating eye-pointed needle has been used in connection with a looper that carries a second thread, and acts in such a manner that the looper takes a loop of needle-thread, and then the needle takes a loop of the second thread and the first loop is dropped over the second, while the looper again takes a loop from the needle, and so on. My invention accomplishes the formation of this well-known character of stitch; but I make use of a peculiar spreading device to insure the proper action of the looper, and in this spreading device my said invention is found.

I make use of an eye-pointed needle, 1, reciprocating by any usual mechanism, and also a feeding device acting to move the cloth in the proper direction, which is indicated by the arrow, Fig. 1; but as all these devices are well known I will not describe the same any further.

In the drawings, *a* is the bed of the machine. *b* is the driving-wheel, propelled by a crank or other device and rotating a cam, *c*, that gives motion to the needle through the usual needle-arm and lever. *d* is a lever set on a fulcrum, 2, and receiving a vibrating motion from the part 3 of the cam *c* acting on a roller, 4, on said lever, and the end of this lever *d* is formed as a slot moving over a screw, 5. *e* is a spring, by which the lever is moved and the roller 4 kept in contact with the cam 3. On this lever *d* the looper *i* is attached, and receives, with said lever, a reciprocating motion,

(although said motion might be given to the looper *i* by a different mechanism.) This looper is firmly attached to the said lever *d* and receives the second thread through the eye 6, whence it is led at the back of the looper and passed through the eye 7, said thread being supplied from the spool *f*, and being shown by blue lines, while the needle-thread is shown by red lines. This looper *i*, if used alone, would work in the well-known manner in taking and dropping the successive loops; but there is a liability that the needle may not take a loop of the second thread from the looper, and thereby a stitch or more be missed.

My invention renders this almost impossible, and consists in the finger 8 set on the center, 9, and kept toward the looper *i* by a spring, 10, so that said finger 8 and looper *i* enter the loop of needle-thread as one instrument and take the same. As the needle withdraws the cam 3 is so shaped and timed that a further motion is given to the looper carrying the rear end, 11, of the finger against a stud, 12, that throws said finger 8 away from the looper *i* in such a manner that the second thread, passing from the eye 7 to the cloth, is spread away from the looper *i*, so that the needle 1 in its next descent will surely pass between said thread and the looper and take a loop from said looper as it retires, in which operation the previous loop of needle-thread is first drawn back out of the way of the descending needle and then the finger 8 springs back to its place as the part 11 clears the stud 12, and said loop of needle-thread is dropped around the loop of second thread, and the parts proceed through their motions, as before indicated.

A plate, *g*, (shown partly removed in Fig. 2,) may be used as a guide to the side of the needle 1.

I do not claim, broadly, the use of a device separate from the looper for the purpose of spreading the second thread, as such a device has before been proposed. Neither do I claim a double looper to open the loop of needle-thread and form a single chain-stitch, as such a device has heretofore been used, and may be seen in the patents of Wm. Sage, June 30, 1857, and Rixford & Dimock, January 19, 1858; but neither of these devices is used with or applicable to spreading the second thread to form a loop for the needle, because the device that spreads the said second thread must move be-

tween the looper having the eye for the second thread and the under side of the bed of the machine, for if said device moved at the side of the looper the said second thread would draw from its eye down between the two parts and the spreader become useless; therefore

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

The spreading-finger 8 acting between the bed of the machine and the looper, that carries the second thread, in such a manner that both

enter the loop of needle-thread, and then the spreader 8 extends the loop of second thread as it draws from the eye of the looper to the cloth, substantially as and for the purposes specified.

In witness whereof I have hereunto set my signature this 15th day of May, 1858.

JOHN THOMSON.

Witnesses:

N. H. GILLETT,

DAVID H. RAYMOND.