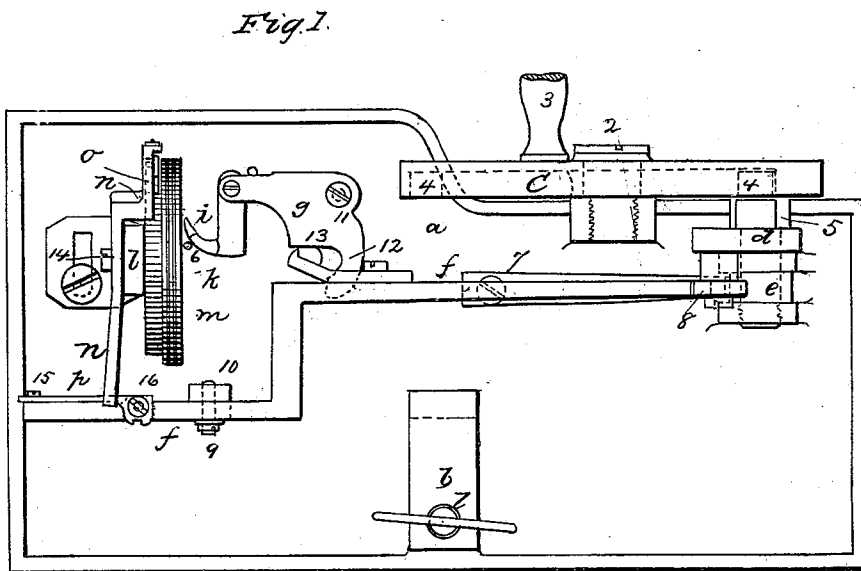
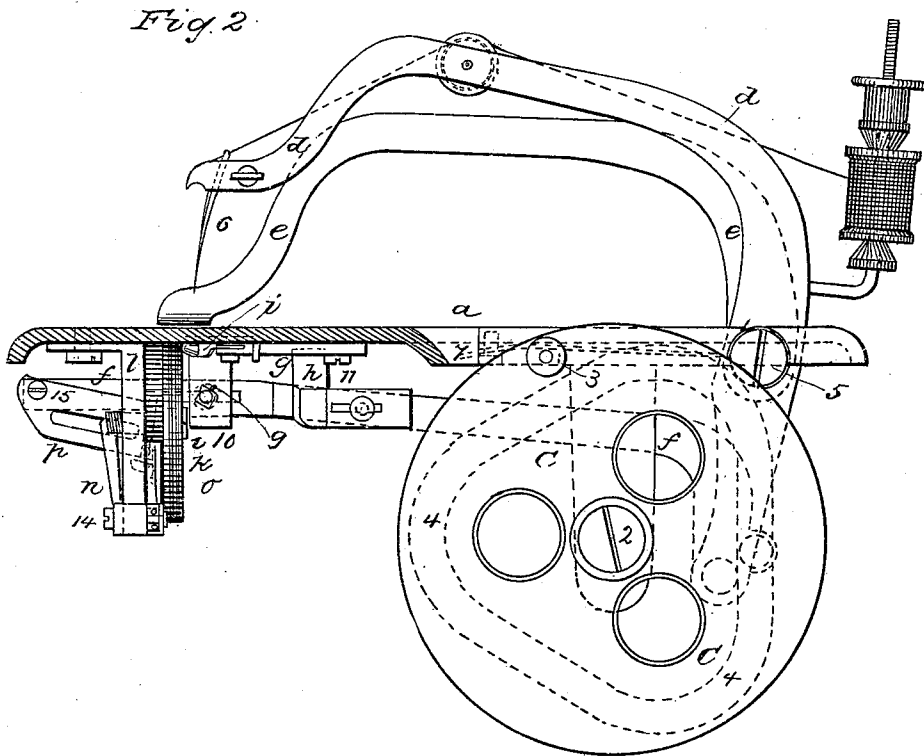


W. MILLER.
Sewing Machine

No. 20,763.

Patented June 29, 1858.



Witnesses.
Lemuel W. Senell
Thomas G. Harold

Inventor
Wesley Miller.

UNITED STATES PATENT OFFICE.

W. MILLER, OF CAMBRIDGE, ASSIGNOR TO HIMSELF AND WILLIAM P. PRESCOTT, OF NEW YORK, N. Y.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 20,763, dated June 29, 1858.

To all whom it may concern:

Be it known that I, WESLEY MILLER, of Cambridge, in the county of Washington and State of New York, 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 the said sewing-machine, showing the works beneath the bed; and Fig. 2 is a side view of the same, the bed being shown partially in section.

Similar marks of reference indicate the same parts.

The nature of my said invention relates to a peculiar device for giving motion to the looper to take a loop of needle-thread.

In the drawings, *a* is the bed of the machine, which may be attached to the edge of a table by means of the bracket *b* and the binding-screw *1*.

c is the main or fly wheel, set on the center screw, *2*, and having a handle, *3*, by which it is rotated, and a slot, *4*, of the desired cam shape. (See dotted lines, Fig. 2.) In this cam *4* a roller on the lower end of the needle-arm *d* travels. This arm *d* is on the fulcrum *5*, and carries the needle *6* in the usual manner; also the spool *7*, from which the thread passes to the needle. On the center *5* is the arm *e*, the end of which becomes a pressure-pad for the feed to act against, and said arm is kept toward the bed *a* by a spring, *7*, on the under side of the bed.

f is a slide attached at one end to the lower end of the needle-arm at *8*, and slides by a slot on a screw, *9*, and against the block *10* on the bed *a*, so that this slide receives a reciprocating motion each vibration of the needle-arm and needle.

i is a looper, attached to the stock *g*, that moves on the fulcrum-screw *11*, and is provided with a hooked heel-piece, *12*, and a straight edge, *13*; and *h* is an adjustable finger, attached by a slot and screw to the slide *f*. The operation of this part is that as the needle rises the finger *h*, coming against the part *13*, projects the looper *i* through the loop of needle-thread, and there the looper stands

while the needle rises and again descends, the finger *h* sliding against the straight part *13* of the stock *g*, and when the needle has taken the loop from the looper *i* to form the chain-stitch the finger *h* takes the heel *12* and throws the looper back, and the moment the needle begins to rise and the slide *f* to move forward the finger *h*, taking the part *13*, throws the looper into the loop, and the operations are repeated.

k is a feeding-wheel on a bracket, *l*, which wheel projects slightly from the table.

m is a fine-toothed ratchet adjoining the wheel *k*.

n is a lever on a fulcrum, *14*, having a pawl, *o*, and spring to the ratchet-teeth *m*. The long end of this lever is bent toward the slide *f*, and passes through a slotted plate, *p*, attached to said slide. This plate *p* is connected by a screw, *15*, at one end and by an adjusting-screw, *16*, at the other, so that the angle of the slotted plate with the slide *f* can be increased or decreased for the purpose of varying the action of the same on the lever *n* and regulating the number of the fine ratchet-teeth taken up each time by the pawl *o*, and by consequence the length of stitches in the material from the motion of the wheel *k*.

Having thus described the nature of my said invention, I do not claim a looper moving in the arc of a circle, as that has before been used; neither do I claim moving such looper by a disconnected lever; but

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

The hooked heel-piece *12* and straight side *13* on the looper-stock *g*, in combination with the finger *h*, having a reciprocating motion on the slide *f*, whereby the necessary motions for taking a loop, pausing during the ascent and commencement of the descent of the needle, drawing back out of the loop, and then taking a fresh loop of needle-thread, are given from the continuously-reciprocating finger *h* without the use of springs, as described and shown.

In testimony whereof I have hereunto set my signature this 5th day of May, 1858.

WESLEY MILLER.

Witnesses:

LEMUEL W. SERRELL,
THOMAS G. HAROLD.