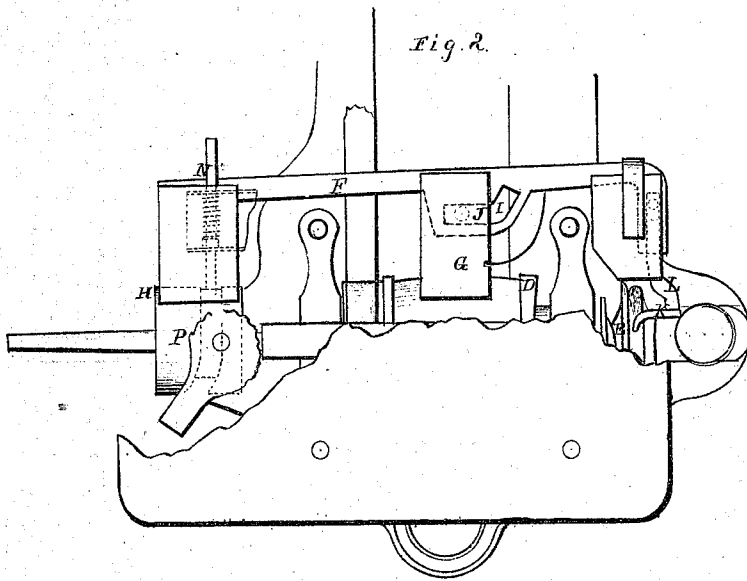
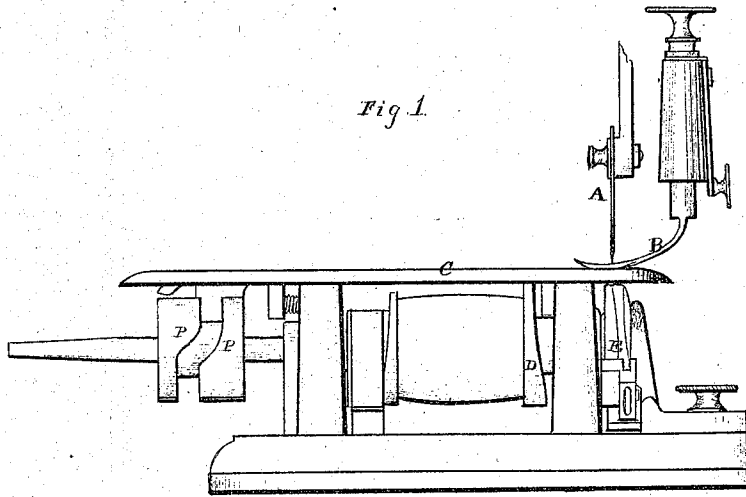


L. W. Stockwell, Sewing Machine.

No. 103254.

Patented May 17 1870



Inventor,
L. W. Stockwell.
Per. Burridge & Co.

Witnesses.
J. M. Burridge
Frank S. Alden.

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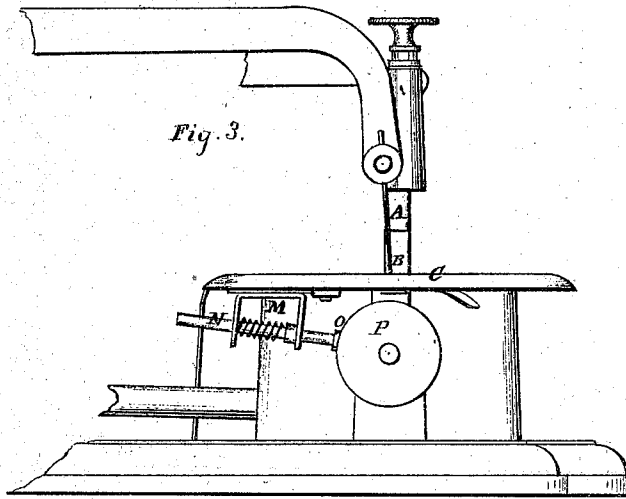


Fig. 3.

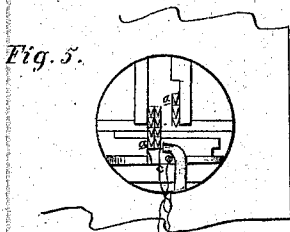


Fig. 5.

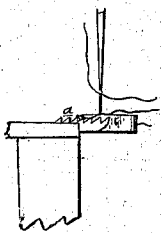


Fig. 6.

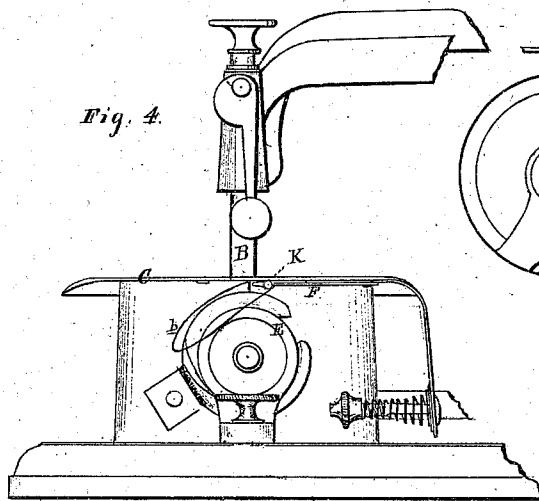


Fig. 4.

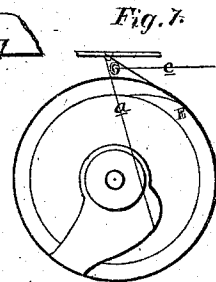


Fig. 7.

Inventor.

L. W. Stockwell
Per Burridge & Co.

Witnesses.

J. M. Burridge
Frank Alden.

United States Patent Office.

LEVI W. STOCKWELL, OF AKRON, OHIO.

Letters Patent No. 103,254, dated May 17, 1870.

IMPROVEMENT IN SEWING-MACHINE.

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, LEVI W. STOCKWELL, of Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Sewing-Machines; and I do hereby declare that the following is a full and complete description of the same, reference being had to the accompanying drawings making part of this specification.

Drawings.

Figure 1 is a front view of the machine.
Figure 2, a view of the top.
Figure 3, an end view.
Figure 4 is also an end view.
Like letters of reference refer to like parts in the different views.

Specification.

The object of this invention relates to a device attached to a sewing-machine of the Wheeler & Wilson manufacture, whereby said machine is made to work a two-thread elastic chain-stitch, or an ordinary single lock-stitch, at the will of the operator.

Said device consists of a slide attached to the under side of the cloth plate, and is operated by a double cam.

The peculiar movement of the slide is obtained by certain slots, into which project stationary pins for guiding the movement of the slide, whereby is operated a curved tubular needle, as hereinafter more fully described.

Fig. 1 represents a front view of the machine of the Wheeler & Wilson manufacture, in which—

A is the needle.

B, the presser.

C, the cloth-plate.

D, the cam, for throwing up the feed-bar.

E, the rotating hook, all of which are or may be constructed and operated in the ordinary way.

To the under side of the plate is attached a slide, F, fig. 2. A section of the plate is shown as broken away in order that it may be seen.

Said slide is held in close relation to the under side of the plate by means of stays G and H, the stay H being indicated by the dotted line *a*, under which the slide has a reciprocating lateral movement to a distance, but which is then deflected from such direct transverse movement by the angular slot I, proceeding from the slot J. By this means is obtained to the slide a direct transverse movement up to a certain point, and then a movement abruptly deviating therefrom toward the needle, the purpose of which will presently be shown.

To one end of the slide F is secured a curved tubular needle, K, fig. 2, by means of the arm L, whereas

to the opposite end of the slide is attached a stay, M, in which is closely but loosely fitted a pintle, N, fig. 3.

To one end of said pintle is secured a head of raw hide, O, embraced between the cheeks of the cam P, fig. 1, and is by it actuated for operating the slide in its transverse, reciprocating, and angular movement, as follows, viz:

The timely movement of the slide F, when operated by the cam P and slots J and I, above described, is such that the tubular needle K, fig. 2, for carrying the under thread *c*, Figure 7, does not begin to move into the loop of the upper thread, which is drawn down by the rotating hook E, as shown in fig. 7, in which *a* is the thread, until the previous loop *b*, fig. 4, is drawn up into the cloth, thereby preventing the tubular needle from catching in the previous loops and breaking the thread.

Said needle moves in a straight line by virtue of the direct movement of the slide, until it arrives beyond the needle hole in the cloth-plate. At this point it makes an abrupt angular movement, by virtue of the angular slot I in the slide referred to, toward the front of the machine, so that the needle A, in its downward stroke, passes between the under thread *c*, Figures 5 and 7, and the tubular needle K.

Said needle does, in passing through the loop of the upper needle, pass near the side of the upper needle, but it cannot come in contact therewith, for the reason that it enters the loop of the upper thread while the needle A is at the highest point; hence there can be no colliding of the two needles.

It will be observed that the under thread passes through the tubular needle, and out of the extreme end thereof; hence its thread is carried back beyond the needle A, so as to insure its thread being caught by the needle A in its descent, or, in other words, to provide ample room for the needle A to pass between the thread and the tubular needle, in order to make the stitch, and without coming in contact with the feed-points *a*, Figures 5 and 6, or in any way interfering with a free movement of the thread.

Also, in consequence of the thread coming out at the end of the needle, there is given more space between the feed-points and the end of said tubular needle, thereby avoiding all difficulty in adjusting the attachment to the machine.

It will be obvious, from the above description of the operation of the tubular needle, that it operates to form a stitch conjointly with the upper needle, the two needles sewing a double lock-stitch, sometimes called a two-threaded elastic chain-stitch, which, for certain kinds of work, is much more desirable than a single lock-stitch, the latter stitch being only the one made by this machine without having my attachment above described.

By this simple device, the machine is rendered capable of making both kinds of stitch, thereby enlarging its capacity for various work and general usefulness.

This attachment may, as above said, be used or not, at the will of the operator, as it can be easily disengaged from the machine by withdrawing the head O of the pintle N from its engagement with the cam, thereby allowing the machine to run independently of the attachment, which will then sew the ordinary single lock-stitch.

Claim.

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

The curved needle K, mounted on the slotted slide F, arranged and operating in connection with the eye-pointed needle and revolving hook, substantially as and for the purpose specified.

LEVI W. STOCKWELL.

Witnesses:

W. H. BURRIDGE,
FRANK S. ALDEN.