

W. A. SPRINGER.  
Sewing-Machine.

No. 128,919.

Patented July 9, 1872.

Fig. 1.

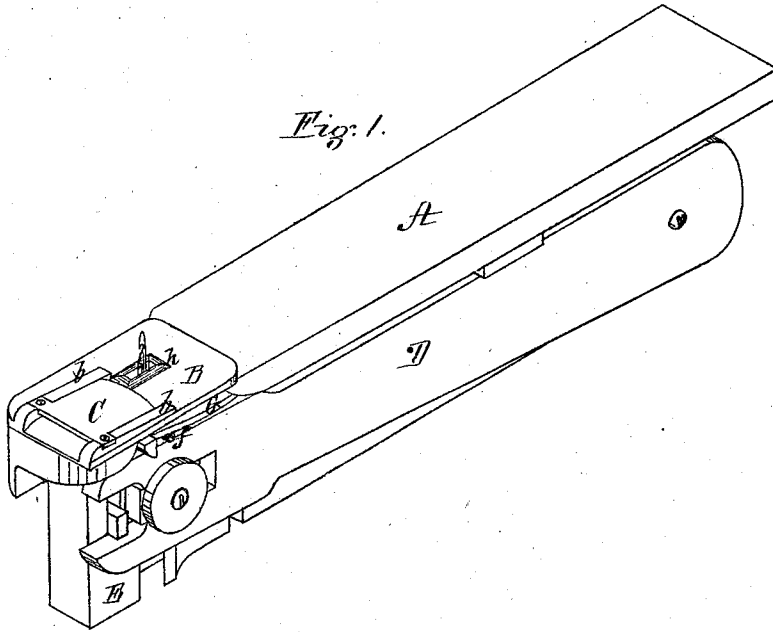


Fig. 2.

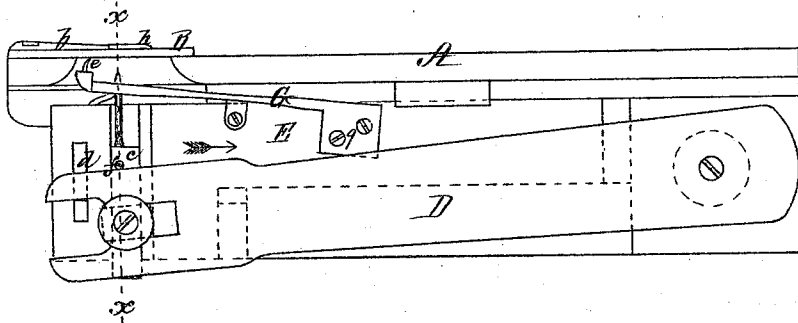
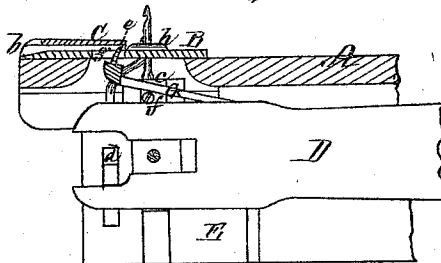


Fig. 3.



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Fig. 4.

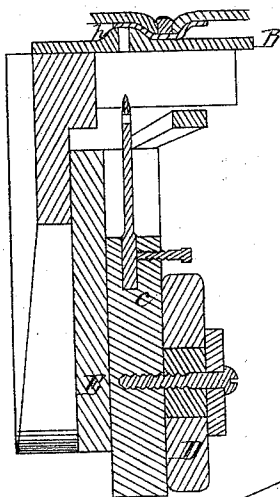


Fig. 5.

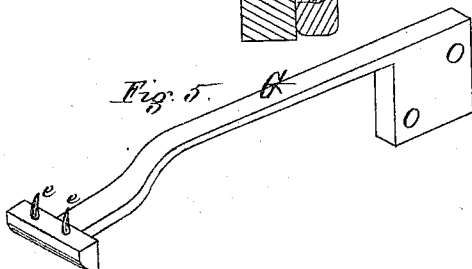


Fig. 6.

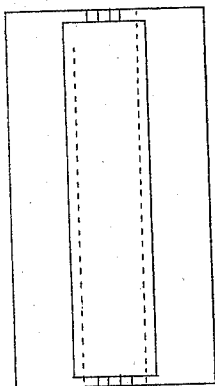
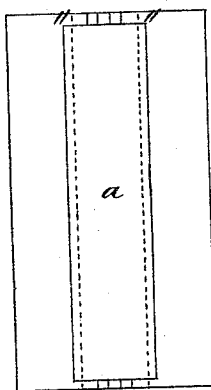


Fig. 7.



Witnesses,  
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# UNITED STATES PATENT OFFICE.

WILLIAM A. SPRINGER, OF MARLBOROUGH, MASSACHUSETTS.

## IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 128,919, dated July 9, 1872.

*To all whom it may concern:*

Be it known that I, WILLIAM A. SPRINGER, of Marlborough, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Wax-Thread Sewing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, making part of this specification, in which—

Figure 1 is a perspective view of a portion of a wax-thread sewing-machine having my improvements applied thereto. Fig. 2 is a side elevation of the same. Fig. 3 is a longitudinal vertical section through the same with the parts in the position shown in Fig. 1. Fig. 4 is an enlarged transverse vertical section on the line X X of Fig. 2 with the work in place; Fig. 5, detail. Fig. 6 represents a portion of a boot-leg with the stay-piece stitched on in the old way. Fig. 7 represents a portion of a boot-leg with the stay-piece stitched on by my improved machine.

In the manufacture of boots a narrow strip of leather or stay-piece is frequently sewed over the lower half of the seam on the inside of the boot-leg, in order to strengthen it and prevent ripping, this stay-piece being fed into the machine between the needle-plate and an auxiliary spring-plate attached thereto. In entering and starting this stay-piece, however, it is necessary to push it forward by means of a pointed instrument passed through a slot in the spring-plate, in order to insure its being caught by the needle and fed forward thereby simultaneously with the boot-leg, for the reason that if the stitching was commenced before the end of the stay-piece was caught by the needle, the boot-leg would be fed forward without the stay-piece. The first seam is thus necessarily commenced at a short distance from the upper corner of the stay-piece, which portion is consequently not fastened down as seen in Fig. 6, and is liable to turn up while the boot is being treed, while as the seam on the other edge of the stay-piece extends to its extreme end, the tops of the seams are not at an equal height, giving an unfinished appearance to the work on the outside. Furthermore, in placing the boot-leg upon the machine the stay-piece is often accidentally moved or drawn back out of its proper position, so that it is not caught and fed forward by the needle,

causing delay and inconvenience, the stay-piece being entirely hidden from the operator when the boot-leg is in place upon the machine.

The first part of my invention has for its object to overcome these difficulties, and consists in an independent feed for feeding the stay-piece up to the needle, after which the stay-piece and the boot-leg are carried forward together by the needle in the ordinary way, by which means I am enabled to run the line of stitching on each side of the stay-piece to or beyond its extreme end (as shown in Fig. 7,) which is thus securely fastened down, leaving no end or corner to turn up—a desideratum heretofore unattained.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawing, A represents the arm or portion of the sewing-machine over which the leg of the boot is placed while the stay-piece *a*, Fig. 7, is being stitched thereto. B is the needle-plate between guides or side-pieces *b b*, on which is secured a spring-plate, C, a passage or throat being left between the plates B and C for the passage of the stay-piece *a*, which is a narrow strip of leather to be stitched over the seam on the inside of the boot-leg, to strengthen it and prevent ripping. D is the needle-arm which operates the needle-bar *c*, which, together with the cast-off bar *d*, moves vertically in suitable guides within a horizontal sliding bar, E. These parts operate in the usual manner, and, as they form no part of my invention, will not be further described. G is a spring-bar, which is secured to the sliding bar E, at *g*, and is provided at its outer end with two points or teeth, *e*, which, when the bar G is raised by a pin, *f*, on the needle-bar, as seen in Fig. 3, project through two slots, *g*, in the needle-plate, into contact with the under side of the stay-piece *c*, and thus as the sliding bar E is moved in the direction of the arrow, Fig. 2, the stay-piece is fed up to the needle as required, by which means I am enabled to commence the line of stitching in advance of the end of the stay-piece, as seen at 11, Fig. 7, which is thus securely fastened down instead of being left loose, (see Fig. 6,) as is the case where there is no independent feed for the stay-piece, as heretofore. In entering

the stay-piece between the plates B C it is pushed forward until its front end is even with the front end of the spring-plate C, the slots *g g* being sufficiently far back to insure the teeth *e* of the feed catching into the under side of the stay-piece when in this position. On the upper surface of the needle-plate B is a block or projection, *h*, having its sides rounded, as seen in Figs. 1 and 4, and in this projection is formed the slot or throat for the passage of the needle. In running the line of stitches the operator presses the seam tightly against one side or the other of the projection *h*, which thus acts as a guide to insure the stitches being run in a straight line, while it also causes the stay-piece to hug close up to the seam as required.

*Claim.*

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

An independent feeding device for the stay-piece *e*, in combination with the needle-plate B and spring-plate C, substantially as and for the purpose set forth.

Witness my hand this 17th day of May, A. D. 1872.

WILLIAM A. SPRINGER.

In presence of—

W. A. ALLEY,

W. W. WOODARD.