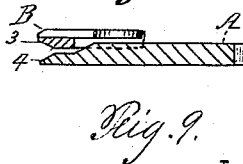
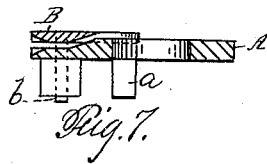
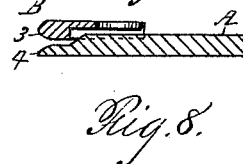
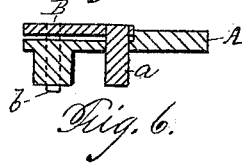
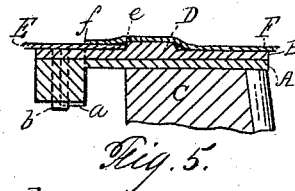
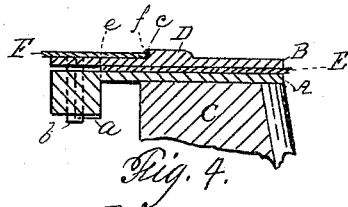
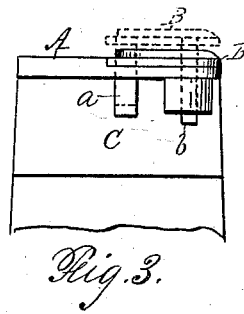
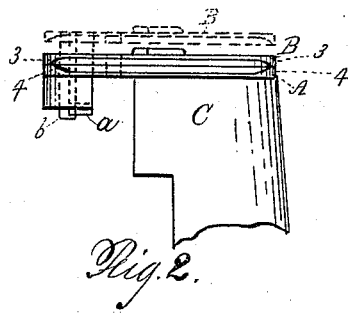
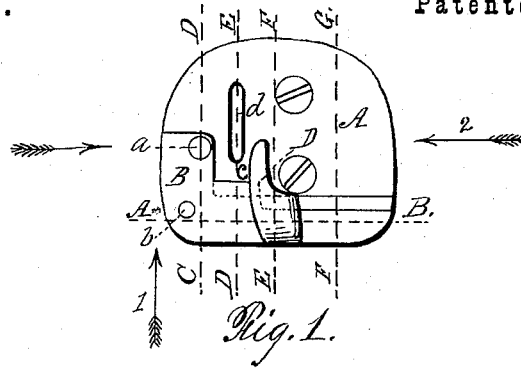


W. A. SPRINGER.

SELF-ADJUSTING GUIDES FOR SEWING LAP-SEAMS IN SEWING-MACHINES.

No. 169,860.

Patented Nov. 9, 1875.



WITNESSES;

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# UNITED STATES PATENT OFFICE.

WILLIAM A. SPRINGER, OF MARLBOROUGH, MASSACHUSETTS.

## IMPROVEMENT IN SELF-ADJUSTING GUIDES FOR SEWING LAP-SEAMS IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 169,860, dated November 9, 1875; application filed July 19, 1875.

*To all whom it may concern :*

Be it known that I, WILLIAM A. SPRINGER, of Marlborough, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Self-Adjusting Guides for Sewing Lap-Seams in Sewing-Machines, and which is particularly adapted to the manufacture of boots and shoes; 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 a part of this specification, and in which—

Figure 1 represents a top or plan view of my said improved guide. Fig. 2 represents a front view. Fig. 3 represents an end view. Fig. 4 represents a section on line A B, Fig. 1, looking in the direction of arrow 1, when the guide is in use for sewing a lap seam. Fig. 5 represents a section on the same line, when the guide is used for sewing the second row of stitches in a lap-seam, as will be hereafter explained; and Figs. 6, 7, 8, and 9 represent vertical sections on line C D, D E, E F, and F G, respectively, looking in the direction of the arrow 2, Fig. 1, as will be hereafter more fully explained.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it more in detail.

In the drawings, the part marked A represents the stationary part of the guide, and B the movable part. The part A is shown secured to the top of a post, C, similar to the post used in the well-known machine called the "New England wax-thread sewing-machine," while the movable part B has two pins, *a* and *b*, which project downward and pass through holes in the stationary part A, made for that purpose. The front inner edges of the parts A and B are beveled off, as shown at 3 and 4, Figs. 2, 3, 8, and 9, for the purpose of facilitating the introduction and passage of that portion of the work which is fed forward between the two guide-pieces A and B. The movable piece B is provided upon its upper side with a guide or projection, D, having a shoulder, *c*, rounded off, as fully indicated in Fig. 1, while the stationary part A has a long

slot, *d*, for the passage of the perforating awl and needle in the usual manner.

The operation of sewing a lap-seam upon a sewing-machine, provided with one of my self-adjusting guides, is as follows: The two pieces, sections of which are shown at E and F, which are to be sewed together, are first placed in the machine, as indicated in Fig. 4, so that the piece E will be fed forward between the parts A and B, with its edge *e* bearing against the edge of the guide-pin *a*, while the part F will be fed forward above the movable part B of the guide, with its edge *f* bearing against the shoulder *c* of the guide or projection D, all as indicated in Fig. 4 of the drawings, and as the work is fed forward over the needle-hole *d* a row of stitches will be formed, and the parts E and F will be stitched together near the edge *f* of the part F, while the edge *e* of the part E will extend some distance under the part F. The operator allows the two pieces to be fed forward and stitched together, as above described, until the piece E has passed entirely under the movable guide-piece B, when he quickly turns the work (momentarily stopping the machine) end for end, so that both pieces of the work will be fed back over the top of the movable guide-piece B, which drops down as soon as the material passes from under it, with the edge *e* of the piece E bearing against the shoulder *c* of the guide-piece D, as indicated in Fig. 5 of the drawings, whereby a second row of stitches is formed near the edge *e* of the part E, and at the desired distance from the other row of stitches, whereby the parts are securely stitched together by means of two rows of stitches at the desired distance apart, and from the edges *e* and *f* of the parts E and F. The part A is recessed or cut out, so that when the part B drops down, as shown in Fig. 5, after the first row of stitches has been formed, the top of the part B will be flush with the top surface of the part A, the guide-piece D only projecting above the surface of the part A.

In Figs. 2, 3, and 5 the part B is shown in full lines dropped down, so as to rest upon the part A, while in Figs. 4, 6, 7, 8, and 9 the part B is shown elevated as it appears when one portion of the material is being run under the

movable part B of the guide. If desired, the part A may be so made as to receive right and left handed pieces B, in which case all the operator would have to do would be to slip out a right-handed piece and insert a left-handed piece, B, as occasion required. In Figs. 2 and 3 the adjustability of the piece B is indicated by dotted lines.

This feature of my invention enables the guide part B to readily adjust itself in sewing material which varies in thickness, since, when a thick part of the material passes under the part B, the latter rises, but falls again when a thinner portion of the material is reached, it being open on three sides for the passage of the bottom piece.

Those skilled in the art, particularly in manufacturing shoes by machinery, will readily appreciate the practical advantages and importance of my invention, since it enables the operator to sew a lap-seam, with two rows of stitches, by the use of a single-needle machine, in a very uniform and perfect manner, and that, too, without any addition to the machine, which interferes materially with the ordinary sewing of single rows of stitches, or with the sewing of the second row of stitches in a lap-seam, since the parts A and B of the guide are so constructed that when the guide is used for sewing ordinary work, or the second row in a lap-seam, the work in reality rests upon a flat table, the upper surface of the parts A and B being in the same horizontal plane.

In case the operator does not wish to use the guide-piece D, the guide-piece B can be quickly removed from the stationary plate A,

the pins *a* and *b* being slipped out of their guide-holes in the part A, which latter then answers the purpose of a common sewing-plate.

In sewing lap-heel seams to shoes the operator commences at the bottom and ends at the bottom, the turn being made at the top with one or more stitches between the two parallel lines or rows of stitching, thus leaving the top of the shoe in a neat and finished condition. My said guide is also well adapted for use in sewing lap-seams by machines having two needles.

Having described my improved guide for sewing lap-seams, what I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

1. The combination, with the stationary part A of the guide, of the movable part B, substantially as and for the purposes set forth.

2. The combination, with the parts A and B, of the guide-pin *a* and guide shoulder *c*, substantially as and for the purposes set forth.

3. In machinery for sewing a lap-seam in the manufacture of boots and shoes, a guide-piece, having on its upper side a guide for the upper part of the work, and on its under side a guide for the lower part of the work, said guide-piece being open on three sides for the passage of the lower part of the work, and self-adjusting to conform to the inequalities thereof, substantially as set forth.

WILLIAM A. SPRINGER.

Witnesses:

THOS. H. DODGE,  
EDWIN E. MOORE.