

A. STEWARD.

RUFFLING ATTACHMENT FOR SEWING MACHINES.

No. 80,371.

Patented July 28, 1868.

Fig. 1.

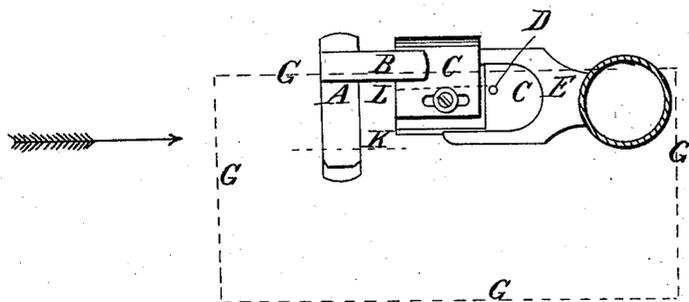
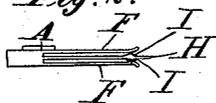


Fig. 2.



Witnesses:

John H. Lawrence

C. L. Norton

Inventor:

A. Steward

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A. STEWARD, OF PLANO, ILLINOIS.

Letters Patent No. 80,371, dated July 28, 1868.

IMPROVEMENT IN RUFFLING-ATTACHMENT FOR SEWING-MACHINES.

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, A. STEWARD, of Plano, in the county of Kendall, and State of Illinois, have invented a new and useful Improvement in Guides for Rufflers 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 a part of this specification, and to the letters of reference marked thereon.

Figure 1 is a top view of the cloth-presser of a sewing-machine, with a ruffler and the guide attached.

Figure 2 shows a view of the guide as seen from the arrow, fig. 1.

Parts lettered as follows:

A, guide; B, connecting-arm; C C, ruffler; D, needle-hole; E, cloth-presser of a sewing-machine; F F, lips of guide; H, tongue; I I, friction-points.

I make my guide of three thin strips of metal or other suitable material, placed one above the other.

Between these strips, near one end, I insert two pieces of metal, and then secure the three strips and the said inserted pieces all firmly together, by soldering or otherwise, thus forming what I call the body of the guide, while the three strips form the prongs, with the two interstices between them. These interstices are of sufficient width to allow the cloth to pass freely, except at the point hereafter described. The two outside prongs, F F, I term lips, and the centre one, H, a tongue. Upon each side of the tongue H, and near its point, is a small prominence, as shown at I I, which I term friction-points, of sufficient height to nearly or quite come in contact with their approximate lips, to insure a suitable amount of friction upon the cloth at this point, in its passage through the guide. The same result may be attained by any other device, such as attaching these prominences to the lips, or by incurvating the lips at the point in question, to bring them to proper proximity to the tongue. But whatever the form may be, the cloth must be allowed to pass freely through the interstices, except at this point. The necessity for two interstices in this guide arises from the fact that, in ruffling, two pieces of cloth are used, one of which must travel faster than the other, thus requiring separate tracks, as, if both passed through the same interstices, both would move together by their friction upon each other.

I now connect this guide to the ruffler C, by means of the arm B, as shown in fig. 1, (or the upper lip, arm B, and that part of the ruffler to which it is attached, may be made of one piece.) Its relation to the ruffler is now such that when two pieces of cloth are passed through the interstices in the guide, their edges may pass far enough beyond the needle-hole D to insure a sufficient depth of seam.

Now it is known that if a small piece of cloth be placed beneath the cloth-presser of an ordinary sewing-machine, and the machine is put in motion, the action of the feeding-apparatus will move the cloth, unobstructed, forward in a straight line; but if resistance be placed upon the cloth, upon the right-hand side, to retard it at that point, the approaching cloth will be inclined towards the left. I take advantage of this principle and operation in the adaptation of my guide to its work.

Now suppose two pieces of cloth are inserted into the two interstices described, and underneath the cloth-presser, in the position indicated by the space within the dotted lines G, and motion be given to the machine, the cloth is propelled by the feed beneath it, under the dotted line L, in the direction of the arrow.

Now, in its passage through the guide, the cloth passes without perceptible hindrance, except at the friction points I I, and the position of this friction, which is indicated by the dotted line K, being at the right, in reference to the forward movement of the cloth, of the feed-line L, the tendency is to swing the cloth which is approaching the needle, towards the left, and widen the seam, but the body of the guide prevents its going too far. The friction of these points is made only sufficient to incline the edge of the cloth to run in contact with the body of the guide, and not enough to disturb the proper feeding. Thus the draught of the feeding-apparatus, in connection with the friction at the line K, keeps the cloth properly in the guide, and secures a perfect seam without the touch of the operator.

This guide is useful in sewing an ordinary seam, (in which case it can be adapted to any machine, and one of the lips be dispensed with, and both pieces of cloth be passed through one opening, as with other guides,

but in ruffling, where one thickness of the fabric moves faster than the other, thus rendering the guiding difficult, it becomes a necessity.

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

In combination with the presser-foot and the ruffling-attachment, the guide A, having the lips, tongue, and friction-points, substantially as described.

A. STEWARD.

Witnesses:

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C. L. NORTON.