(No Model.) 2 Sheets—Sheet 1.

L. E. ELLSWORTH.

REVERSIBLE BINDING ATTACHMENT FOR SEWING MACHINES.

No. 296,396. Patented Apr. 8, 1884.

Fig. 1.

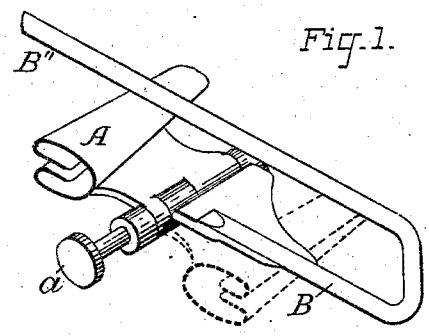


Fig. 2.

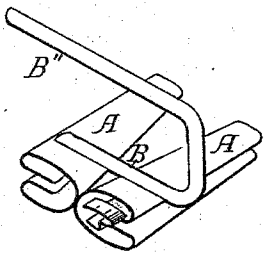
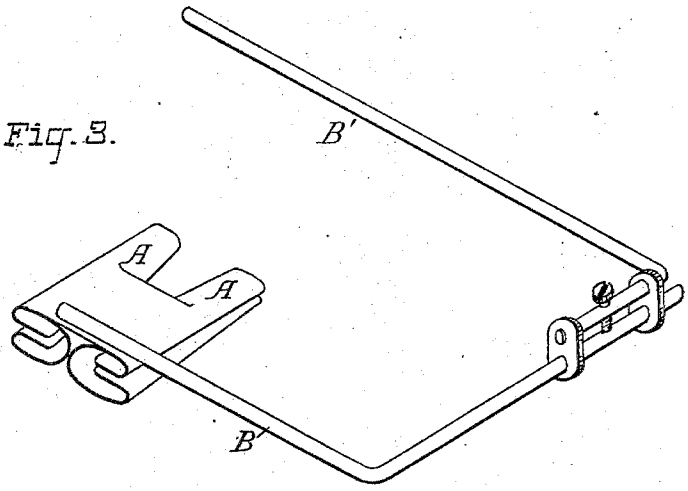


Fig. 3.



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(No Model.) 2 Sheets—Sheet 2.

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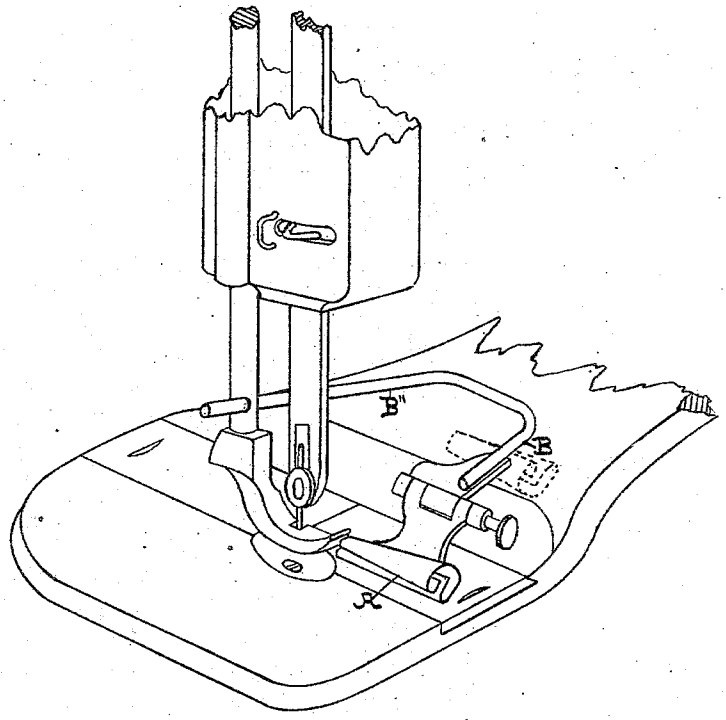

Fig-4-

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UNITED STATES PATENT OFFICE.

LYNDES E. ELLSWORTH, OF WILTON, NEW YORK.

REVERSIBLE BINDING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 296,396, dated April 8, 1884.

Application filed August 13, 1880. (No model.)

To all whom it may concern:

Be it known that I, LYNDES E. ELLSWORTH, a citizen of the United States, residing in the town of Wilton, in the county of Saratoga and State of New York, have invented a new and useful Improvement in Reversible Binding Attachments for Sewing-Machines, of which the following is a specification.

My invention consists in constructing a binding attachment for sewing-machines in such a manner as to present the scroll-guide in two positions, or in reverse order, that the operator may attain two different results without changing or removing the attachment from the sewing-machine.

Referring to the drawings, Figure 1 represents my improvement with a hinged joint for reversing the position of the guide. Fig. 2 represents my improvement with two guides in reversed position upon one holder. Fig. 3 represents Fig. 2 with an adjustment in the arm of the same. Fig. 4 represents a perspective view of the guide applied to a sewing-machine.

A represents the ordinary scroll binding guide, which is provided with a shank, B, by which it is held upon the sewing-machine, also for securing the same adjustably in position.

In Fig. 1 of the drawings I have represented the attachment with a hinged connection at a point represented at *a*. This hinged connection enables the operator to change or reverse the position of the binding-guide A without removing the same from the sewing-machine, thus enabling the operator to bind material in the usual manner. By reversing the position of the guide from that shown in full lines to that shown in dotted lines the operator is enabled to bind the edge, or put a braid or other facing upon the edge of a skirt without the necessity of rolling up the dress, as is required when the binding-guide is applied to the machine in the usual way. This enables the operator to fold the facing over the seam.

In Fig. 2 of the drawings I have illustrated my improvement in a modified form, showing two guides arranged upon one shaft or holder adapted to be used for binding material in the same manner as described as the functions of Fig. 1, although it is more expensive and less convenient in many respects than the former.

Fig. 3 is the same as Fig. 2, with the exception of the arm or holder, which is provided with a sliding and turning joint for variable adjustment, and for the additional purpose of affording an elastic movement to enable it to act with the feed, yielding at the proper moment to prevent kinking, thereby insuring a smooth surface and finish to the bound part. The elasticity of this arm is sufficient when formed of stiff wire of a suitable diameter. A suitable form and proportionate size is shown in the drawings. The arms B′ and B″, for connection with the sewing-machine, are held by socket, plate, or other suitable means in the proper position.

It has been found in practice oftentimes that when binding is applied upon the edge of goods with or through the action of the binding attachment and the sewing-machine a wrinkled surface upon the binding appears, which is caused by the irregular strain upon the attachment and strip while fed through and its inability to yield to the combined action of the feed of the machine and guide when required. By making the arm or holder of the binding-guide yielding it will yield the required amount to the action of the feed, thereby insuring a smooth surface instead of a wrinkled one. The cause of the wrinkle referred to is in consequence of the feed of the machine moving the under part of the strip passing through the binding-guide faster than the upper part of the fold, in consequence of the friction caused by the folding process, and in consequence of its receiving no aid other than from the feed-dog below, while by my improvement the elasticity of the arm permits of a yield toward the needle and in the direction of the feed at the proper time, so that the needle is enabled to secure the same in position before the backward movement of the guide with the feed in its retreat. In each of the three forms shown a guide is presented facing inwardly or outwardly, as needed. Where a double guide is employed, as in Figs. 2 and 3, there is a guide facing permanently in each direction. In Fig. 1 the guide may be turned so as to face inwardly or outwardly, as needed.

Having thus set forth my invention, what I claim as new, and desire to secure by Letters Patent of the United States of America, is—

1. A binding attachment for sewing-machines, consisting of a supporting-rod adapted to be adjustably secured to the presser-bar above the bed-plate, and in a line at right angles to the path of the needle, a scroll guide or guides, and means whereby the opening or mouth of the said guide or guides may be presented to either the outer or inner side of the needle-path, substantially as described.

2. In a binding attachment for sewing-machines, the combination, with a suitable support, of a hinged binding-guide adapted to be adjusted to reverse positions, substantially as described, and for the purpose set forth.

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