L. L. ALMOND.

STRIP FOLDING GUIDE FOR SEWING MACHINES.

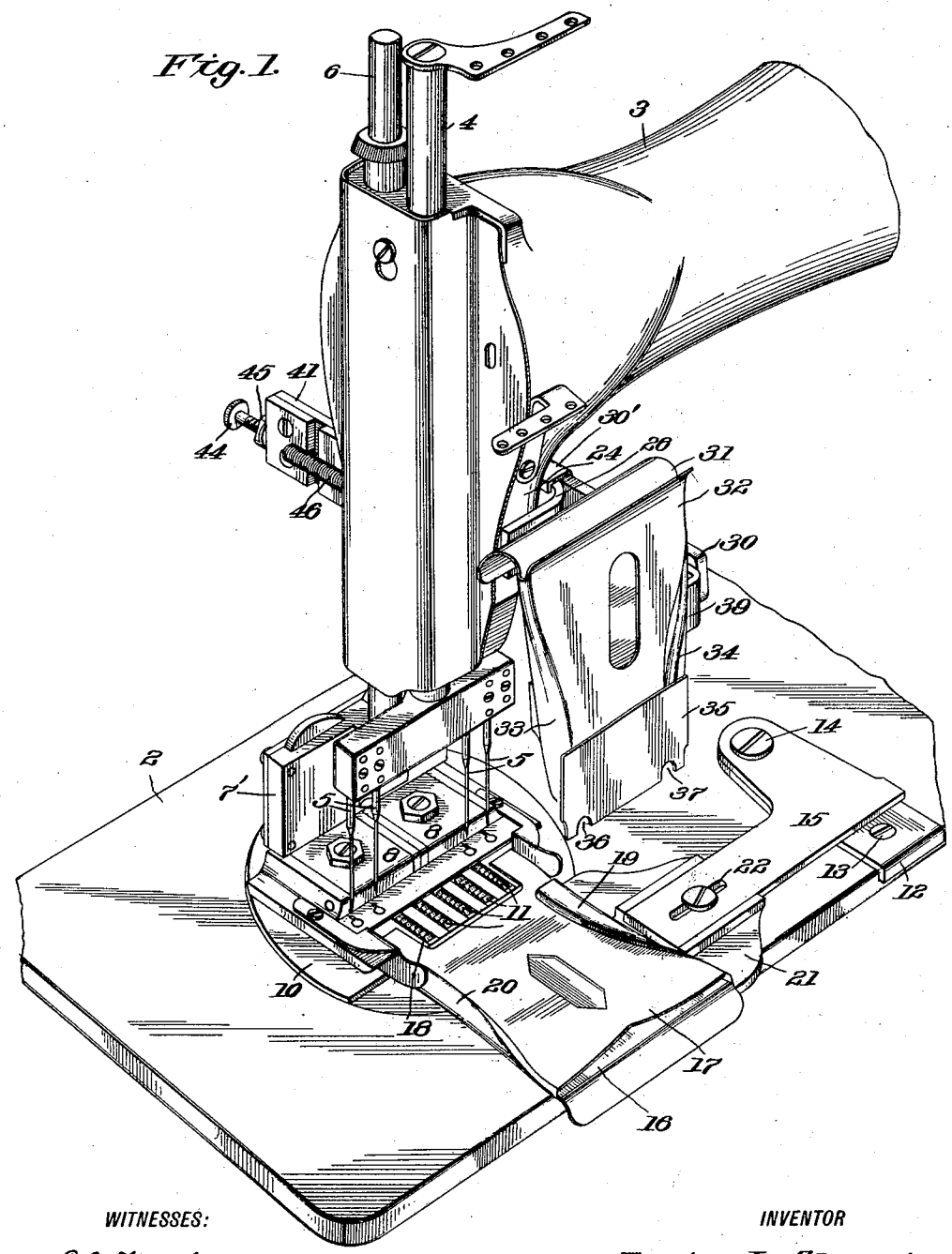
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1,201,423.

Patented Oct. 17, 1916.

4 SHEETS—SHEET 1.

Fig. 1.



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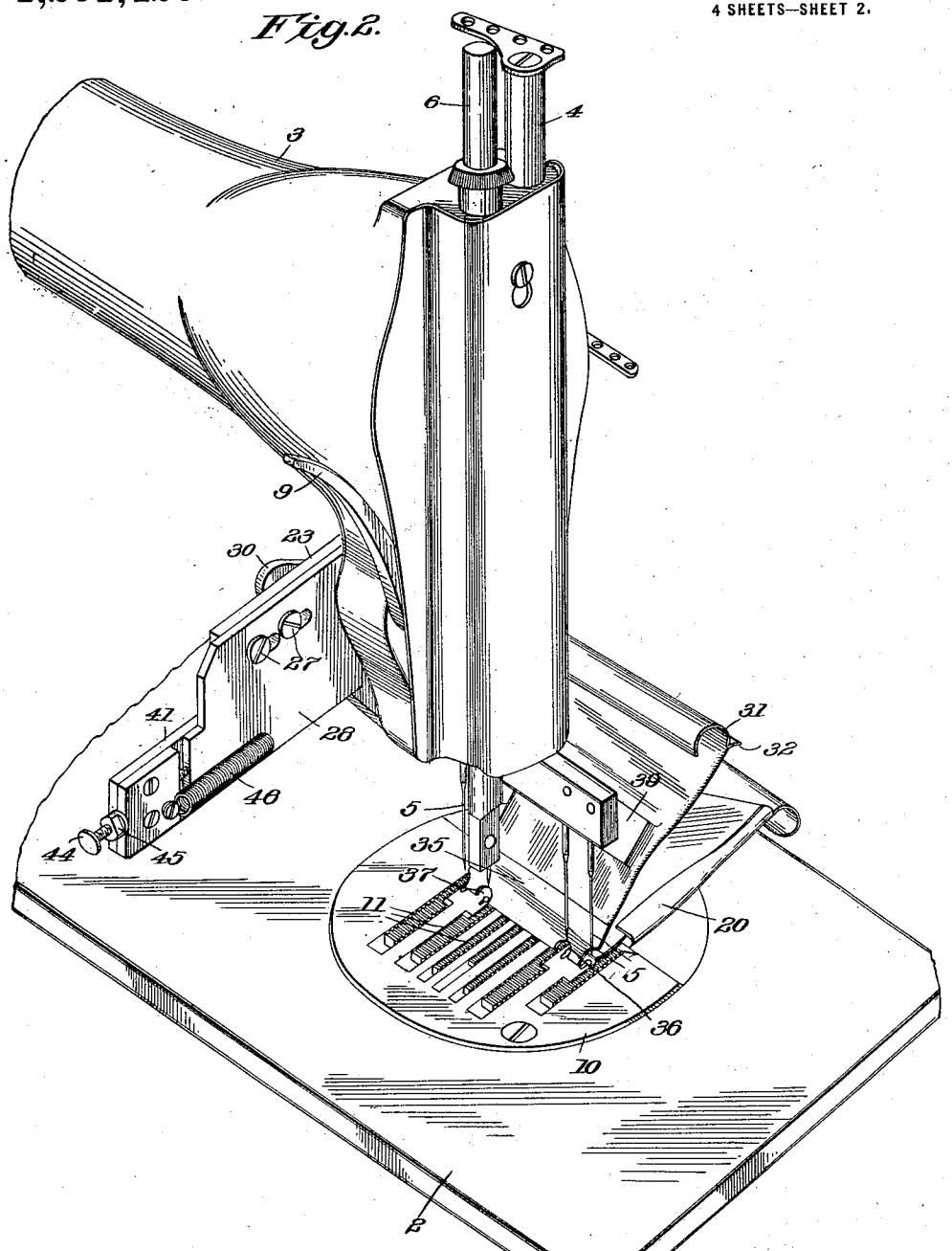
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4 SHEETS—SHEET 2.

Fig. 2.



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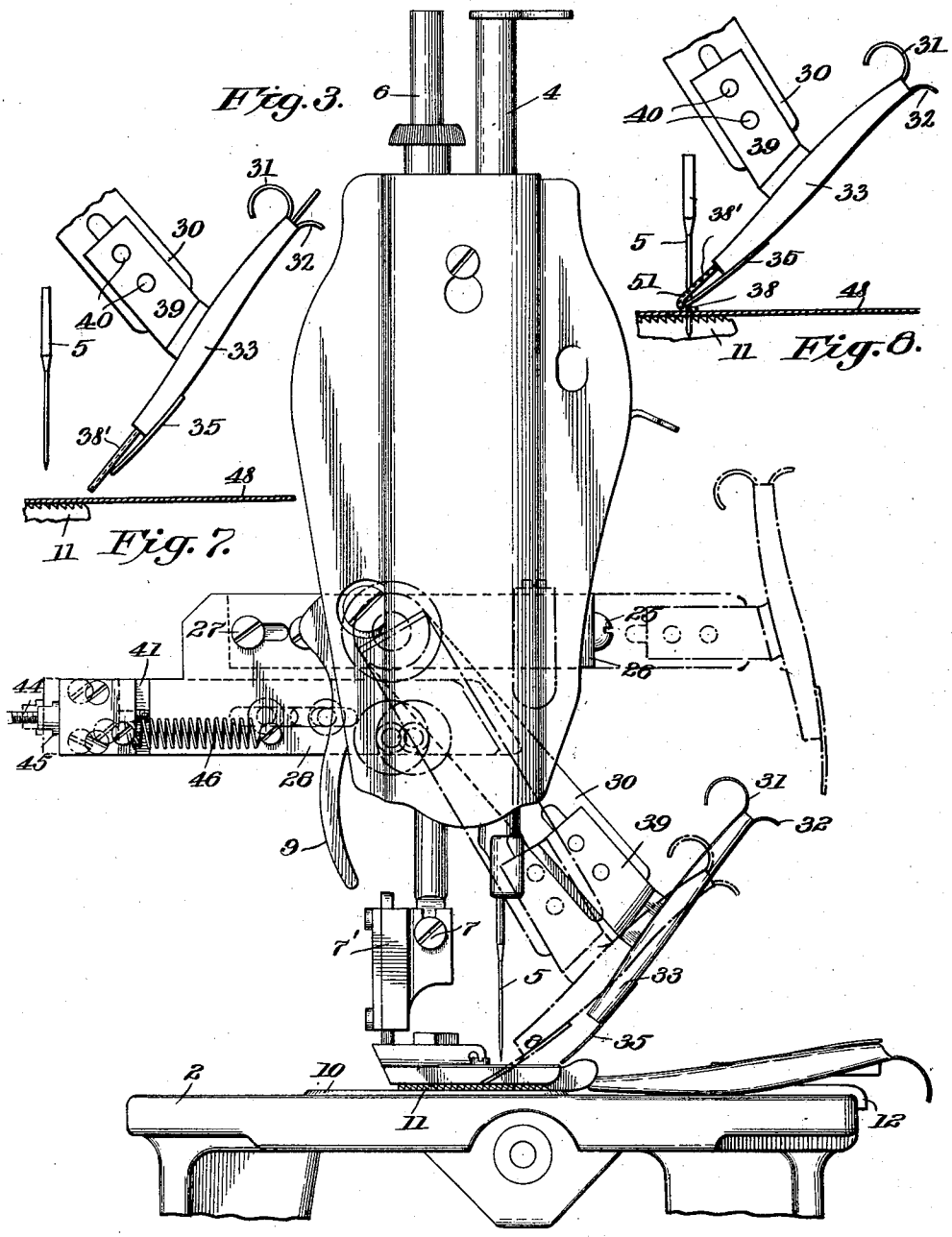
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4 SHEETS—SHEET 3.



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4 SHEETS—SHEET 4.

Fig. 4.

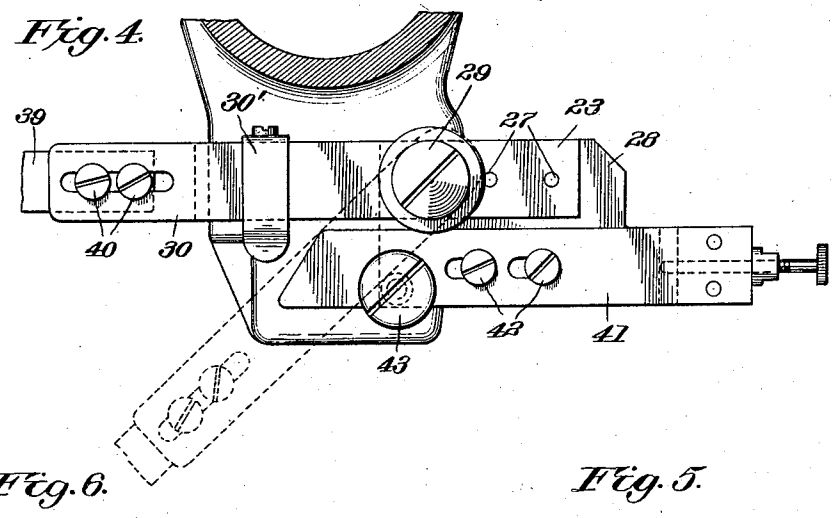


Fig. 6.

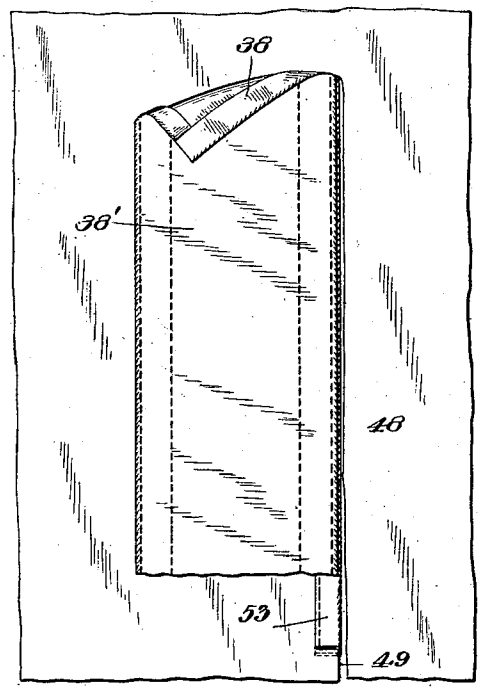
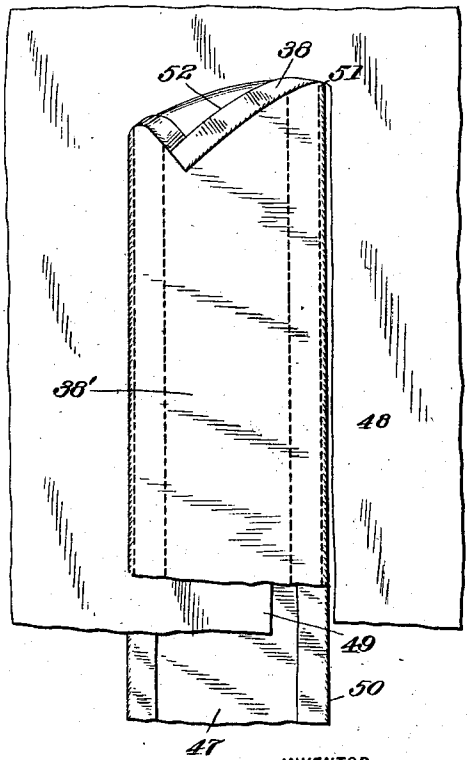


Fig. 5.



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UNITED STATES PATENT OFFICE.

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STRIP-FOLDING GUIDE FOR SEWING-MACHINES.

1,201,423. Specification of Letters Patent. Patented Oct. 17, 1916.

Application filed January 24, 1912. Serial No. 673,225.

To all whom it may concern:

Be it known that I, LESTER L. ALMOND, a citizen of the United States, residing at Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Strip-Folding Guides for Sewing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in strip folding and guiding attachments for sewing machines, and has to do primarily with folding and presenting facings or button and buttonhole strips to the action of the stitch-forming mechanism in the manufacture of men's and women's garments, particularly those made of knit fabric.

The feature most important to the present invention is the construction and control of the vertically movable strip-folding guide, which consists of a single instrument or device pivotally suspended from the sewing machine bracket arm, and which not only effects the folding of the oppositely arranged longitudinal edges of the facing strip but also the folding and positioning of the end or cross fold, thus providing a construction more simple and cheaper than the earlier devices for effecting a like product, and more convenient means for positioning the cross fold in effective relationship with the stitch-forming mechanism.

The invention is shown as applied to a well-known Singer 52 class commercial sewing machine, but as it relates mainly to the construction and control of the means employed for folding and presenting a facing strip to the action of the stitch-forming mechanism, only such reference will be made to the other elements of the machine as is deemed necessary for a proper understanding of its application.

In the accompanying drawings illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a perspective view, in front side elevation, of a portion of the bracket arm and bed-plate of a sewing machine equipped with the present invention. Fig. 2 is a perspective view, in rear side elevation, similar to Fig. 1 except that the cloth-pressers are omitted to better illustrate the positions of the delivery ends of the strip-folding guides when moved into effective relationship with the needles. Fig. 3 is a front end elevation of Fig. 1. Fig. 4 is a view in elevation of the strip-folding-guide-carrying bracket, together with that portion of the head of the bracket arm to which said carrying bracket is secured. Fig. 5 is a view of one variety of product effected by the present invention. Fig. 6 is a view similar to Fig. 5, but showing the raw edge of the knit fabric bound and only an upper facing or buttonhole strip employed. Fig. 7 a detatil, illustrating the position of the vertically movable strip-folding guide when directing a fabric strip to the action of the stitch-forming mechanism, and Fig. 8 a detail, illustrating the position of the vertically movable strip-folding guide and its fold positioning element when presenting the end fold of a facing strip to the action of the needles.

Referring to the figures, 2 represents the sewing machine bed-plate, 3 the bracket arm, 4 a needle-carrying bar provided with needles, as 5, 6 a cloth-presser-carrying bar to which are connected by screw 7 and bracket 7′ cloth-pressers, as 8, 9 a cloth-presser-carrying bar lifting lever, 10 a needle or work-supporting plate, and 11 serrated feed-dogs.

12 represents a bracket secured by screw 13 to the sewing machine bed-plate, and pivotally secured thereon by a screw 14 is a strip-folding-guide-carrying arm 15 provided with a horizontally arranged strip-folding guide comprising lower and upper guiding plates 16 and 17, respectively, the latter of which has formed in its delivery end a notch 18 to better accommodate the action of the feed-dogs 11, said strip-folding guide being provided with right and left hand edge-folding guides 19 and 20.

21 represents a strip-folding guide shank suitably secured to said strip-folding guide, and adjustably secured to said strip-folding-guide-carrying arm by screw 22.

A bracket base plate 23 is secured to the head 24 of the bracket arm by screws 25 (one only of which is shown, see Fig. 3) which pass through a transversely arranged portion 26 and are threaded into said head. A bracket plate 28 is adjustably secured to the base-plate 23 by

screws, as 27, and also secured to said base plate by a pivot screw 29 is a strip-folding guide-carrying lever 30, the latter being held in its elevated position by a spring catch 30′ and provided with a vertically movable strip-folding guide comprising oppositely arranged guiding plates 31, 32, oppositely arranged edge folding portions 33, 34, and a rigidly secured fold-positioning element 35, the free end of which latter is provided with notches 36, 37, which permits a cross fold 38 of the facing strip 38′ to be positioned so as to be pierced by the descending needles.

Suitably secured to the vertically movable strip-folding guide is a strip-folding guide shank 39 which is also secured to the strip-folding guide-carrying lever 30 by screws, as 40. A fabric guide stop bar 41 is slidably secured by screws, as 42, to the bracket plate 28 and provided with a stop screw 43, adjusting screw 44 and check nut 45, a spring 46 acting to hold said stop bar in its forward or normal position with the strip-folding guide in the position illustrated in full lines Fig. 3.

To effect the product represented by Fig. 5, supposing the cloth-pressers to occupy their elevated positions, the facing strip 47 is placed in the horizontally arranged strip-folding guide in the usual manner and drawn through sufficiently to bring its free end in effective relationship with the stitch-forming and fabric-feeding mechanisms, the body fabric 48 is positioned beneath the needles with its edge 49 slightly back from the edge 50 of said facing strip and in position to commence the stitching operation at the point 51, followed by placing the facing strip 38′ in the vertically movable strip-folding guide with its free edges in the edge folding portions 33 and 34 and with its free end 52 overlapping the notches 36 and 37 sufficiently to form the cross fold 38, as shown in Fig. 8 said vertically movable guide is manually adjusted from the position shown in full lines Fig. 1 to that shown in Fig. 2, which causes the free end 52 to come in contact with said body fabric and form the fold 38 as shown in Fig. 8, the element 35 carrying said fold in line with the vertically movable needles, when the cloth-pressers are permitted to take their effective positions.

As the needles descend into the fabric to commence the stitching operation, the spring 46 positions the vertically movable guide as shown in full lines Fig. 3, in which position it remains until the facing strips have been secured to the opposite sides of the body fabric, after which said vertically movable guide is manually returned to the position illustrated in Fig. 1, the horizontally arranged guide moved outward and the facing strips severed from the body fabric at a point which leaves sufficient of each strip extending through the respective guides to commence the facing of the garment next to be operated upon.

To effect the product represented by Fig. 6 from which the facing strip 47 is omitted, the edge 49 is first finished with a binding 53, after which the facing strip 38′ is folded, guided and secured as when effecting the product represented by Fig. 5.

Claims:—

1. In a strip-folding and guiding attachment for sewing machines, the combination with a work-support and a vertically movable strip-guide, of a fold-positioning member carried by and rigid with respect to said strip-guide for laying a fold across the end of a facing strip, said strip-guide adapted to be manually moved for placing the said fold-positioning member in effective relationship with the stitching mechanism and means for automatically withdrawing the same from said position and returning the strip-guide to its strip guiding position with respect to the stitching mechanism.

2. In a strip-folding and guiding attachment for sewing machines, the combination with a work-support and a vertically movable strip-guide, of a fold-positioning member carried by and rigid with respect to said strip-guide for laying a fold across the end of a facing strip, said strip guide adapted to be manually moved, in opposition to resilient means, for placing the said fold positioning members in effective relationship with the stitching mechanism, said resilient means acting to withdraw the same from said position and to return the strip-guide to its strip guiding position with respect to the stitching mechanism.

3. In a strip-folding and guiding attachment for sewing machines, the combination with a work-support and a vertically movable strip-guide, of a fold positioning member carried by and rigid with respect to said strip-guide for laying a fold across the end of a facing strip, and provided with notches for the passage of the needles, said strip-guide adapted to be manually moved for placing the said fold-positioning member in effective relationship with the stitching mechanism and means for automatically withdrawing the same from said position and returning the strip-guide to its strip guiding position with respect to the stitching mechanism.

4. In a strip-folding and guiding attachment for sewing machines, the combination with a work-support and a vertically movable strip-guide, of a fold-positioning member carried by and rigid with respect to said strip-guide for laying a fold across the end of a facing-strip, said strip-guide adapted to be manually moved for placing the said

fold-positioning member in effective relationship with the stitching mechanism and means for automatically withdrawing the same from said position and returning the strip-guide to its strip-guiding position with respect to the stitching mechanism, and a horizontally movable strip-guide coacting with said vertically movable strip-guide and fold-positioning member for folding facing strips and presenting them to the opposite sides of a body fabric.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

LESTER L. ALMOND.

Witnesses:

JAMES M. SNYDER,

FRANK J. NEHREN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."