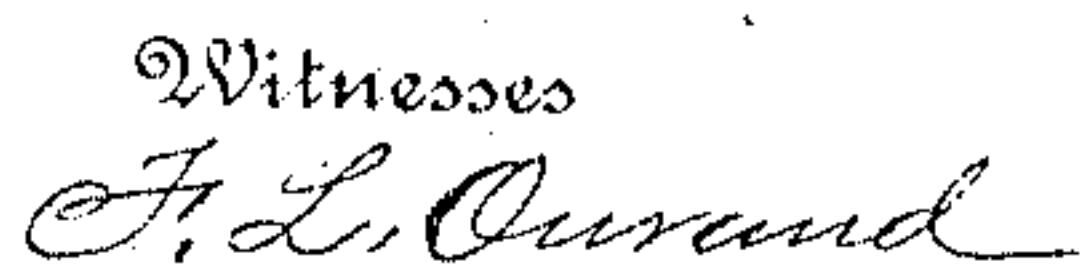


FOLDING AND GUIDING MECHANISM FOR SEWING MACHINES.

APPLICATION FILED AUG. 31, 1904.

Patented Aug. 3, 1909.

2 SHEETS--SHEET 1.



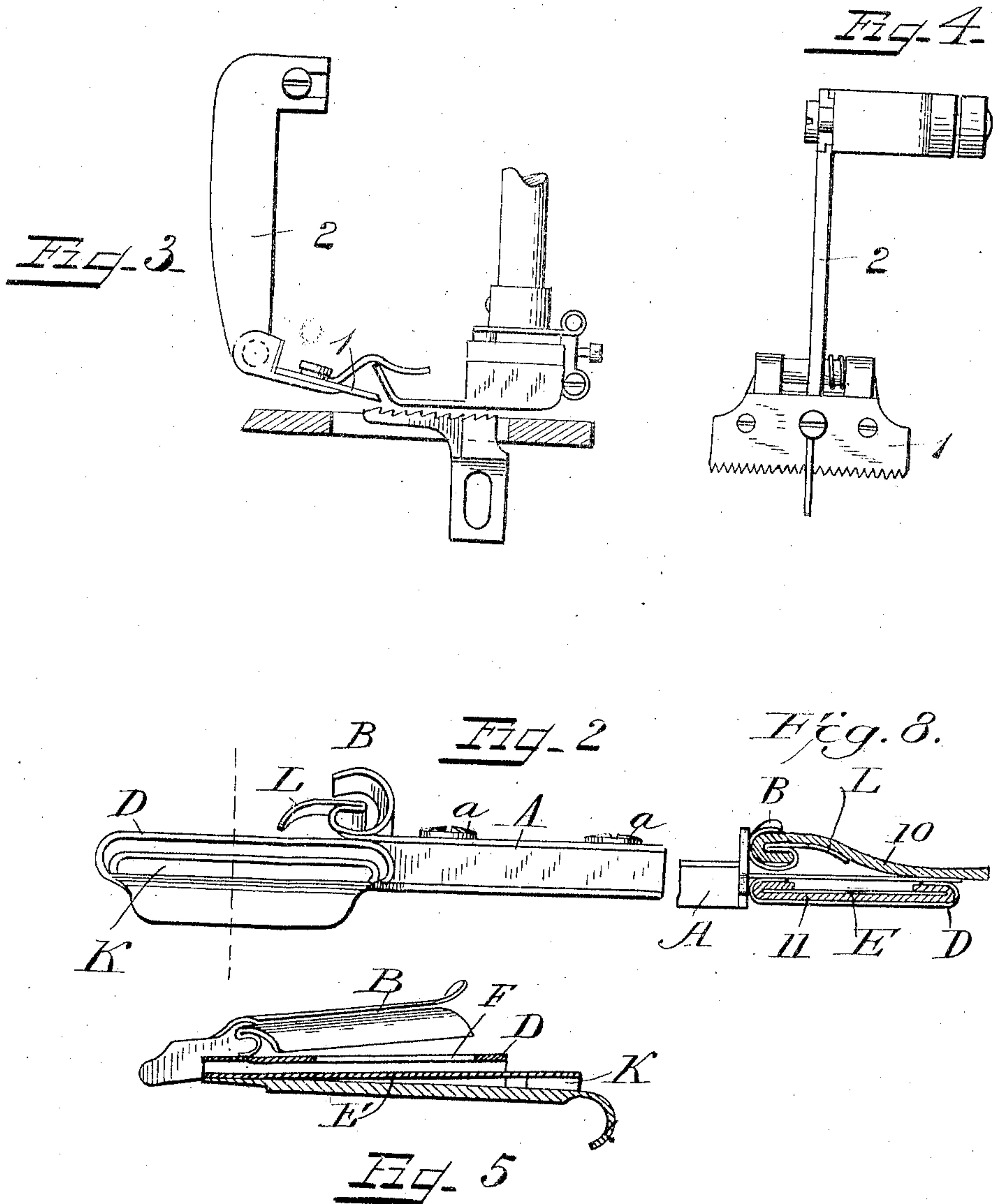
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UNITED STATES PATENT OFFICE.

CHESTER McNEIL, OF CHICAGO, ILLINOIS, ASSIGNOR TO UNION SPECIAL MACHINE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

FOLDING AND GUIDING MECHANISM FOR SEWING-MACHINES.

No. 929,692.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed August 31, 1904. Serial No. 222,796.

To all whom it may concern:

Be it known that I, CHESTER McNEIL, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Folding and Guiding Mechanism for Sewing-Machines, of which the following is a description, reference being had to the accompanying drawing and to the letters and figures of reference marked thereon.

My invention relates to an improvement in folding and guiding arrangements for sewing machines, adapted to cooperate with an auxiliary feeding mechanism, such as shown and described in an application for patent, Serial No. 222,795 filed by James R. Moffatt August 31, 1904. The only point of distinction between this mechanism and the one referred to, is that the auxiliary feeding blade is extended laterally across the space between and in front of the two needles, and the blade acts across the face of the goods between the needles, to lay the elastic knitted fabric flat, and without wrinkles or distortion, as would be the case were not an auxiliary feeding device employed to overcome the draw of the fabric incident to its being guided by the operator, folding device, etc. In connection with this mechanism, I employ a folding guide to guide and fold in advance of the sewing operation, two pieces of fabric, the top piece of which is knitted or elastic fabric, and which is operated upon by the auxiliary feed, and has one of its edges folded downward and inward upon the second fabric. The second piece of fabric has both its edges folded upward and inward against the top piece of fabric, one of the needles passing through the folded edge of the top and bottom fabric, and the opposite needle passing through one thickness of the body fabric, and through the folded portion of the bottom piece, to form the button hole strip upon the front of a knitted skirt.

The invention consists in the matters hereinafter described and referred to in the appended claims.

The invention is illustrated in the accompanying drawings, in which,

Figure 1 is a front perspective view of a

portion of a sewing machine, showing the folding and guiding mechanism attached; Fig. 2 is a front view of the folding guide; Fig. 3 is a sectional detail view of the presser foot and feeding mechanism, taken from the right of the head of the machine; Fig. 4 is a detail view of the feeding device; Fig. 5 is a sectional side view of Fig. 2; Fig. 6 is a perspective view of the fabrics sewed on the machine; and Fig. 7 is a sectional view of the same. Fig. 8 is a view of the delivery end of the guide showing the fabric therein.

In these drawings, the feeding device or blade 1 is carried on the lower end of an arm 2, which is adjustably attached to the bracket 3, clamped on the lower end of the bar or rod 4, which is pivoted on a plate 5, attached to the head of the machine, and connected to the needle bar by means of the connection 6, so that in the upward movement of the needle bar, the feeding device reciprocates back and forth.

The guide used with the machine is provided with a suitable base A, upon which is attached by a suitable screw, *a*, the scroll B, to fold downwardly and inwardly the edge of the top piece of material 10 it having a forwardly projecting arm C to keep the folded edge properly directed to the right hand needle. The lower folding guide D is provided with a tongue E, as shown in Fig. 5 to properly guide and fold a strip of material 11, turning upwardly and inwardly both edges thereof. The outer edge of the fold in the strip is substantially below the outer edge of the fold in the body piece of material, although in practice it is sometimes desirable to have the bottom right hand inwardly and upwardly turned edge slightly inside the edge of the top folded edge, as shown in Fig. 7, in order that the strip or facing material may be concealed from view when the garment is exposed for sale.

The lower folding guide is provided with a slot F, for the purpose of threading the strip through the guide. The upper folding guide B is mounted above the lower folding guide D, and has its delivery end *c* in front of the delivery end of the lower guide, thus forming a space for the operation of the

auxiliary feeder. The presser foot G, is provided with an auxiliary bearing surface *d*, on the side under which passes the increased thickness of material. This is necessary in a machine of this kind to hold the fabric in proper position upon the main feed dog to feed both sides of the seam evenly.

The operation of my device will be obvious. The strip of material 11 is led through the opening K in the guide D underneath the tongue E. The guide D tapers toward its forward end, and, therefore, as the strip approaches the forward end of the guide, it will be folded up over the edges of the tongue E on to the upper surface thereof, as clearly shown in Fig. 8. The tongue E is spaced from the sides of the guide D, and thus forms a guiding recess or passage at each side of the guide D, which causes the folding above referred to. The tongue E presses the strip against the bottom portion of the guide, and places, therefore, a slight tension thereon. The top piece of material is led into the scroll B over the supporting ledge L. Said scroll B has a folding recess B', which turns the edge of the material underneath the body portion thereof. As clearly shown in Fig. 8, the folded edge of the top piece of material is positioned substantially over the folded edge of the strip, and as the strip and folded top piece of material pass to the stitching mechanism, they will be stitched together, as shown in Figs. 6 and 7.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is—

1. In a two needle machine, a work support, stitch-forming mechanism including two needles, a main feeding device, an auxiliary feeding device located and operating above said work support, a guiding member having folding recesses at each of its side edges, a guiding member located above said first named guiding member and having a folding recess at one side thereof, the folding recess in the upper guiding member being substantially over one of the folding recesses in the lower guiding member and cooperating therewith to direct the folded edges of the material in a line adjacent one of said needles; substantially as described.

2. In a two needle machine, a work support, stitch-forming mechanism including two needles, a main feeding device, an auxiliary feeding device located and operating above said work support, a guiding member having folding recesses at each of its side edges, a guiding member located above said first named guiding member and having a folding recess at one side thereof, the folding recess in the upper guiding member being substantially over one of the folding recesses in the lower guiding member, and

cooperating therewith, to direct the folded edges of the material in a line adjacent one of said needles, said guiding members being adjustably attached to the work support; substantially as described.

3. In a two needle machine, a work support, stitch-forming mechanism including two needles, a main feeding device, an auxiliary feeding device located and operating above said work support, a guiding member having folding recesses at each of its side edges, a guiding member located above said first named guiding member and having a folding recess at one side thereof, the folding recess in the upper guiding member being substantially over one of the folding recesses in the lower guiding member and cooperating therewith to direct the folded edges of the material in a line adjacent one of said needles, said lower guiding member having a threading slot extending longitudinally thereof; substantially as described.

4. In a two needle machine, a work support, stitch-forming mechanism including two needles, a main feeding device, an auxiliary feeding device located and operating above said work support, a guiding member having folding recesses at each of its side edges, a guiding member located above said first named guiding member and having a folding recess at one side thereof, the folding recess in the upper guiding member being substantially over one of the folding recesses in the lower guiding member and cooperating therewith to direct the folded edges of the material in a line adjacent one of said needles, and means for guiding the folded edges from said guiding members to said needles; substantially as described.

5. In a two needle machine, a work support, stitch-forming mechanism including two needles, a main feeding device, an auxiliary feeding device located and operating above said work support, a guiding member having folding recesses at each of its side edges, a guiding member located above said first named guiding member and having a folding recess at one side thereof, the folding recess in the upper guiding member being substantially over one of the folding recesses in the lower guiding member and cooperating therewith to direct the folded edges of the material in a line adjacent one of said needles, said guiding members being adjustably attached to the work support, and means for guiding the folded edges from said guiding members to said needles; substantially as described.

6. In a two needle machine, a work support, stitch-forming mechanism including two needles, a main feeding device, an auxiliary feeding device located and operating above said work support, said auxiliary feeding device including a feeding blade extending across the space between said needles, a

guiding member having folding recesses at each of its side edges, a guiding member located above said first named guiding member and having a folding recess at one side thereof, the folding recess in the upper guiding member being substantially over one of the folding recesses in the lower guiding member and cooperating therewith to direct the folded edges of the material in a line ad-

jacent one of said needles; substantially as 10 described.

In testimony whereof I affix my signature, in presence of two witnesses.

CHESTER McNEIL.

Witnesses:

CHAS. E. JOHNSON,

HELEN GILLIS.