March 2, 1926. 1,575,453

A. SHUTZER

SEWING MACHINE ATTACHMENT

Filed Feb. 7, 1924 2 Sheets-Sheet 1

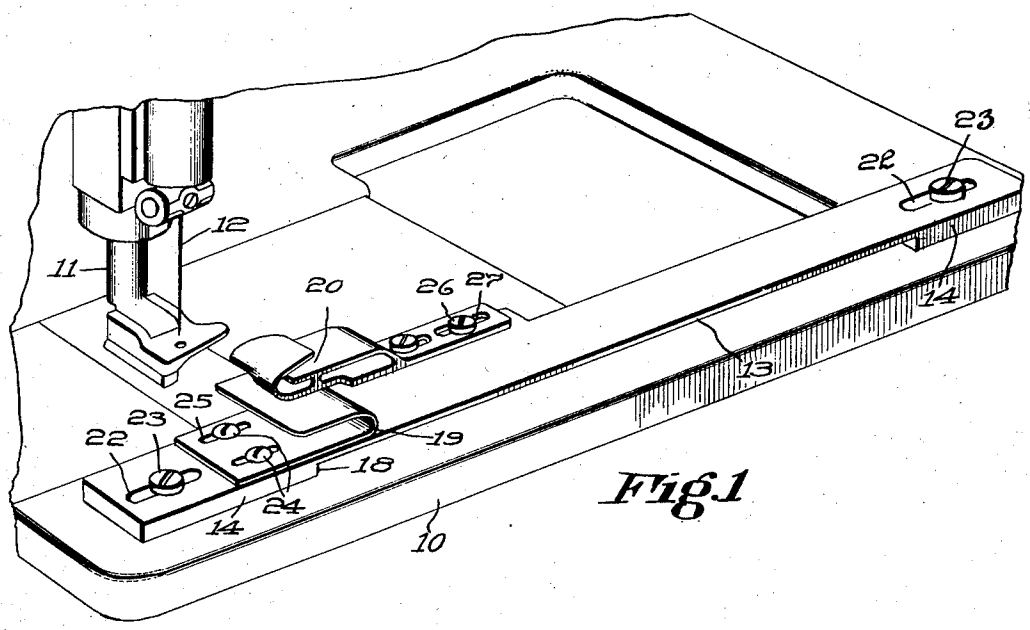


Fig. 1

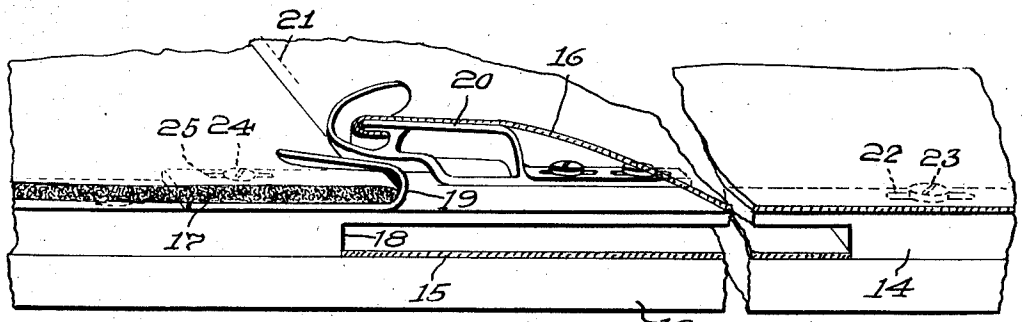


Fig. 2



Fig. 3

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Fig. 4

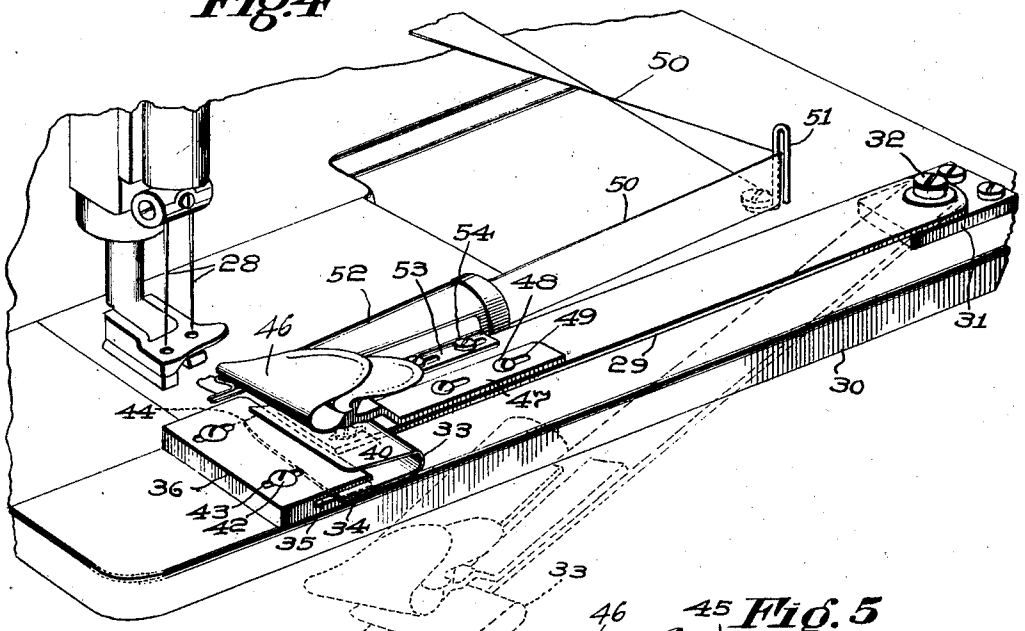


Fig. 5

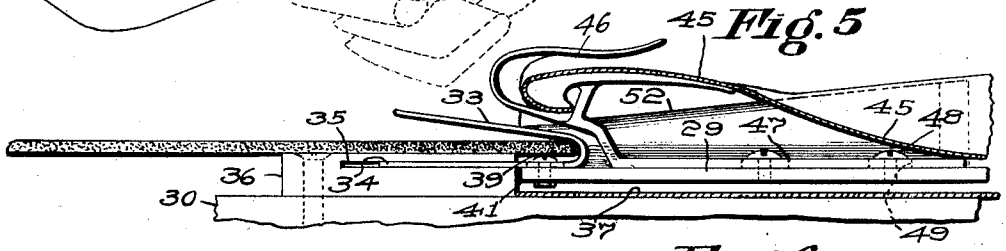
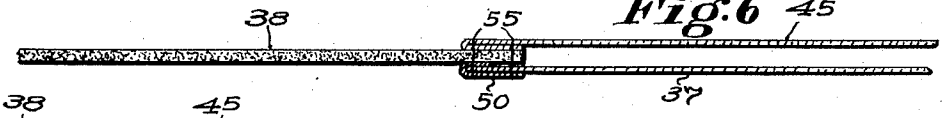


Fig. 6



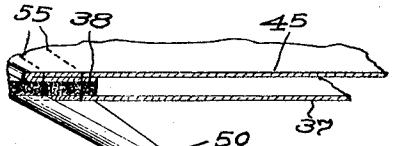


Fig. 7

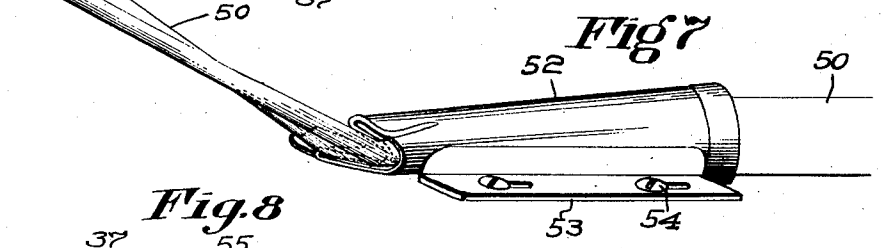
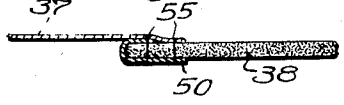


Fig. 8



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Patented Mar. 2, 1926. 1,575,453

UNITED STATES PATENT OFFICE.

ARTHUR SHUTZER, OF BOSTON, MASSACHUSETTS.

SEWING-MACHINE ATTACHMENT.

Application filed February 7, 1924. Serial No. 691,130.

To all whom it may concern:

Be it known that I, ARTHUR SHUTZER, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Sewing-Machine Attachments, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to sewing machine attachments for guiding a plurality of sheets of material to the needle, and more particularly to an attachment for performing certain operations in making sheepskin lined coats.

These coats are extensively worn, and as usually constructed have the back and sides of the garment lined with sheepskin, while the front portion of the garment, which is provided with the buttons and button-holes or other fastening means, is usually provided with a double cloth lining. One sheet of the double lining, known as interlining, and which is not exposed in the finished garment, is commonly formed of a heavy, coarse material, and the second sheet, which forms the exposed lining of the front portion of the coat, is usually formed of heavy cotton goods.

In making sheepskin coats having the lining above mentioned, the double front lining is sewed to the front marginal edges of the sheepskin along a substantially vertical line, and the marginal edge of the sheepskin is interposed between the marginal edges of the two sheets forming the front lining. Furthermore, the marginal edge of the inner front lining is usually turned under to hide and protect its raw edge.

Heretofore the sewing of the three pieces of material together in the manner above pointed out has been difficult and expensive, involving several different operations, each requiring the service of a skilled workman. The difficulty experienced in sewing the three sheets of material together is due to the fact that it is hard to handle the thick wool covered skin and at the same time maintain a second sheet in place upon the woolly face of the sheepskin, and it is also due to the fact that it is difficult to guide three sheets of material to a sewing machine needle so that the marginal edge of one sheet is secured between the oppositely extending marginal edges of two other sheets.

The present invention is therefore directed to a sewing machine attachment which is constructed to guide three relatively wide sheets of heavy material, such as the lining of a sheepskin coat, to a sewing machine needle, so that the three sheets are sewed together in a single operation with the marginal edge of one sheet secured between the oppositely extending marginal edges of the other two sheets.

One important feature of the present invention resides in a bridge bar supported in spaced relation to the bed plate of the sewing machine so that one sheet of material may be fed under the bridge bar to the needle while a second sheet of material positioned over the first is supported in spaced relation thereto by the bridge bar as the sheets are fed to the needle.

Another feature of the invention resides in guides associated with the bridge bar to guide the different sheets of material to the needle, and in their arrangement by which the marginal edge of one sheet is guided between the oppositely extending marginal edges of two other sheets.

Another feature of the invention resides in the arrangement by which the guides may be independently adjusted.

Still another feature of the invention resides in means for supporting the bridge bar so that it may be readily swung from its active to its inactive position.

Other features of the invention and novel combination of parts in addition to the above will be hereinafter described in connection with the accompanying drawings which illustrate good practical forms thereof.

In the drawings;

Fig. 1 is a perspective view of a portion of a sewing machine provided with the attachment of the present invention.

Fig. 2 is an enlarged perspective view of parts shown in Fig. 1 and with the sheet material shown in section.

Fig. 3 is a sectional view thru the sewed sheet material.

Fig. 4 is a perspective view of a modification of the invention applied to a sewing machine.

Fig. 5 is an enlarged front view of parts

shown in Fig. 4, the sheet material being shown in section.

Fig. 6 is a vertical sectional view thru the sewed sheet material of Fig. 5,

Fig. 7 is a perspective view of tape applying mechanism, and

Fig. 8 is a vertical sectional view thru the sheets of material showing a different sewing operation.

The attachment of the present invention may be applied to various types of sewing machines employing either one or two needles, and although designed more particularly for use in the manufacture of coats, it may be used for other purposes where several pieces of relatively wide heavy material are to be sewed together with their marginal edges in overlapping relation.

Referring more particularly to Figs. 1, 2 and 3, 10 is the bed plate of a sewing machine of any well known construction having the usual presser foot 11 and needle 12.

Secured to the bed plate 10 in front of the needle 12 is the bridge bar 13 of the present invention. The opposite ends of the bridge bar are provided with blocks or are thickened as at 14 to support the intermediate portion of the bar in spaced relation to the bed plate 10 so that a sheet of fabric 15, such as the interlining sheet above mentioned may be fed under the bridge bar to the needle 12.

The bridge bar 13 serves to support a second sheet of material 16, such as the sheet above mentioned, as forming the exposed lining of the front part of the coat, positioned over and in spaced relation to the sheet 15 so that either sheet may be moved laterally independent of the other sheet as it is guided towards the needle. If a marginal portion of a third sheet of material 17 such as sheepskin is to be sewed between the sheets 15 and 16 it may be easily introduced between these two sheets due to the construction of a guide, to be described, which serves to raise the marginal portion of the sheet 16 so that the marginal portion of the sheet 17 may be easily placed between the other two sheets, as will be apparent from Fig. 2, and also from Fig. 3, where the sheet 17 is shown as sewed between the sheets 15 and 16.

It is desirable to provide a guide for each sheet of material so that the sheets will be guided properly to the needle, and the shoulder 18 of the bridge bar forms a guide for the edge of the material 15. A U-shaped guide 19 secured to the upper face of the bridge bar serves to guide the sheet 17 to the needle, and the guide 20 for the sheet 16 is supported in spaced relation to the bridge bar, as shown, to clear the guide 19 and to raise the marginal portion of the sheet so that the sheet 17 may be introduced under the sheet 16, as above pointed out. The guide 20, in the construction shown, is formed to fold the marginal edge of the sheet 16 under as it is guided to the needle, so that the edge of this sheet will be turned under, as shown in Fig. 3.

It may be desirable to vary the position of the stitch 21 with respect to the edge of each sheet 15, 16 and 17 and it is therefore desirable to provide means by which each guide 18, 19 and 20 may be adjusted relative to the needle 12. In the present case the guide 18 is adjusted by adjusting the bridge bar 13 upon the bed plate 10 in the direction of its length and this is accomplished by providing each end of this bar with an elongated slot 22 thru which the securing bolt 23 extends. The guide 19 is adjustably secured to the bridge bar by screws 24 extending thru slots 25, and the guide 20 is adjustably secured to the bridge bar by screws 26 extending thru slots 27. The guide 20 is the only one shown as adapted to fold the edge of the material but it will be understood that the other guides may be similarly formed if desired.

As a result of the attachment described three relatively wide sheets of fabric or other material may be easily and accurately fed to the sewing machine needle, and since the sheets are supported in spaced relation they may be independently shifted to their proper position, and the location of the edge of each sheet relative to its guide may be watched during the sewing operation.

Referring to the modification of Figs. 4 to 7 inclusive, it may be desirable to mount the bridge bar so that it can be readily swung from the operative to the inoperative position and it may be desirable to fold a strip of tape over the edge of one of the sheets of fabric. In Fig. 4 the sewing machine is shown as provided with two needles 28, and the bridge bar 29 is supported at one end in spaced relation to the bed plate 30 by a block 31, and the bridge bar is swingingly secured to the block by a bolt 32. The opposite end of the bar 29 is supported by the guide 33 secured to the bar and having a blade portion 34 that enters the slot 35 formed in the block 36. The arrangement is such that the blade portion 34 will slide into the slot 35 as the bridge bar is swung from the position shown in dotted lines in Fig. 4 to the full line position, and it is supported in spaced relation to the bed plate so that the sheet of material 37 may pass under this bar to the needles 28 similar to the construction shown in Fig. 1. The guide 33 serves to position the edge of the material 38 relative to the needles, and it is adjustably secured to the end of the bridge bar by screws 39 mounted in slots 40.

An edge 41 of the block 36 serves to guide the sheet 37 to the needles, and in order that the guide may be adjusted the block

is adjustably secured to the bed plate by screws 42 extending thru slots 43. The plate 34 that extends into the slot 35 is sufficiently long to allow for relative adjustment of the parts, and while the bridge bar is in its active position the blade abuts against a rear shoulder 44.

The sheet 45 that rests upon the bridge bar is provided with a guide 46 supported in spaced relation to the bridge bar, similar to the guide 20. The guide 46 is constructed to fold the marginal edge of the sheet 45 under as shown, and it is supported by an arm 47 adjustably secured to the bridge bar by screws 48 entering slots 49. When the bridge bar 29 is not needed it may be readily swung about the pin 32 to the inoperative position, or it may be swung to this position to permit the guides to be readily freed from lint and threads that may lodge therein.

It may be desirable to place a strip of tape over an edge of one of the sheets fed to the needles and to this end a strip of tape 50 drawn from a source of supply passes thru the guide 51 to a folding tube 52 which folds the tape in the form of a V and places the folded tube tape over the edge of the sheet 37 as shown in Fig. 7.

The tube 52 may be approximately crescent shaped in cross section at its receiving end and the tape enters between the concave and convex walls of the tube. The folding tube is supported by a plate 53 adjustably secured to the bridge bar by screws 54.

From the foregoing it will be seen that the three sheets of material and the tape are accurately guided to the needles 28 and are secured together by the stitches 55.

In some operations it is desirable to omit the third sheet of material 45, in which case the inner edge of the relatively thick sheet 38 will be exposed. In this case it may be desirable to place the tape over the edge of the relatively thick strip 38 as shown in Fig. 8, and in carrying out this operation the bridge bar of Fig. 4 may be swung to its inoperative position. In sewing the material of Fig. 8 the position of the sheets 37 and 38 may be interchanged so that the folder 52 will place the tape 50 over the edge of the thick sheet 38, and as the sheets 37 and 38 reach the needles 28 the tape will be secured in place and the two sheets will be sewed together in a single operation.

From the foregoing it will be seen that as the several pieces of material such as shown in Fig. 6 are drawn toward the sewing machine needles by the usual sewing machine feeding mechanism, the attachment of the present invention will turn the edge of the upper sheet 45 under, fold the tape over the edge of the under sheet 37 and guide the three sheets 45, 37 and 38 to the needles with the marginal portion of the sheet 38 lying between the marginal portion of the sheets 45 and 37, so that the four different pieces of material if the tape is employed, on three pieces if it is omitted will be sewed together properly in a single operation. Heretofore this has necessitated several separate and independent operations and by using the attachment of the present invention so that the several operations may be performed simultaneously a large saving in labor and sewing machine equipment is secured.

What is claimed is:

1. In combination with a sewing machine, an attachment for guiding three relatively wide heavy portions of a coat to a sewing machine needle, comprising a relatively long bridge bar provided with supports at its ends for holding the bar spaced sufficiently from the base of the sewing machine to permit the passage of one relatively wide sheet of material under the bar to the needle while a second relatively wide sheet of material lying over the first is supported by the bridge bar in spaced relation to the first sheet, guides for the adjacent edges of said sheets, and a guide for guiding the opposite marginal edge of a wide sheet of sheepskin between said sheets so that the three sheets are sewed together with the marginal edge of the sheepskin extending between the marginal edges of the other two sheets.

2. In combination with a sewing machine, an attachment for guiding the marginal edge of one sheet of material between two other sheets, comprising a bridge bar supported in spaced relation to the sewing machine base plate so that one wide sheet of material may pass under the bridge bar to the sewing machine needle and a second wide sheet of material passing to said needle is supported by the bridge bar above and in spaced relation to the first sheet, a guide for each of said sheets, a third guide for guiding the opposite marginal edge of a third sheet between the marginal edges of the first and second sheets, means for pivotally supporting one end of the bridge bar so that it may be swung to and from its active position, and one of said guides being secured to the bridge bar to move therewith.

3. In combination with a sewing machine, an attachment for guiding the marginal edge of one sheet of material between two other sheets, comprising a relatively long bridge bar supported in spaced relation to the sewing machine base plate so that one wide sheet of material may pass beneath the bridge bar to the sewing machine needle and a second wide sheet of material passing to said needle is supported by the bridge bar above and in spaced relation to the first sheet, an upper guide for elevating the left-hand edge of the upper sheet to facilitate the introduction of the right-hand marginal edge of a third sheet between the

left-hand marginal edges of said spaced sheets, a lower guide for the left-hand edge of the lower sheet, and an intermediate guide for the right-hand edge of said third sheet.

4. In combination with a sewing machine, an attachment for guiding the marginal edge of one relatively wide sheet of material between two other relatively wide sheets, comprising a bridge bar of substantial length supported in spaced relation to the machine bed and constructed to support one of two relatively wide sheets of material above and in spaced relation to the other as the two sheets approach the sewing machine needle, guides positioned in vertically spaced planes and disposed so that the marginal edge of a third relatively wide sheet of material is guided between the oppositely extending edges of said two sheets as they approach the needle.

5. In combination with a sewing machine, an attachment for guiding the marginal edge of one sheet of material between two other sheets, comprising a bridge bar of substantial length supported in spaced relation to the machine bed and constructed to support one of two sheets of material above and in spaced relation to the other as the two sheets approach the sewing machine needle, guides positioned in vertically spaced planes and disposed so that the edge of a third sheet of material is guided between the oppositely extending edges of said two sheets, and adjustable means for securing the guides in different positions of adjustment.

6. In combination with a sewing machine, a bridge bar of substantial length supported in spaced relation to the machine bed and constructed to support one of two pieces of material above and in spaced relation to the other as the two pieces approach the sewing machine needle, guides positioned in vertically spaced planes and disposed so that the edge of a third piece of material is guided between the corresponding opposite edges of said two pieces, and means for folding a strip of tape and placing it over the edge of one of said pieces of material in front of the needle.

7. In combination with a sewing machine, a long bridge bar supported in spaced relation to the base of the sewing machine to hold an upper sheet of material above and in spaced relation to the lower of two sheets of material as the two sheets approach the sewing machine needle, a support for each end of said bar, a folder for folding the edge of one sheet of material under, means for spreading the marginal edges of said pieces of material to facilitate the introduction of the marginal edge of a third piece of material between the oppositely extending edges of said two sheets, and guides for guiding the different sheets of material to the needle with the marginal edge of the third sheet extending between the marginal edges of the two other sheets.

8. In combination with a sewing machine, an attachment comprising a bridge bar of substantial length supported in spaced relation to the machine bed and constructed to support one of two sheets of material above and in spaced relation to the other as the two sheets approach the sewing machine needle, guides positioned in vertically spaced planes and disposed to guide the edge of a third piece of material between the oppositely extending edges of said two sheets, and means for pivotally supporting one end of the bridge bar so that it may be swung from its active to its inactive position.

9. In combination with a sewing machine, an attachment for supporting and guiding sheet material, comprising a relatively long bridge bar supported in spaced relation to a base plate so that one wide sheet of material may pass beneath the bridge bar to the sewing machine needle and a second wide sheet of material passing to said needle is supported by the bridge bar in spaced relation to the first sheet, supporting blocks for the opposite ends of said bar, means for pivotally securing the bar to one block for swinging movement to and from its active position, interengaging means between the other block and bar for supporting the bar in its active position, and guides positioned in vertically spaced planes and disposed so that the edge of a third sheet of material is guided between the oppositely extending edges of said two sheets.

In testimony whereof, I have signed my name to this specification.

ARTHUR SHUTZER.