July 26, 1955 H. OSTER ET AL 2,713,686

PIPED OR BOUND BUTTONHOLES IN GARMENTS AND METHOD OF MAKING THE SAME

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FIG. 1

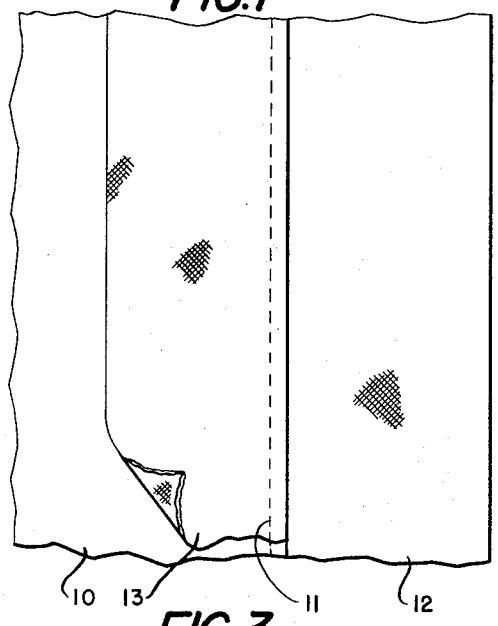


FIG. 2

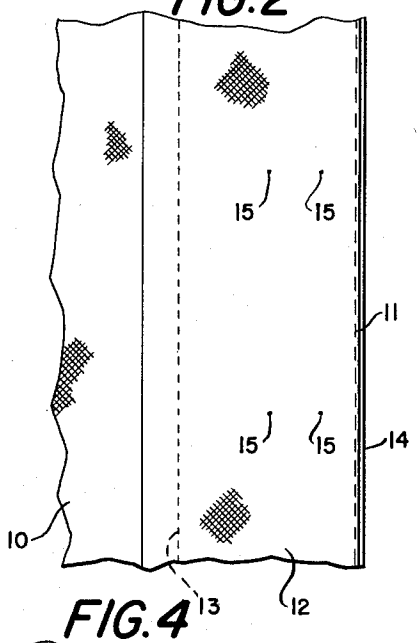


FIG. 3

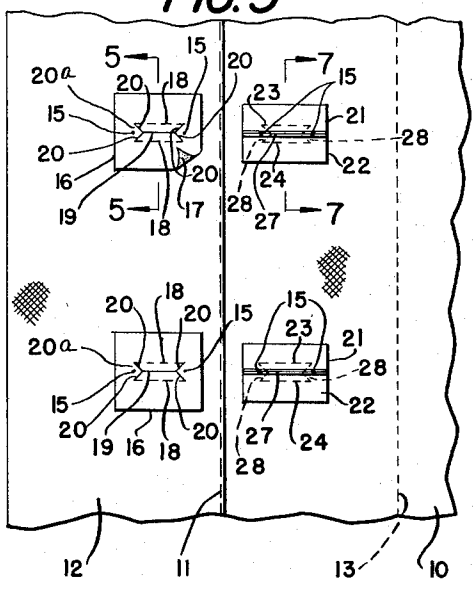
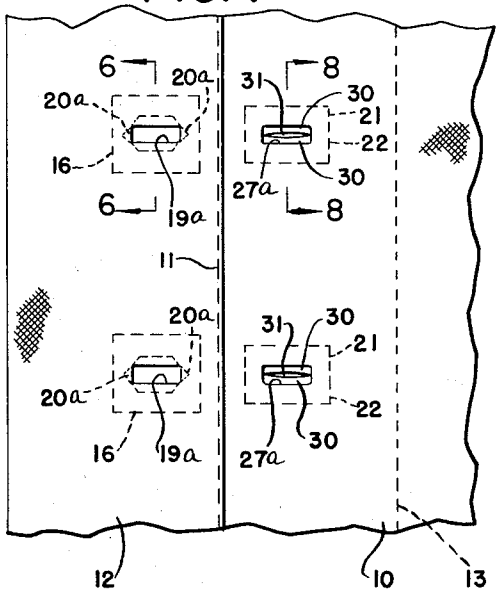


FIG. 4



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FIG. 5

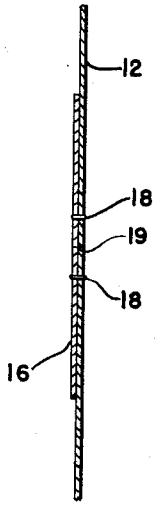


FIG. 6

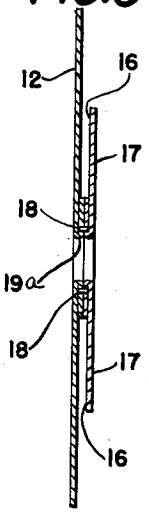


FIG. 7

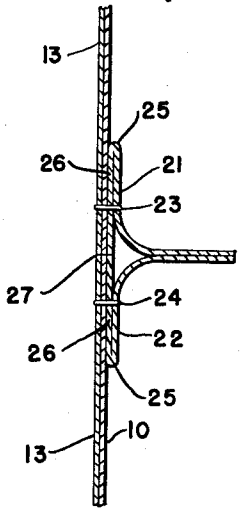


FIG. 8

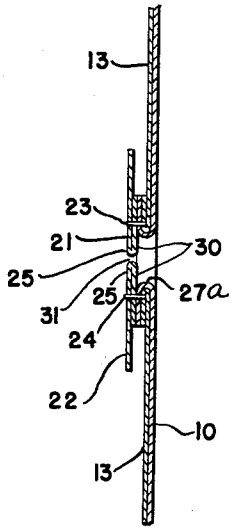


FIG. 9

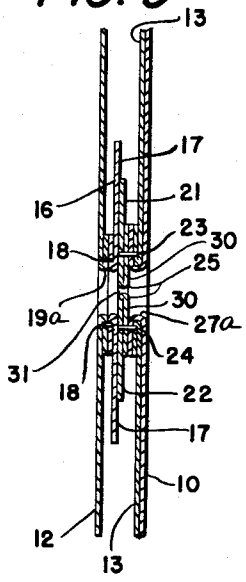
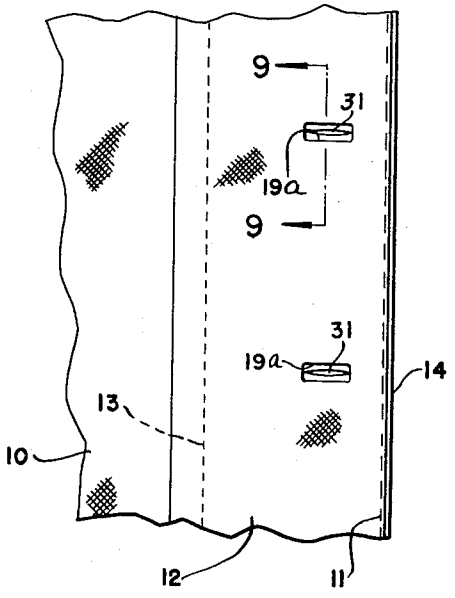


FIG. 10



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PIPED OR BOUND BUTTONHOLES IN GARMENTS AND METHOD OF MAKING THE SAME

Harold Oster, University Heights, and Joseph A. Marconi, Warrensville Heights, Ohio

Application January 7, 1953, Serial No. 330,056

8 Claims. (Cl. 2—266)

This invention relates, as indicated, to a method of making piped or bound buttonholes in garments.

In making piped or bound buttonholes in garments provided with a facing, it has heretofore been necessary to hand cut openings in the facing to match those cut in the front or exterior of the garment, thus necessitating hand turning of the raw edges in the facing and hand-sewing or basting of such edges to the button holes on the garment front.

Piped or bound buttonholes on garment fronts are made both by hand and by machines. Where made by machine, the operations of hand turning of the aforesaid raw edges and basting of such edges to the machine made buttonholes on the garment front require the services of large numbers of skilled hand sewing operators, in order to maintain pace with the machine operations or production.

The present invention has as its primary object the virtual elimination or reduction to a minimum of these hand sewing operations, whereby production of garments in large quantities necessitated by present competitive conditions, can be materially facilitated and speeded up.

Another object of the invention is to provide piped or bound buttonholes in garments, which, although produced almost entirely by machine operations, closely resemble hand-sewn buttonholes, thereby presenting an appearance in the garment indicative of garments selling at higher prices.

Other objects and advantages of the invention will become apparent in the course of the following description, taken in connection with the accompanying drawings, wherein like parts are designated by like numerals throughout, and wherein

Fig. 1 is a fragmentary elevational view showing portions of a garment, such as a dress, in which buttonholes are to be provided;

Fig. 2 is a view similar to Fig. 1, but with the facing folded or pressed back onto the front of the garment;

Fig. 3 is a view similar to Fig. 1, but of the obverse side of the garment, and showing buttonhole edging patches, strips or tapes, in a preliminary stage of the method;

Fig. 4 is a view similar to Fig. 3, but showing the buttonhole edging patches, strips or tapes, in their final position, as related to the garment;

Fig. 5 is a fragmentary cross-sectional view, taken on the line 5—5 of Fig. 3;

Fig. 6 is a fragmentary cross-sectional view, taken on the line 6—6 of Fig. 4;

Fig. 7 is a fragmentary cross-sectional view, taken on the line 7—7 of Fig. 3;

Fig. 8 is a fragmentary cross-sectional view, taken on the line 8—8 of Fig. 4;

Fig. 9 is a fragmentary cross-sectional view, taken on the line 9—9 of Fig. 10, and

Fig. 10 is a view similar to Fig. 2, but showing the completed buttonholes.

Referring more particularly to the drawings, reference

numeral 10 designates the front or body portion of a garment, such, for example, as a dress, and to which are secured, as by stitching 11, a facing 12, and an interlining 13. The facing 12 is customarily made of the same fabric as the front 10. The interlining 13 is liftable away from the front 10, as clearly shown in Fig. 1.

After the parts 10, 12 and 13 have been thus secured together, the facing 12 is pressed down upon the interlining 13 and body portion 10, so as to provide a finished or pressed edge 14 adjacent the line of stitching 11. This is commonly known as "forepressing the edge." As a result of such forepressing, the parts appear as shown in Fig. 2.

With the parts positioned as in Fig. 2, the location and length of desired buttonholes is marked, as by means of spaced dots or marks 15, these dots being applied as by any suitable marking material, and may be applied by a conventional machine provided for this purpose. In practice, the dots are applied to the front 10 (on the obverse face thereof, which is the reverse face from that shown in Figs. 1 and 2) the application being made in such a manner that the dots penetrate through the interlining 13 as well as the facing 12, so as to be visible on the facing, as shown in Fig. 2.

The facing 12 is then returned to the position shown in Fig. 1, and the garment is then reversed, that is to say, laid in the position shown in Fig. 3, with the parts in a relationship to each other which is the reverse of that shown in Fig. 1.

With the parts thus positioned, patches, strips or tapes 16, shown in this instance as of rectangular form, but not necessarily so, and made of an adhesive coated material, are laid over the buttonhole dots or marks 15, as shown in Fig. 3. The material may be paper, fabric, or any other substance capable of being coated with an adhesive. The adhesive is preferably a heat and pressure sensitive adhesive, and may be applied to both surfaces of the patch, but at least to the lower surface thereof, as indicated at 17 in Fig. 3. One such adhesive-coated material is available in the market in the form of a tape, known as Bondex. These patches 16 are attached to the facing 12 in any desired manner, and may, if so desired, be attached to the facing by parallel lines of stitching 18. This stitching can be performed on a machine which simultaneously slits the patches 16 as well as the facing 12. The slits are indicated by reference numeral 19, and are in line with the dots 15, terminating just short of these dots in divergent slits 20, which extend to the ends of the lines of stitching 18 and form substantially triangular areas 20*a* between the slits 20 and dots 15.

The piped or bound buttonholes in the front 10 are of conventional form, and may be made by conventional or known methods, or by any desired method. In this instance, by way of exemplification, pairs of longitudinally-folded tapes 21 and 22 are sewn to the front 10 and interlining 13, as by means of lines of stitching 23 and 24 respectively, these tapes occupying a relationship to the dots 15 as shown in Fig. 3. These tapes 21 and 22 may be made of any suitable fabric, and of any desired color. Reference to Fig. 7 shows that each tape is folded under, as at 25, to provide a portion 26 which extends substantially to the line extending between the dots 15. The machine which stitches the tapes 21 and 22 to the body 10 and interlining 13 simultaneously slits the body 10 and interlining 13, the slit being indicated by reference numeral 27 in Figs. 3 and 7, these slits being in line with the dots 15, and terminating short of these dots in divergent slits 28 similar to the slits 20. This method of attaching the tapes 21 and 22 and slitting is common practice in the making of machine bound or piped buttonholes, and no claim is made to the same per se.

The patches 16 are then pushed or turned through the

slits 19. In turning the patches through these slits, the triangular areas 20a are pushed or turned laterally to the position shown in Fig. 4, and the portions of the patches above and below the slits are respectively turned upwardly and downwardly, so as to form rectangular openings 19a, which provide the finished buttonholes in the facing 12. The adhesive 17, in this instance, is on the surface of the patch 16 remote from the facing 12 (see Fig. 6).

The tapes 21 and 22 are similarly pushed or turned through the slits 27 and are tacked to the triangular portions of the front 10 and interlining 13 between the slits 28 and the dots 15. In pushing or turning these tapes 21 and 22 through the slits 27, rectangular openings 27a are formed in the front 10 and interlining 13, as best shown in Figs. 4 and 8, these openings being similar in size and shape to the openings 19a and providing the buttonholes in the front 10 and interlining 13. However, the tapes 21 and 22, instead of being folded back completely, as are the patches 16, are folded in the manner shown in Figs. 4 and 8, to leave portions 30 thereof which form a button-receiving slit 31, the portions 30 providing a piping or binding for the openings 19a, which is to say, a binding or piping for the buttonholes which is visible through said openings.

Upon completion of the buttonholes, in the manner described, the facing 12 is again laid over the interlining 13 and front 10, thereby bringing adhesive face 17 of the strips 16 into juxtaposition with the adjacent faces of tapes 21 and 22, as shown in Fig. 9, and heat is then applied, in any desired manner, thereby causing the adhesive faces 17 to adhere to the adjacent faces of the tapes 21 and 22 and lining 13. This also results in a flattening of all of the parts, so that the combined thickness of all of the layers of material, shown greatly exaggerated in Fig. 9, is not substantially greater than the combined thickness of the parts 10, 12 and 13.

The adhesion of the patches 16 to the tapes 21 and 22 and lining 13 causes the facing 12 to lie closely to the front 10 and covers up any imperfections in the lines of stitching as well as loose fibres or fragments of the fabric which may have become loosened during the various operations. Any tendency of the patches 16 to pull away from the tapes 21 and 22 and lining 13 during use of the garment is easily remedied when the garment is pressed, since the adhesive 17, while primarily a heat-sensitive adhesive, also has pressure-sensitive qualities.

As best shown in Figs. 9 and 10, the rectangular openings 19a in the facing 12 are substantially wider than the buttonhole slits 31 formed by the adjacent edges of the portions 30 of the tapes 21 and 22, so that these portions 30 are visible through the openings 19a. It will be understood, however, that the openings 19a in the facing 12 may be of any desired width.

Production of piped or bound buttonholes in the manner described is primarily of advantage in that it avoids the necessity of hand-sewing and hand-cutting to complete a piped or bound buttonhole. This task has always been a formidable one, involving the use of a large number of skilled women or men adept at hand sewing, with its consequent large labor costs, as well as delays in production. By causing the patches 16 to adhere to the tapes 21 and 22 and lining 13 in the manner described, the strips 16 are automatically and permanently retained in position to form the openings 19a, without any hand sewing.

It is thus seen that we have provided a novel method of manufacturing piped or bound buttonholes which eliminates a great many laborious and costly hand operations, yet is productive of buttonholes which substantially resemble high quality hand-made piped or bound buttonholes.

Although the invention has been described particularly with reference to women's garments, such as dresses, it may be applied with equal facility to other types of garments in which a facing is employed having buttonholes which match those of the front or face portion of the garment.

It will be understood that various other changes can be made in the various steps of the method, as described, provided such changes come within the purview of the appended claims:

Having thus described our invention, we claim:

1. In a method of making bound buttonholes in a garment having a front and a facing secured to said front adjacent the marginal edge of the latter, said method comprising the steps of simultaneously marking the location of the buttonholes in said front and facing, securing buttonhole edging patches to the inside face of said facing over the buttonhole markings, said patches having an adhesive on the face thereof in contact with said facing, securing buttonhole edging tapes to the outside face of the front over the buttonhole markings, forming buttonhole slits in said patches and facing, forming buttonhole slits in said front, turning said patches through the slits in the patches and facing, flattening said patches out in a manner to present said adhesive faces away from the facing, turning said tapes through the slits in the front and folding the tapes beyond said slits to provide portions which form an edging for said slits in the front, laying the facing over the inside face of the front in a manner to bring said adhesive faces into juxtaposition with portions of the edging tapes which have been turned through the slits in the front, and causing said adhesive faces to adhere to said portions.

2. The method, as defined in claim 1, in which the portions of the edging tapes on the front which are pushed through the slits are arranged in a plane parallel with the front.

3. In a buttonhole construction for garments of the character described, the combination with a front and a facing in parallel relation to said facing, spaced buttonholes in said front and facing in registry with each other, an edging for the buttonhole in said facing and an edging for the buttonhole in said front, said first-named edging being adhesively secured directly to said last-named edging.

4. A buttonhole construction, as defined in claim 3, in which said first-named edging is provided with a heat-sensitive adhesive on one face thereof.

5. In a buttonhole construction for garments of the character described, the combination with a front and a facing in parallel relation to said facing, spaced buttonholes in said front and facing in registry with each other, edging patches for the buttonholes in said facing, and edging tapes for the buttonholes in said front, said edging patches being adhesively secured directly to said tapes.

6. A buttonhole construction, as defined in claim 5, in which said edging patches are provided with a heat-sensitive adhesive on one face thereof.

7. In a method of making bound buttonholes in a garment having a front and a facing underlying said front adjacent the marginal edge of the latter, said method comprising the steps of securing adhesive-faced buttonhole edging patches to the inside face of said facing, securing buttonhole edging tapes to the outside face of the front, forming registering buttonhole slits in said front, facing and patches, turning the edging patches through the slits in said facing so as to present the adhesive faces away from the facing, turning said edging tapes through the slits in the front, bringing said adhesive faces into juxtaposition with the edging tapes, and causing said adhesive faces to adhere to said edging tapes.

8. In a method of making bound buttonholes in a garment having a front and a facing underlying said front adjacent the marginal edge of the latter, said method comprising the steps of securing adhesive-faced buttonhole edging patches to the inside face of said facing, securing buttonhole edging tapes to the outside face of the front, forming registering buttonhole slits in said front, facing and patches, turning the edging patches

through the slits in said facing and flattening them out in a manner to present said adhesive faces away from the facing, turning said edging tapes through the slits in the front and folding them beyond the slits in the front to provide portions which form an edging for the slits in the front and portions which are arranged in a plane parallel with the front, and laying said facing over the rear face of the front in a manner to bring said adhesive faces into juxtaposition with said parallel portions of the edging tapes.

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