March 16, 1954 F. W. BREUL 2,671,903

BOUND GARMENT OPENING

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Fig. 1.

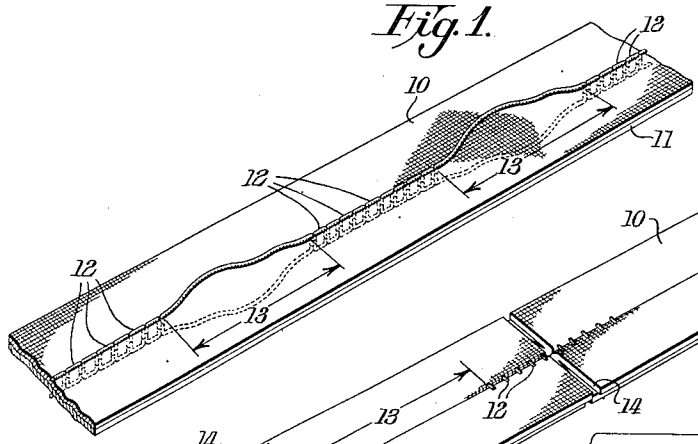


Fig. 2.

Fig. 3.

Fig. 4.

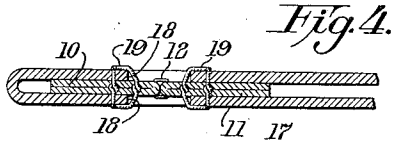


Fig. 5.

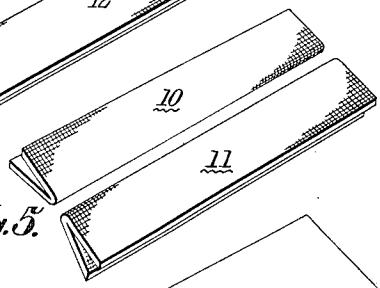


Fig. 6.

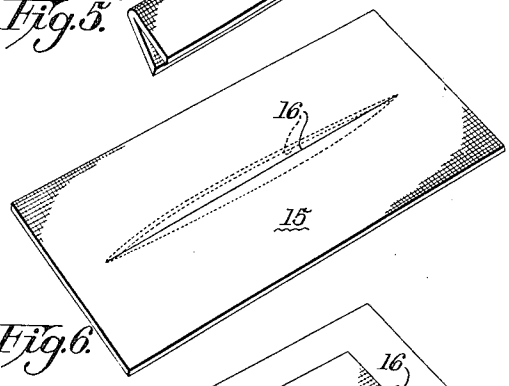


Fig. 7.

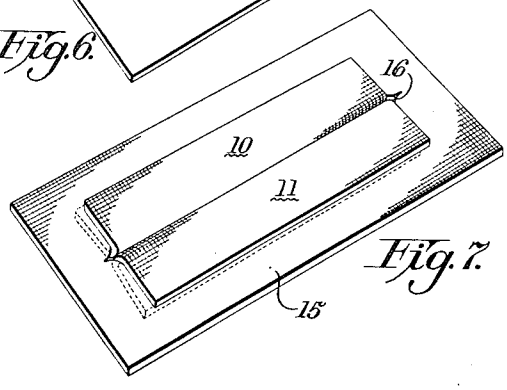


Fig. 8.

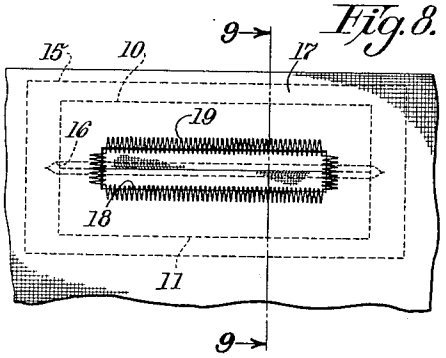
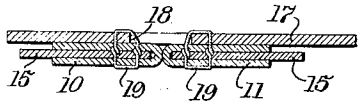


Fig. 9.



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BOUND GARMENT OPENING

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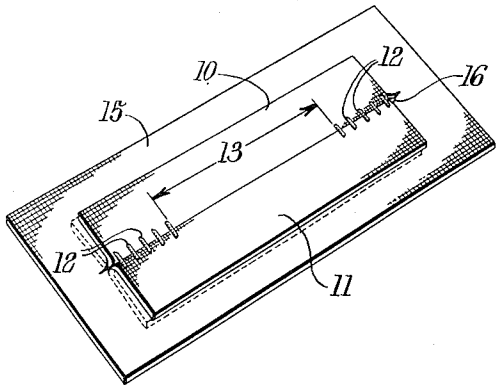


Fig. 10.

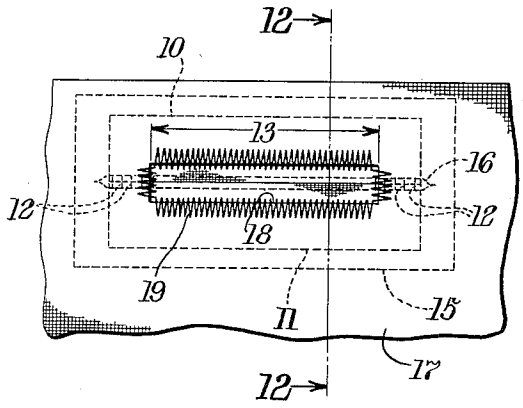


Fig. 11.

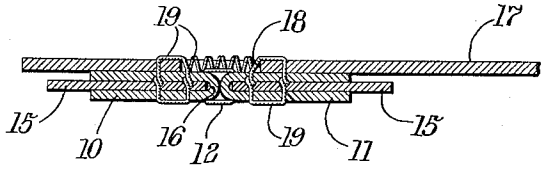


Fig. 12.

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BOUND GARMENT OPENING

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Application November 24, 1950, Serial No. 197,265

1 Claim. (Cl. 2—266)

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This invention relates to garment openings such as pockets, buttonholes, and the like, and to novel and improved methods of producing the same.

It is an object of this invention to provide a garment opening structure which presents to the eye the attractive appearance of a double piped or bound opening and which affords the strength and form-retaining qualities of the usual over-edge-stitched garment opening.

A further object is to provide an inexpensive garment opening capable of being simply produced commercially and involving a minimum of operations.

The above and other objects and advantages will hereinafter appear from the following description together with the accompanying drawings, in which:

Figs. 1 through 4 illustrate one preferred sequence of operations in the production of a buttonhole by my improved method.

Fig. 1 is a perspective view showing the two piping-strips as they are stitched together.

Fig. 2 is a perspective view of the two piping-strips of Fig. 1 after each has been folded on itself along the stitching line and illustrates the subsequent cutting operation, whereby individual piping blanks are provided.

Fig. 3 is a plan view of the finished garment opening formed in a hemmed portion of a garment and in which the finished piping blank of Fig. 2 is used.

Fig. 4 is a sectional view taken substantially along the line 4—4 of Fig. 3.

Figs. 5 through 9 illustrate another preferred method for producing a bound buttonhole in accordance with the present invention.

Fig. 5 is a perspective view of two folded piping strips.

Fig. 6 is a perspective view of a stiffening strip properly slashed to accommodate the piping strips of Fig. 5 and

Fig. 7 is a perspective view of an assembled individual piping blank.

Fig. 8 is a plan view of a finished garment having an opening formed in a single ply of garment fabric and in which the piping blank of Fig. 7 is used, and

Fig. 9 is a sectional view taken substantially along line 9—9 of Fig. 8.

Fig. 10 is a perspective view of an assembled piping-blank comprising the severed piping-blank of Fig. 2 in assembled relation with a stiffening strip of the type illustrated in Fig. 6.

Fig. 11 is a plan view of a finished garment

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having an opening formed in a single ply of garment fabric and in which the assembled piping-blank of Fig. 10 is used and,

Fig. 12 is a sectional view taken substantially along line 12—12 of Fig. 11.

With existing methods, the manufacture of bound or piped garment openings requires a high degree of skill and time consuming hand work, which restricts the use of this type of construction to the highest priced garments. These existing methods invariably require several separate stitching operations and several folding operations while the piping is being applied to the garment, which operations necessitate tedious handling of the garment.

With my novel construction and method the above disadvantages are obviated. Essentially, my method involves, first, the preparation of blanks of piping material which are each properly folded and arranged suitably for the formation of one garment opening, and second, of a means for securing the piping blank to the garment entirely by machine, thus requiring only a minimum of garment handling with no folding, turning, or reversing of the garment.

The accompanying drawings illustrate my improved method as applied to the manufacture of a bound buttonhole. It will be understood, however, by those skilled in the art that the features of this selected embodiment will apply equally as well to the manufacture of bound pocket openings and the like .

Fig. 1 and Fig. 2 together illustrate one method of preparing individual buttonhole piping blanks. As shown in Fig. 1, two strips of piping material 10 and 11, each having a width substantially greater than that of the finished buttonhole, are united in superposed relationship by intermittent or spaced groups of stitches 12—12, the stitches being formed substantially along the longitudinal centerline of the strips. The stitch-groups 12—12 are preferably of the lock-stitch type and contain at least 6 to 8 stitches. The spaces 13—13 between each group of stitches 12—12 correspond substantially to the length of the button opening in the finished buttonhole (see Fig. 3). This particular pattern of stitching may be readily accomplished by hand or by any suitable sewing machine, such for example, as a conventional skip-stitch machine.

After the piping strips are stitched together, the strips are separated and each strip is doubled upon itself and creased, the fold in each strip being formed along the line of stitches 12—12 so that the folded-back limbs of the strips

are disposed in parallel and coplanar relation with the folded edges thereof juxtaposed as shown in Fig. 2. The above described separating and folding operation constitutes in effect, a reverse folding of the superposed piping strips. Thereafter, the strips are severed as at 14 along lines transversely of the longitudinal fold and medianly of each of the stitch groups 12 to form what is herein termed a double piping-blank.

The purpose of first forming the piping-blank is to provide a unitary subassembly which may be conveniently handled during the buttonhole finishing operation to be described below. Figs. 5, 6 and 7 illustrate an alternative method for forming the piping-blank in which no stitching is required. In this form, each of the two piping strips 10 and 11 is separately folded and creased substantially along the longitudinal centerline of the strip as shown in Fig. 5. The folded strips are then severed into lengths substantially longer than the finished buttonhole. A stiffening strip 15, preferably of a sized fabric such as buckram, is slashed as at 16 of Fig. 6, the length of the slash corresponding to the length of the piping strips 10 and 11. One limb of each of the folded piping strips is then inserted into the slash 16 of the stiffening strip 15 as illustrated in Fig. 7, whereby the stiffening strip acts as a supporting member and maintains the piping strip in proper relationship as a unitary subassembly. Still another method of preparing a piping blank is shown in Fig. 10 and involves the combination of the severed piping blank as illustrated in Fig. 2 with the stiffening strip 15 of Fig. 6. In this method, one limb of each of the stitched and folded strips 10 and 11 is inserted into the slash 16 of the stiffening strip 15 in the same manner as was described above with regard to the two separate strips. With this third method, the stiffening strip is included in the finished buttonhole as illustrated in Figs. 11 and 12 not only to maintain the piping strips as a unitary subassembly but also to augment the shape retaining characteristics of the piping strips in the finished garment opening.

As shown in Figs. 8 and 9, the garment in which the buttonhole is to be formed is designated as 17. An aperture 18 is formed in the garment material in the desired position for the buttonhole and corresponding in size to that of the desired buttonhole. The drawings illustrate a rectangular aperture 18, but it will be apparent that the aperture 18 need not be rectangular but may be formed in any suitable shape.

Still referring more particularly to Figs. 8 and 9, after the aperture 18 has been formed in the garment fabric, the piping-blank is positioned beneath the aperture against the under side of the garment-fabric with the folds of the piping strips positioned substantially along the longitudinal centerline of the aperture. Figs. 8 and 9 show the piping blank of Fig. 7, but if the piping blank of Fig. 2 is used, the space 13 between the stitch-groups 12—12 of the piping blank is positioned to correspond substantially with the length 13 of the aperture 18 as illustrated in Fig. 3. The buttonhole is then completed by stitching a uniting seam 19 about the edge of the aperture 18, the stitches passing through both the garment-fabric 17 and the piping strips 10 and 11. While any type of stitching which will serve to secure the piping in position is satisfactory, a zigzag edge-covering seam in which alternate stitches pass through the piping strips at the edge of the aperture 18 and next through the garment fabric 17, as illustrated most clearly in Figs. 4 and 9, is preferable, since the raw edges of the garment-aperture 18 will then be covered or concealed. While the drawings show the body fabric aperture 18 as being defined by a raw edge, it will be appreciated that the raw edge may be inturned, in which case a line of stitches spaced from the inturned edge of the aperture may be used for securing the piping blank in place rather than the illustrated edge-covering stitches.

Figs. 3 and 4 illustrate a form of the instant construction in which the buttonhole is formed in a portion of the garment fabric which is doubled as along the hemmed edge of a garment. In this instance, the aperture 18 is formed in each of the superposed plies of garment fabric 17. The piping blank of Fig. 2 is shown in this case, but any one of the described blanks may be used. The blank is inserted through one of the apertures to a position between the plies and in all other respects identical with the position as described above. The finishing stitches 19 are then applied about the edge of the aperture 18 in the manner described above to complete the buttonhole. As will appear from inspection of Fig. 4, an added advantage of my improved method resides in the fact that when applied to a hemmed fabric, the product has an attractive and finished appearance on both sides of the garment.

Having thus set forth the nature of the invention, what I claim herein is:

In the manufacture of a double-piped garment opening, the steps of forming a double piping-blank by superimposing two strips of piping-fabric, forming intermittent stitch-groups longitudinally of the centerline of said superposed strips, said stitch-groups being spaced apart a distance substantially equal to the length of the finished garment-opening, folding each of said piping-strips about the line of said stitch-groups to form opposed piping-strips, the fold-edges of which are juxtaposed, and severing the piping-strips transversely of the fold-edges thereof and within each of the stitch-groups; forming an aperture in said garment-material; placing said double piping-blank beneath said garment-aperture with the stitch groups thereof underlying the garment at opposite ends of said garment-aperture; and attaching said piping blank to said garment by a seam of securing stitches which embrace the edge of the garment-aperture.

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