Oct. 10, 1961 P. E. CRYSTAL 3,003,445

METHOD FOR MOUNTING A CONCEALED SLIDE FASTENER INTO A CLOTH ARTICLE

Filed July 30, 1958 2 Sheets-Sheet 1

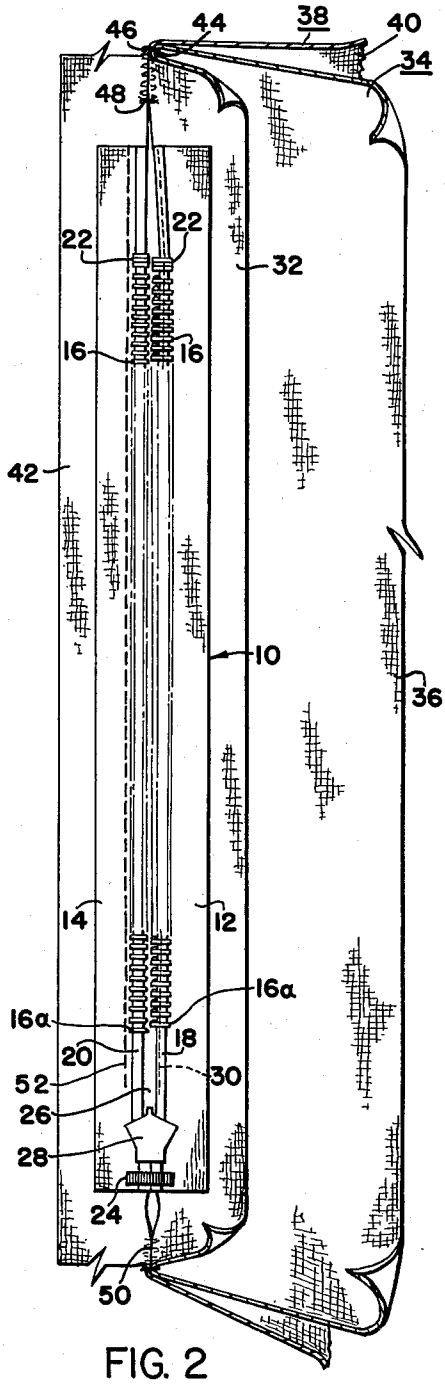


FIG. 2

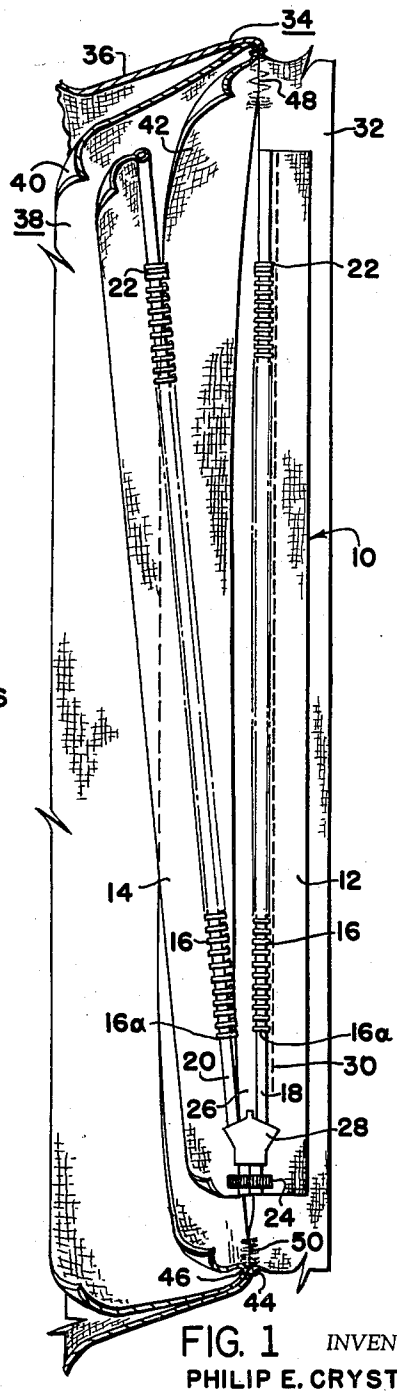


FIG. 1

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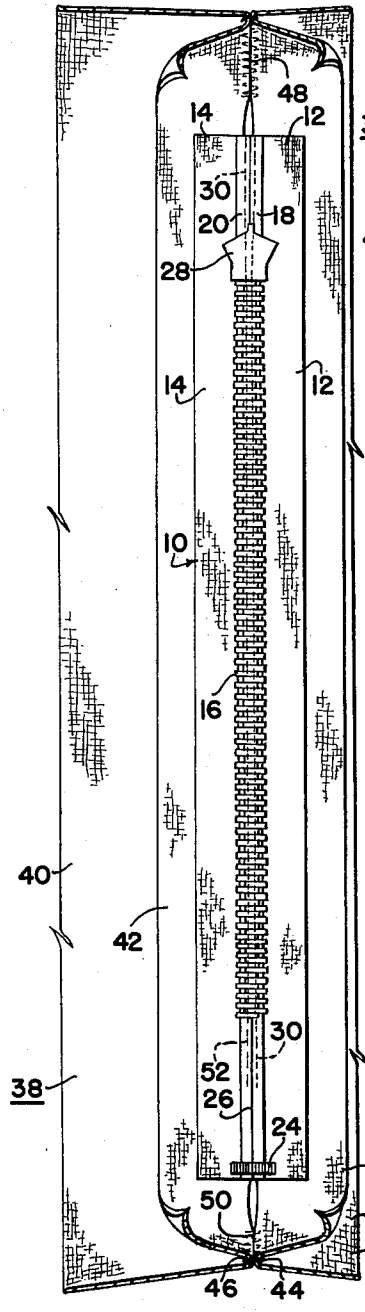


FIG. 3

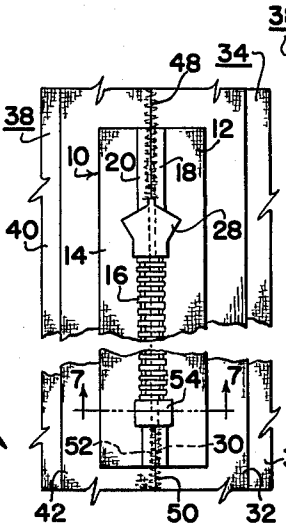


FIG. 6

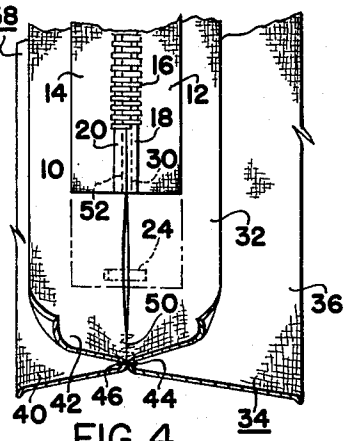


FIG. 4

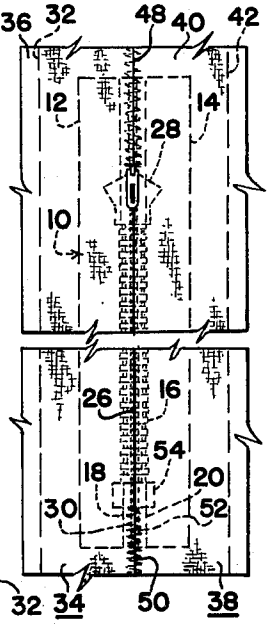


FIG. 8

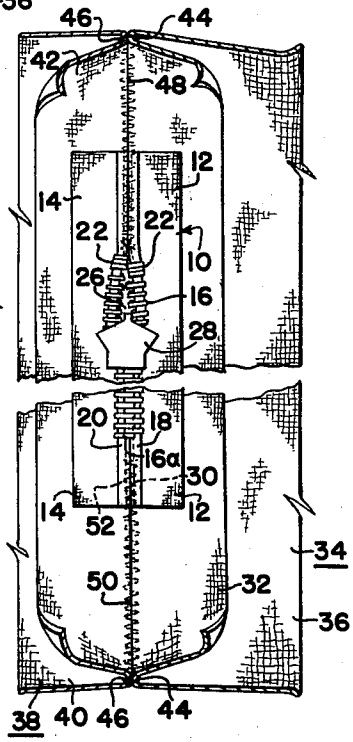


FIG. 5

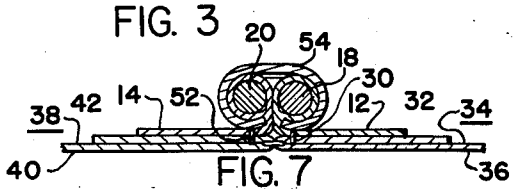


FIG. 7

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3,003,445

METHOD FOR MOUNTING A CONCEALED SLIDE FASTENER INTO A CLOTH ARTICLE

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Filed July 30, 1958, Ser. No. 751,943
5 Claims. (Cl. 112—262)

The present invention relates to a method for mounting a concealed slide fastener into a cloth article, and more particularly to a method for inserting a concealed slide fastener in such manner that it is substantially concealed from view and closely simulates a seam when its elements engage each other, namely when the slide fastener is closed and the slide fastener elements of one of the tapes engage the slide fastener elements of the other of the tapes.

This invention has as an object the provision of a method for mounting a concealed slide fastener into a cloth article.

This invention has as another object the provision of a method for mounting a concealed slide fastener into a cloth article in which the line of stitching which joins each of the slide fastener element carrying tapes to the cloth article is as close as possible to the slide fastener elements.

Other objects will appear hereinafter.

For the purpose of illustrating the invention there is shown in the drawings a form which is presently preferred; it being understood, however, that this invention is not limited to the precise arrangements and instrumentalities shown.

Referring to the drawings, wherein like reference characters refer to like parts:

FIGURE 1 is a perspective view revealing the first stage of the process of the present invention.

FIGURE 2 is a perspective view revealing a later stage in the process of the present invention.

FIGURE 3 is a perspective view revealing a still later stage in the process of the present invention.

FIGURE 4 is a fragmentary perspective view revealing a later stage of the process of the present invention than that shown in FIGURE 3.

FIGURE 5 is a perspective view revealing a still later stage in the process of the present invention than that shown in FIGURE 4.

FIGURE 6 is a plan view revealing the concealed slide fastener mounted into the cloth article, such plan view being taken from the rear of the cloth article which carries the concealed slide fastener.

FIGURE 7 is a cross-sectional view taken on line 7—7 of FIGURE 6.

FIGURE 8 is a plan view similar to that of FIGURE 6 but viewed from the front of the cloth article wherein the close similarity of the construction of the present invention to a sewn seam is revealed.

Referring to FIGURE 1, the slide fastener 10 shown therein is preferably of the type disclosed in my United States patent application Serial No. 740,257 entitled: Slide Fastener, which was filed on June 6, 1958.

The slide fastener 10 comprises a pair of element carrying tapes 12 and 14 which carry mating slide fastener elements 16 on respective welts 18 and 20 (see FIGURE 7 for welts 18 and 20 in cross-section).

The slide fastener 10 is provided with the top stops 22 adjacent the uppermost elements 16, the top stops 22 being spaced from the uppermost edges of the tapes 12 and 14. Preferably, the top stops 22 comprise non-mating slide fastener elements, thus in the illustrated embodiment the top stops 22 comprise a plurality of nesting slide fastener elements.

The slide fastener 10 is devoid of a bottom stop, the

bottommost slide fastener elements 16*a* of each of the tapes 12 and 14 being spaced from the bottommost edges of the tapes 12 and 14 by an appreciable distance.

The tapes 12 and 14 of slide fastener 10 are joined together closely adjacent to their bottommost edges by means of the bar tack 24 which maintains the welts 18 and 20 of tapes 12 and 14 in even parallel alignment in the portion of slide fastener 10 which comprises the gap 26 intermediate the bottommost slide fastener elements 16*a* and the bar tack 24.

The slider 28 is reciprocally movable on the slide fastener 10 from the top stops 22 down to the bar tack 24, the slider 28 being readily movable along the welts 18 and 20 in the gap 26. As seen in FIGURES 1, 2, and 3 the gap 26 has a length appreciably greater than the slider 28, namely a length in the illustrated embodiment of more than double the length of the slider 28.

The elements 16 are pivotable, and may be pivoted on the welt on which they are carried from their normal disposition shown on tape 14 in FIGURE 1 to a disposition in which such elements are maintained substantially upright, such latter disposition being presented by the elements 16 of tape 12 in FIGURE 1 in which disposition the free ends of the elements are disposed at the front face of the slide fastener with the innermost ends of the elements (that portion of the elements which engages the welt) being disposed on the rear face of the slide fastener (such rear face being seen in FIGURE 1). The aforesaid pivotation of the elements 16 of tape 12 enables the line of stitching 30 to be placed closely adjacent to the elements 16 of tape 12. The line of stitching 30 joins the tape 12 to the inner flap 32 of cloth member 34.

Cloth member 34 comprises the relatively narrow inner flap 32 and the relatively wide outer flap 36 which is presented to view when the cloth article is worn. Thus, in the case of a garment, the outer flap 36 is presented to view when the garment is worn. The cloth member 34 is joined to the cloth member 38 which likewise comprises an outer flap 40 and an inner flap 42. The tape 14 is to be joined to the inner flap 42.

The cloth members 34 and 38 are folded along parallel abutting fold lines 44 and 46 to form the respective inner and outer flaps 32 and 36 and 42 and 40. The cloth members 34 and 38 are joined together in the illustrated embodiment by an upper seam 48 and by a bottom seam 50, such seams 48 and 50 being collinear.

The line of stitching 30 extends from the topmost edge of tape 12 to a point about midway in the gap 26. Such line of stitching 30 is evenly spaced from the welt 18, and preferably comprises a conventional lockstitch as made by a single needle sewing machine.

During the insertion of the line of stitching 30, the slider 28 is disposed in the bottom portion of the gap 26 and does not interfere with the installation of the line of stitching 30. The bar tack 24 aligns the tapes 12 and 14, and also serves to prevent the slider 28 from becoming disengaged from the slide fastener 10.

In the stage of the process of the present invention shown in FIGURE 2, the line of stitching 52 is added which joins the tape 14 to the inner flap 42 of cloth member 38. Such line of stitching 52 extends from the uppermost edge of tape 14 to a point within the gap 26. It is to be noted that the line of stitching 52 is effected with the elements 16 of tape 14 in perpendicular disposition, in the identical fashion in which the line of stitching 30 which joined the tape 12 to the inner flap 32 of cloth member 34 was effected. During the sewing-in of line of stitching 52, the slider 28 is positioned within the gap 26 so that such slider 28 does not interfere with the insertion of the line of stitching 52.

The bar tack 24 maintains the tapes 12 and 14 in

alignment facilitating the insertion of such tapes so that the same are mounted in such disposition that when their elements are engaged, the center line of the slide fastener is collinear with the seams **48** and **50**.

It is desirable that the bottommost ends of the lines of stitching **30** and **52** extend to the same distance. However, this is not absolutely essential.

The next stage of the process is shown in FIGURE 3. In this stage of the process the slider **28** is withdrawn from the welts **18** and **20** in the gap **26** and is moved along the elements **16** of the tapes **12** and **14**. In the illustrated embodiment, the slider **28** is moved to a disposition adjacent the top stops **22**. However, it is not necessary for the slider to be moved all the way to the top of the slide fastener elements **16**, it is only necessary that the slider **28** be moved a sufficient distance onto the slide fastener elements **16** so that such slider **28** is out of the gap **26** and spaced a sufficient distance therefrom so as not to interfere with the manipulations in the gap **26** set forth below.

The next stage of the process of the present invention is illustrated in FIGURE 4. In this stage the bottom portions of the tapes **12** and **14** below the ends of the lines of stitching **30** and **52** are cut away. This can be readily accomplished with shears or other simple hand tools. The portion of the tapes **12** and **14** which was cut away is shown in FIGURE 4 in phantom line.

In FIGURE 5 there is shown the next stage in the process of the present invention. In this stage the seams **48** and **50** are extended so that the slide fastener **10** will present the appearance of a seam which is continuous with and collinear to such seams **48** and **50**.

In the final stage of the process of the present invention shown in FIGURE 6 the bottom clip **54** is applied to the welts **18** and **20** of tapes **12** and **14** adjacent the bottommost elements **16***a*. Such bottom clip **54** may be formed of pliable sheet metal and may be readily secured to the welts **18** and **20**.

The bottom clip **54** serves as a bottom stop and prevents the withdrawal of the slider **28** from the slide fastener **10**.

The appearance of the installed slide fastener is shown in FIGURE 8. When viewed from the front with the elements of the tapes **12** and **14** engaged, the slide fastener presents the appearance of a continuation of the seams **48** and **50**.

The present invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof and, accordingly, reference should be made to the appended claims, rather than to the foregoing specification as indicating the scope of the invention.

I claim:

1. In a method for mounting a slide fastener upon the adjacent flaps of a cloth article which slide fastener comprises a pair of mating fastener element carrying tapes, each of which tapes carries its elements on a welted inside edge, said slide fastener lacking a botton stop adjacent the bottommost slide fastener element on each of its tapes, said slide fastener including an element free gas on its tapes having a length appreciably greater than the length of the slide fastener's slider, with said gap being disposed between the bottommost slide fastener elements on each of the tapes and the bottom end portion of the slide fastener, and said slide fastener including means joining the bottom end portions of the tapes together, the steps which comprise applying a first line of stitching to join one fastener element carrying tape of the slide fastener to one flap of the cloth article while the slider of the slide fastener is disposed within the gap and spaced from the bottommost element of said one tape, extending said first line of stitching into the gap a spaced distance above the slider, applying a second line of stitching to join the other fastener element carrying tape of the slide fastener to the adjacent flap of the cloth article while the slider of the slide fastener is disposed within the gap and spaced from the bottommost element of said other fastener element carrying tape, extending said second line of stitching into the gap a spaced distance above the slider, moving the slider a spaced distance from the gap onto the slide fastener elements of the slide fastener so that the slider is carried upon the stitched portions of the tapes a spaced distance from the gap, with mating elements of the tapes intermediate the gap and the slider joining the tapes together, cutting off the bottommost portion of the slide fastener along a line extending through the gap a sufficient distance below the bottommost slide fastener elements on each of the tapes to provide room for a bottom stop below the bottommost slide fastener elements on each of the tapes while the elements of the tapes intermediate the slider and the gap are matingly engaged, and applying a bottom stop to the inside welted edges of the tapes adjacent the bottommost slide fastener elements on each of the tapes.

2. A method in accordance with claim 1 in which the first and second lines of stitching are extended into the gap to approximately the same position and in which the bottommost portion of the slide fastener is cut off along the line extending through the gap adjacent the position occupied by the ends of said first and second lines of stitching.

3. A method in accordance with claim 1 in which the first and second lines of stitching are inserted contiguously to the fastener elements carried by the tapes of the slide fastener.

4. A method in accordance with claim 1 in which the first and second lines of stitching are inserted while the elements carried by the tapes adjacent thereto are pivoted to a substantially upright disposition, with said first and second lines of stitching being so closely adjacent the elements that the elements overlap their respective lines of stitching when the elements mate and join the tapes together.

5. A method in accordance with claim 1 in which the first and second lines of stitching extend collinearly a spaced distance above the top stops of the slide fastener.

References Cited in the file of this patent

UNITED STATES PATENTS

1,990,311	Salwen	Feb. 5, 1935
2,078,874	Friedman	Apr. 27, 1937
2,155,795	Markin	Apr. 25, 1939
2,623,214	Yaffe	Dec. 30, 1952
2,629,875	Geissmann	Mar. 3, 1953

FOREIGN PATENTS

745,564	Great Britain	Feb. 29, 1956