June 8, 1937. A. M. BUTOW 2,083,047

GARMENT CLOSURE

Filed July 29, 1936

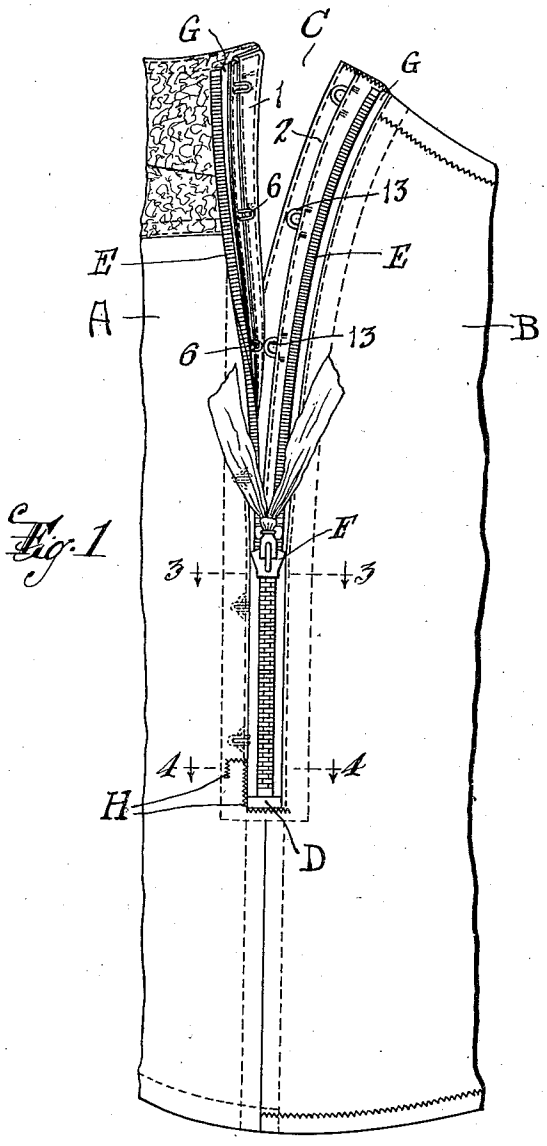


Fig. 1

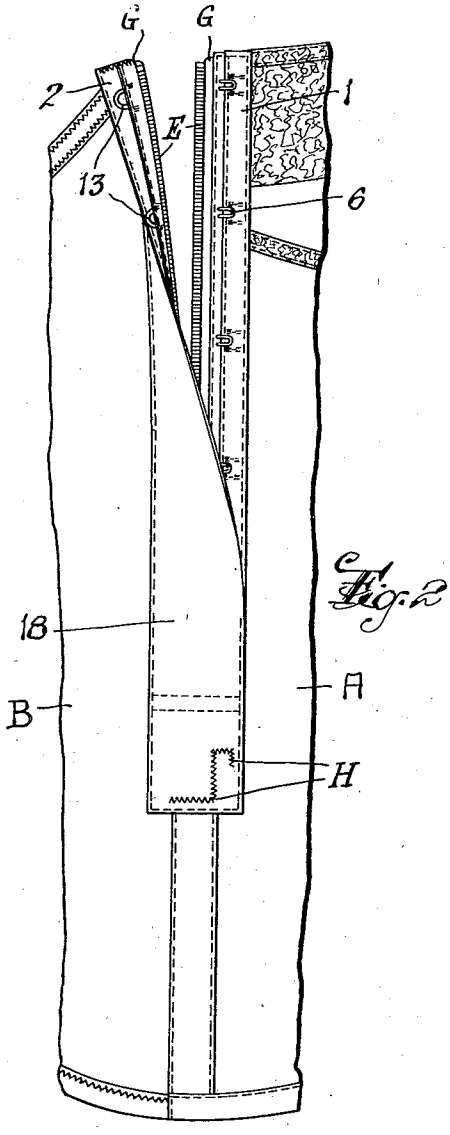


Fig. 2

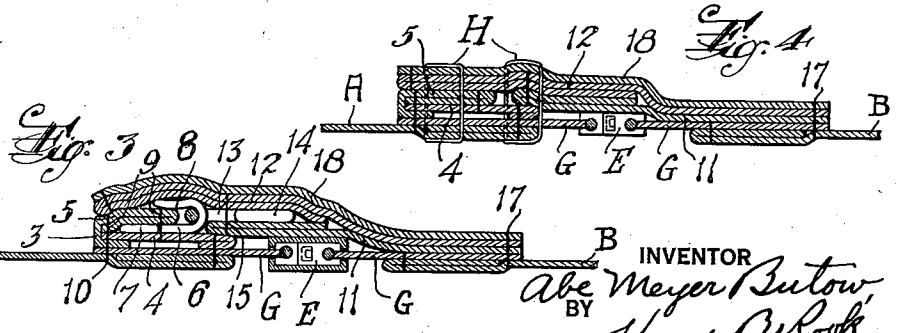


Fig. 3

Fig. 4

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GARMENT CLOSURE

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Application July 29, 1936, Serial No. 93,146

1 Claim. (Cl. 2—38)

This invention relates particularly to garment closures of the type wherein the edge portions of the garment at opposite sides of the opening to be closed are connected by a slide operated fastener which includes a set of fastener elements on each garment edge portion to separably interlock with complemental fasteners on the other edge portion and an actuating slide for interlocking and disengaging said sets of fastener elements. The invention more especially relates to garment closures of this character in tight fitting garments such as corsets and brassières, or other garments where the fastener is placed under tension in use. In such cases it is extremely difficult to pull the edges of the garment opening together by the actuating slide, and the garment edges ripple or wrinkle under the tension so as to cause the slide to jam or catch on the fasteners or the material of the garment. This application is a continuation in part of my copending application Serial No. 55,317 filed December 20, 1935.

It has been proposed to provide in a garment closure of the character described, an auxiliary fastener on the inside of the garment beneath the slide operated fastener, to be manually closed so that the garment edge portions first can be pulled together and connected by the auxiliary fastener into a position to permit easy sliding of the actuating slide and so that the tension on the edge portions will be largely taken up by the auxiliary fastener, after which the actuating slide of the slide fastener can be easily operated to complete the closure. However, difficulty is frequently experienced in that the auxiliary fastener interferes with free sliding of the actuating slide, for example, said slide catches in the auxiliary fastener elements or their connections to the garment. Also, the known auxiliary fasteners are expensive to apply to the garment, and are undesirably bulky or thick.

Accordingly, a prime object of my invention is to provide a novel and improved construction and arrangement of the auxiliary fastener the surface of which contiguous to the actuating slide of the slide operated fastener, shall be smooth, free from projections and continuous from end to end of the garment edge portions to prevent catching or jamming of the actuating slide as it is operated to open or close the slide operated fastener.

Further objects are to provide such a garment closure wherein the auxiliary fastener can be easily and quickly applied to the garment at low cost, and shall be simple and inexpensive; and thus to provide an auxiliary fastener which shall comprise hook and eye tapes wherein the bases of the hooks and eyes are disposed between two plies of fabric so as to be covered or concealed, each tape shall be stitched to one garment edge portion in one operation and extend throughout the length of said edge portion, and the surfaces of said tapes contiguous to the actuating slide shall be smooth and free from projections throughout their lengths, so as to prevent the actuating slide of the slide operated fastener from catching or jamming.

Another object is to provide such a garment closure wherein said auxiliary fastener shall include a strip of such fastener tape secured to each edge portion of the garment so that the engaging portions of the hooks and eyes shall be located in offset relation to said actuating slide laterally of the closure, one of said strips being connected at one longitudinal edge to the garment edge portion and extending full length thereof to form a loose flap to bridge the garment edge portions and underlie said hook members and eye members to prevent contact thereof with the body of the wearer when the slide operated fastener is closed, said strips being substantially non-stretchable and having approximately uniform inherent resistance to buckling or wrinkling throughout their lengths to restrain such longitudinal buckling or wrinkling of the strips as the hooks and eyes are connected as might interfere with operation of the slide operated fastener or cause discomfort to the wearer, and to ensure against such relative stretching of the strip as might throw the complemental hooks and eyes out of proper alinement with each other and interfere with connection thereof and cause bulging or rippling of the fabric.

In certain garments, the openings extend from one edge to intermediate points in the length of the garments, and the strips of the slide operated fastener are secured at the inner ends of the openings by reenforcing stitches to withstand the strains incident to closing of the fastener. Also additional reenforcing strips of fabric are frequently used beneath the fastener strips. Another object of my invention is to utilize my hook and tapes so that the tapes shall have the dual function of reenforcing the strips of the slide operated fastener and also maintaining the complemental hook and eyes in properly alined relation to each other.

Other objects are to provide a garment closure of the character described wherein one hook and complemental eye of the auxiliary fastener shall be located adjacent the free edge of the garment opening contiguous to the location of the actuat-

ing slide of the slide fastener when the latter is closed, so as to prevent the actuating slide from being accidentally moved by tension on the garment edge portions in such manner as to open the slide operated fastener; and to obtain other advantages and results as will be brought out by the following description.

Referring to the accompanying drawing in which corresponding and like parts are designated throughout the several views by the same reference characters.

Figure 1 is a front elevation of a garment closure embodying my invention, the garment being shown fragmentarily, the closure being illustrated as partially closed.

Figure 2 is a rear elevational view of the closure looking at the inside of the garment.

Figure 3 is a horizontal sectional view on a greatly enlarged scale, taken on the line 3—3 of Figure 1, and

Figure 4 is a similar view on the line 4—4 of Figure 1.

For the purpose of illustrating the principles of the invention I have shown it in connection with a tight fitting garment of the nature of a corset, the edge portions of the garment at the garment opening being designated by the reference characters A and B, the opening of the garment extending through one edge thereof at C and terminating short of the other edge at D.

Secured to the extremities of the edge portion A and B are sets of fastener elements E of the slide operated type, the set at one edge being complemental to and interlocking with the set at the other edge for closing the garment opening. The fastener elements E are secured on fabric strips G and the strips are secured to the garment and the inner end of the opening D by reenforcing stitches H to withstand the strains on the strips during closing of the fastener. The sets of fasteners E are interlocked and disengaged by an actuating slide F of known construction. This slide operated fastener comprising the fastener elements E and the actuating slide F may be of any suitable known type, and no claim to novelty is made thereon.

In closing the garment opening, the actuating slide is moved from the inner end D of the opening to the outer end C, the actuating slide drawing the edge portions of the garment together. This is a difficult operation, especially in tight fitting garments like corsets, and the garment edges and strips G frequently ripple or wrinkle under the tension so as to cause the actuating slide to jam or catch on the fastener elements or the material of the garment.

My invention relates particularly to an auxiliary fastener for the closure to be manually closed so that the garment edge portions first can be pulled together and connected by the auxiliary fastener in a position to permit easy sliding of the actuating slide and relieve the tension on the edge portions of the garment so that the actuating slide can then be easily operated to complete the closure.

As shown on the drawing, my auxiliary fastener comprises hook and eye tapes 1 and 2 respectively, each secured to one edge portion A or B on the inner side of the garment in underlying relation to the slide operated fastener, and having its inner end secured to the garment and the strips G by the stitches H.

The hook tape 1 is shown as comprising a strip of substantially non-stretchable fabric folded longitudinally at 3 to form plies 4 and 5 and having its edge portions folded inwardly between the plies 4 and 5. A plurality of hook members 8 are spaced longitudinally of the strip with their bases 7 between the inturned edge portions and the plies 4 and 5 and the hooks 8 projecting beyond the ply 5. The hook members are secured between the plies by stitches 9. The strip extends the full length of the corresponding garment edge portion A and is secured thereto and to the corresponding strip G by lines of stitches 10 running longitudinally of the strip with the hooks facing toward the inner side of the garment.

The eye tape comprises superposed plies of substantially non-stretchable fabric 11 and 12 having a plurality of eye members 13 spaced longitudinally thereof with their bases 14 secured between the plies by stitches 15. The ply 12 is considerably wider than the ply 11 and the eyes 16 of the eye members project beyond the edge of the ply 11 but overlie the edge portion of the ply 12. The eye tape is secured to the edge portion B of the garment opposite the edge portion to which the hook tape is applied and to the corresponding strip G, at one longitudinal edge of the tape with the ply 12 innermost with respect to the garment, by longitudinal lines of stitches 17, the other edge of the eye tape being free and underlying the garment edge portion A, and the hook tape is applied to the garment edge portion A inwardly of the corresponding slide operated fastener elements E. In this way, the eye tape forms a flap to bridge the garment edge portions and underlie the hook members and eye members and the slide operated fastener elements E when the fasteners are closed, the actuating slide being offset from the hook members and eye members laterally of the closure to prevent contact of the actuating slide with said hooks and eyes. This is clearly shown in Figure 3 of the drawing. Preferably a cushioning strip 18 of suitable material such as flannel is applied to the innermost side of the eye tape to contact with the body of the wearer. It is desirable that the free edge of the ply 11 of the eye tape approximately abut the edge of the ply 4 of the hook tape, so that a channel or slide way for the actuating slide F of the slide operated fastener, free from all projections or protuberances is provided. With this construction, the actuating slide is underlaid by only the eye tape, and the surface of the latter contiguous to the actuating slide is smooth and continuous throughout the length of the corresponding garment edge portion and free from projections or protuberances which might hinder the free sliding of the actuating slide during opening and closing of the slide actuated fastener. Also, the tapes are substantially non-stretchable and of substantially uniform flexibility throughout their lengths, so as to have approximately uniform inherent resistance to tension, buckling and wrinkling which might interfere with operations of the actuating slide or cause discomfort to the wearer of the garment containing the closure.

With this form of closure, and assuming that the closure is open, it will be observed that in closing the closure the hooks and eyes may first be connected so as to draw the garment edge portions together and assume the major portion of the tension thereon, and then the actuating slide F may be easily slid along the slide operated fasteners E so as to draw the garment edges more tightly together and interlock the fasteners to complete the closure. Also the auxiliary fastener may be alone used to fasten the garment,

and the two fasteners enable the wearer to obtain different degrees of tightness of the garment about the body; for example should the garment become too tight for comfort with the slide fastener closed, the slide fastener may be opened and the garment thereby loosened and yet held closed by the auxiliary fastener

Preferably one hook and complemental eye of the hook and eye tapes 1 and 2 are located adjacent the free edge C of the garment opening contiguous to the location of the actuating slide of the slide fastener when the latter is closed, so as to prevent the actuating slide being accidentally moved on the garment edge portions in such manner as to open the slide operated fastener.

It will be observed that the auxiliary fastener embodying my invention is simple and inexpensive in construction, and that each tape 1 and 2 can be applied to the corresponding garment edge in one operation so that the application of the fastener to the garment may be quickly and inexpensively accomplished. The continuous tapes 1 and 2 enable the hooks and eyes to be secured on the garment in accurately spaced relation and with the opposed hooks and eyes in proper cooperating alinement with each other. Moreover, the auxiliary fastener is of minimum bulk and is free of all projections, folds or ripples which might interfere with the operation of the actuating slide of the slide operated fastener. The hooks and eyes are prevented from contacting with the body of the wearer and are also prevented from contact with the actuating slide. Only a few of the hooks and eyes are required and they may be spaced apart on the tapes sparingly or at considerable distance, it being necessary simply that the spacing of the hooks and eyes be sufficient to relieve the tension on the garment edge portions and prevent wrinkling or rippling thereof, so as to facilitate operation of the actuating slide. The tapes 1 and 2 reenforce the strips G and edges of the garment opening against stretching, rippling or buckling and also against strains incident to closing of the slide operated fastener.

It will be understood by those skilled in the art, that the invention may be embodied in other types of garments and in closures that extend from one edge to the other instead of terminating short of one end as shown. Also, the auxiliary tapes 1 and 2 might be secured directly to the usual carrier strips G on which the interlocking fastener elements E are secured so that the auxiliary fastener may be attached to the garment with and at the same time as the slide operated fastener.

Having thus described my invention, what I claim is:

In a garment having an opening extending from one edge to an intermediate point in the length of the garment, the combination with a slide operated fastener including sets of fastener elements each mounted on a fabric strip which is secured on one edge of said opening to interlock with fastener elements on the other edge of said opening, and an actuating slide to interlock and disengage said sets of fastener elements, of an auxiliary fastener comprising a continuous tape of substantially non-stretchable fabric including superposed plies secured to the inner side of each edge portion of said garment opening and extending throughout the length thereof and having substantially uniform inherent flexibility and resistance to wrinkling throughout its length, reenforcing stitches at the inner end of said opening passing through both of said tapes, the garment and said fabric strips of the slide operated fastener, and complemental fastener members secured directly on and spaced longitudinally of said tapes between the plies of the tape for connecting said garment edge portions together, each of said tapes of fabric having one longitudinal edge secured to the respective edge portion of the garment and the corresponding fabric strip of the fastener elements throughout the length thereof and one of said tapes having the other edge free and underlying the other garment edge portion, the fastener members being offset from said actuating slide laterally of the closure, and the ply of said tape adjacent said fastener elements being free from projections on its surface that is contiguous to said actuating slide, whereby said garment edge portions can be connected together by said fastener members prior to closing of said slide operated fastener so as to facilitate interlocking of said fastener elements and prevent catching or jamming of said actuating slide on said fastener elements or said auxiliary fastener, and said auxiliary fastener tapes reenforce said strips of the slide operated fastener and the edge portions of said garment opening against strains incident to closing of the slide operated fastener and hold the complemental auxiliary fastener members in properly opposed alined relation to each other.

ABE MEYER BUTOW.