

Feb. 18, 1941.

L. I. LEVY

2,232,332

STOP CONSTRUCTION FOR SLIDE FASTENER IN CLOTHING OR OTHER ARTICLES

Filed Nov. 23, 1938

2 Sheets-Sheet 1

Fig. 1.

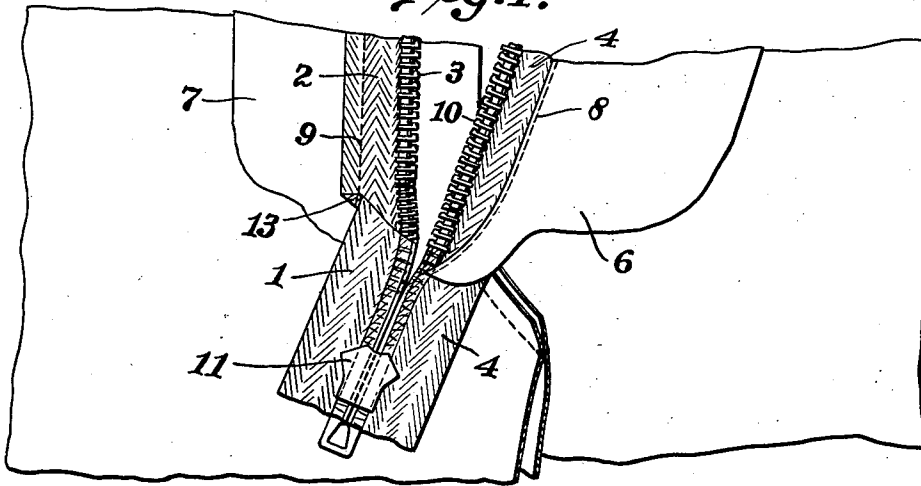


Fig. 2.

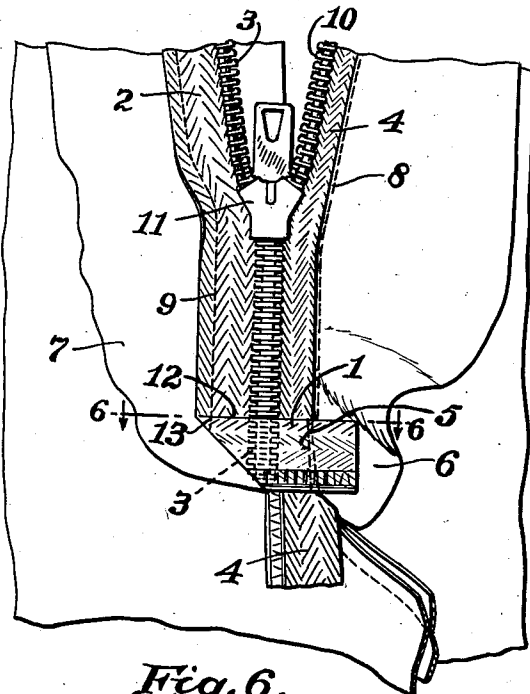
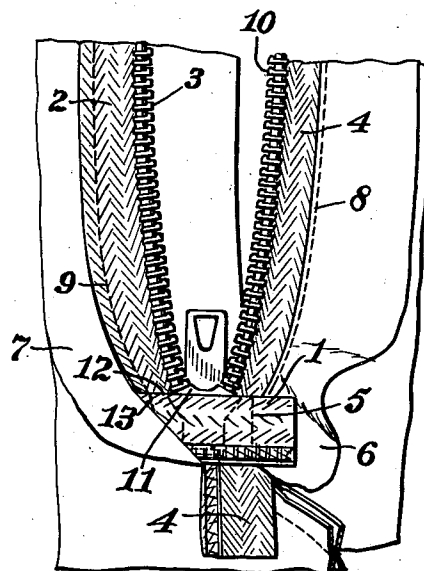
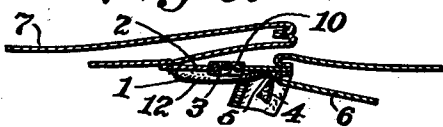


Fig. 3.



Inventor:

Fig. 6.



Lewis I. Levy,

By Spear, Donaldson & Hall

Attorneys.

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2 Sheets-Sheet 2

Fig. 4.

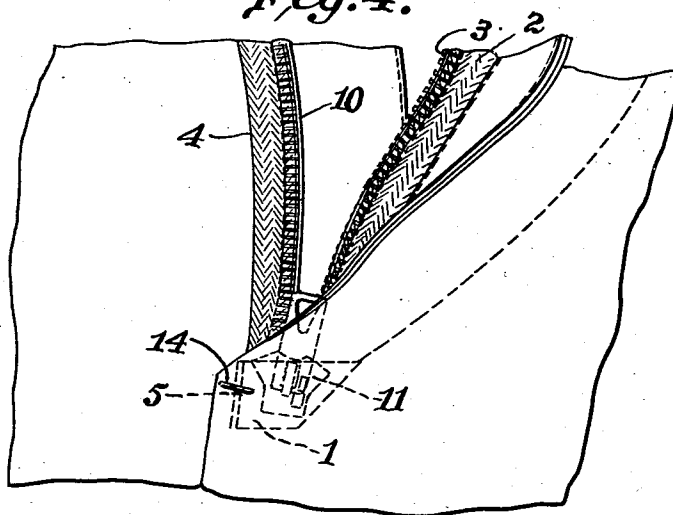
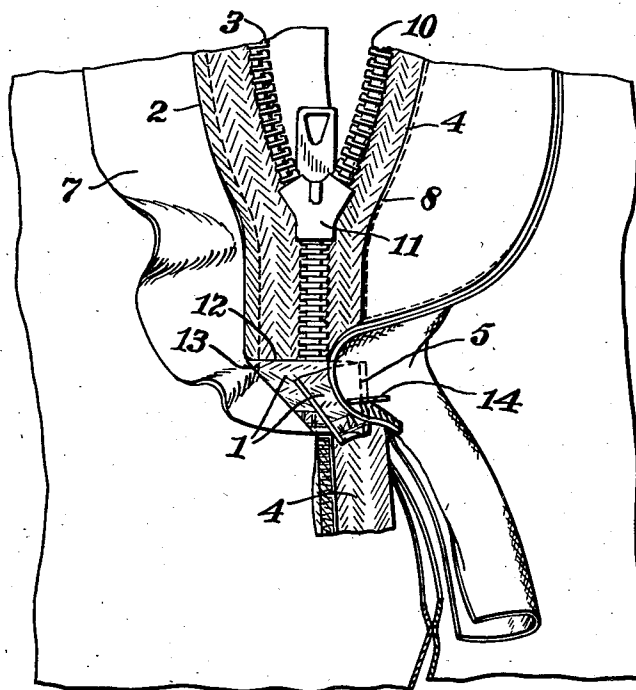


Fig. 5.



Inventor

Lewis I. Levy,

By Spear, Donaldson & Hall

Attorneys

UNITED STATES PATENT OFFICE

2,232,332

STOP CONSTRUCTION FOR SLIDE FASTENER IN CLOTHING OR OTHER ARTICLES

Lewis I. Levy, Baltimore, Md.

Application November 23, 1938, Serial No. 242,066

10 Claims. (Cl. 2—243)

My present invention relates to means for preventing the slide member of a Zipper or slide fastener closure device from becoming disengaged from the fastener elements which are mounted on a pair of tapes or strips of material.

An object of the invention is to provide a novel and effective construction of such stop means for limiting the movement of the slide, and which may be readily and inexpensively made.

A further object is the provision of such stop means for the slide which stop means may be readily applied after the two parts of the article or garment are substantially completely made and finished, each with its tape carrying the fastener elements and joined by the slide, thus enabling each part to be completed separately and independently of the other part.

Other objects will appear hereinafter, the invention comprising the features, combination, and arrangement of parts as hereinafter described, and as particularly pointed out in the claims.

In the drawings, showing the invention applied to trousers, as a desirable example:

Figure 1 is a view of the inside of portions of a trouser construction to constitute the fly of the trousers with slide fastener tapes applied thereto, and showing certain features of the invention.

Figs. 2 and 3 are similar inside views of a portion of a trouser construction embodying features of the invention, and showing the slide of the fastener in different adjusted positions.

Fig. 4 is a front view of a portion of a trouser construction similar to that shown in Figs. 2 and 3, and embodying features of the invention.

Fig. 5 is an inside view of a construction as shown in Fig. 4.

Fig. 6 is a sectional view substantially on line 6—6 of Fig. 2.

Referring to the drawings, 1 represents the end of a tape 2 carrying slide fastener elements 3, which end of tape 1 is folded to extend transversely across the fastener adjacent the lower end thereof and is secured to the opposite tape 4 of the fastener in any suitable way and desirably by means of stitching, for example, as indicated at 5. The stitching 5 joining the transversely extending folded tape end 1 to the opposite tape 4 may preferably be disposed near to the garment or article portion 6, and near to the point of joining of the fastener tape 4 to the portion 6. In the embodiment shown, the portion 6 represents a portion of a trouser fly and 7 represents the other fly portion to which the fastener tapes 4 and 2 are respectively attached as by stitching, as indicated at 8 and 9. The tape 4 carries fastener elements 10 cooperating with the fastener elements 3 of tape 2, and a slide 11 joins them.

In being folded over and secured to the opposite tape 4, the end 1 of tape 2 provides an effective stop against accidental disengagement of the slide from the fastener elements, and while it may be drawn with sufficient tightness across the fastener to cause the lower end of the slide 11 to engage the upper edge 12 of the crossed tape end 1, it may desirably be sufficiently slack or bowed outwardly to provide a pocket to receive the slide as shown in Fig. 3, with the slide abutting and stopped by a portion of the inner part of the pocket.

Preferably the tape end 1 is folded on a substantially diagonal line extending from a point substantially against or adjacent the lowermost fastener element 3 of the tape 2, and upwardly and outwardly to the outer margin of the tape, as shown in Figs. 2 and 3.

Preferably also, as will be apparent in Fig. 1, prior to the application of the slide to the fastener elements, the tape end 1 is folded over desirably during the stitching of the tape 2 to the portion 7 of the article or trouser fly, and the corner stitched as indicated at 13 preferably by extending the line of stitching 9 which secures the tape 2 to the garment or article portion 7. This operation causes the tape end 1 to tend to remain in the angularly folded position, or to readily be returned thereto for being sewn to the other tape 4 substantially in the crotch seam.

The two parts of the article or garment, such as the trouser fly as illustrated, may desirably be substantially completely made and finished separately and independently of the other part, each with its tape carrying the fastener elements sewed thereto prior to assembly and application of the slide 11. In this way, the general factory routine of manufacturing is unchanged, since the present invention providing the stop means by attaching the folded over tape end 1 after the fastener tapes are separately assembled with their respective garment portions, dispenses with the usual metal stops which are ordinarily provided on the slide fastener tapes as supplied. In other words, it has heretofore been necessary to either handle the slide fastener comprising the two tapes with metal stops and slide attached, as a unit, and to attach garment portions thereto, or it has been necessary to use tapes free of metal stops and to apply the metal stops to the tapes after the parts are made and assembled, with the Zipper tapes set in the garment or article. The present invention provides a substantial stop or means to guard against accidental displacement of the slide from the

fastener, which saves the time and handling of the garment or article usually required to provide stops such as the usual metal ones, and which also avoids any special factory routine in manufacturing.

In carrying out my method with particular reference to the fly of pants or trousers, the Zipper tapes are applied preferably by starting at the bottom of the fly and sewing upwardly to the top of the waist portion. The starting point or the placing of the fastener elements or teeth of the Zipper or slide fastener may desirably be approximately one-eighth of an inch above the notch of the pants where the fly ends, or at the point where the joining of the crotch and the seat seam of the pants starts. In sewing the Zipper tape to the right fly or under fly portion, this is desirably done independently of the other fly portion and independently of the other Zipper tape, and is sewed on with the teeth of the Zipper about one-eighth of an inch above the fly notch as indicated above. Likewise, the Zipper tape for the left fly or top fly is sewed thereto independently, and is sewed about one-eighth of an inch above the notch of the fly and over at a distance within the fly as may be required and as is generally done.

The method of my invention also involves before sewing the Zipper tape to the top fly, folding the tape end 1 upon itself substantially transversely of the Zipper and desirably substantially tightly against or near to the lowermost teeth or fastener elements of the Zipper tape, and the outer corner of the fold is preferably stitched through the folded part and the underlying part of the tape, preferably by simply extending or continuing the line of stitching 9 which secures the tape to the top fly portion.

The two parts of the trouser fly or other article may then be assembled substantially as indicated in Fig. 1 with the folded tape end 1 turned down as indicated, and the slide 11 may be applied over the tape ends as shown and moved into engagement with the teeth or fastener elements and moved up to a position such as indicated in Fig. 2. The tape end 1 may then be folded to extend transversely across the lower end of the Zipper or slide fastener and is then secured to the other tape adjacent the fly portion 6, desirably by stitching, such as indicated at 5, substantially at the crotch and seat seam starting point.

The tack stitching or bartacking, represented by numeral 14, at the end of the fly or at the starting point of crotch joining used for the purpose of strengthening that point, according to the invention, may desirably be used also for strengthening or reinforcing the crossed tape stopper by passing through both tapes near the stitching 5. It automatically reinforces and makes the stopping action of the tape end 1 more positive and secure, since the position of the crossed over tape end 1 of the top fly where it engages the under fly tape 4, is desirably directly under the place of tack stitching or bartack.

Referring to Figs. 4 and 5, the bartack or tack stitching is indicated at 14, and as shown, is used in strengthening the end of the fly at the point of crotch joining. As indicated in the drawing, the bartack or tack stitching 14 will preferably pass through the crossed over tape end 1 and the underlying tape 4 near the stitching 5, and it may desirably cross or pass through the stitching 5 to some extent, substantially as indicated, thereby giving additional strength to the tape stopper for the slide.

This method eliminates the metal stopper as heretofore used, the machine to apply the metal stopper and the cost of an operator to operate the machine. It also eliminates the gap and space present in ordinary constructions between the end of the Zipper teeth or the metal stop thereof and the end of the fly. Such a gap is usually needed to clear the teeth or stop by the machine tack stitching or bartacking the end of the fly.

In my method, the Zipper teeth or slide fastener elements are disposed substantially down to or adjacent the tack stitching or bartacking 14 of the fly.

It will be understood that the invention is not restricted to folding over any certain one of the two tapes of the slide fastener as it will be apparent that it may be carried out equally well with either tape crossed over the other, depending upon the desirable requirements of a particular article or garment to which the invention may be applied. For example, if the outer and inner portions of a trouser fly were to be reversed from the arrangement shown, as may readily be done, or as in a skirt placket, the opposite tape from that shown would be the one to be folded and to extend across to the other tape.

The invention is not restricted to a trouser fly, but may be applied to a skirt placket or to slits, pockets, or openings in various garments or articles. Where the portions of the article or garment need not come completely apart at one end of the opening, as is necessary in a trouser fly, but can remain fixed together at both ends, it will be apparent that the folded over tape stop construction of the present invention may be applied to both ends of the slide fastener at both ends of the opening.

In a garment such as a trouser fly, since the upper end of the fly portions must separate completely, the invention is not applicable to the upper end, which has accordingly not been shown, since this construction may be conventional both as to garment structure and as to stop means which may be the usual metal stops or some portion of the garment serving as a stop.

I claim:

1. In combination in a pair of trousers, a closure device for the fly of said trousers, comprising a slide fastener with tapes or strips of material carrying the fastener elements and secured to the adjacent fly portions of the trousers forming said fly opening, a slide joining and mounted on said fastener elements, one of said tapes being substantially straight and unfolded and stitched to the corresponding fly portion in said straight and unfolded condition, and the other of said tapes having its lower end folded over upon itself and extending transversely across and overlying fastener elements of the fastener adjacent the end thereof, and secured to the face of the first mentioned substantially straight unfolded tape, and providing a stop means for preventing the slide from becoming disengaged from the fastener elements, said folded transversely extending tape being free from stitching or securing means where it overlies said fastener elements.

2. In combination, in a pair of trousers, a closure device for the fly of said trousers, comprising a slide fastener with tapes or strips of material carrying the fastener elements and secured to the adjacent fly portions of the trousers

forming said fly opening, a slide joining and mounted on said fastener elements, one of said tapes at its lower end being folded over upon itself and extending transversely across and overlying fastener elements of the fastener adjacent the end thereof, and secured to the opposite tape, thereby forming a stop means for preventing the slide from becoming disengaged from the fastener elements, said folded transversely extending tape being free from stitching or securing means where it overlies said fastener elements and stitching in the form of tack stitching or bartacking at the lower end of the fly passing through one fly portion and through the folded over transverse tape portion and through the said opposite tape and through the other fly portion.

3. In combination in a pair of trousers, a closure device for the fly of said trousers, comprising a slide fastener with tapes or strips of material carrying the fastener elements and secured to the adjacent portions of the trousers forming said fly opening, a slide joining and mounted on said fastener elements, one of said tapes at its lower end being folded over upon itself and extending transversely across and overlying fastener elements of the fastener adjacent the end thereof, and secured to the opposite tape, thereby forming a stop means for preventing the slide from becoming disengaged from the fastener elements, said folded transversely extending tape being folded on a diagonal fold line extending from a point adjacent the terminal fastener elements on the tape upwardly and outwardly to the outer margin of the tape, and stitching passing through both the outer and under portions of the folded tape and securing the double thickness of the folded tape to the underlying fly portion, said stitching being disposed sufficiently distant from the inner margin of the tape and from the fastener elements to permit application of the slide to the fastener elements, said folded transversely extending tape being free from stitching or securing means where it overlies said fastener elements.

4. In combination with a garment or other article having adjacent portions providing an opening, a closure device for said opening comprising a slide fastener with tapes or strips of material carrying the fastener elements and secured to said adjacent portions, a slide joining and mounted on said fastener elements, one of said tapes being folded upon itself and extending transversely across and overlying fastener elements of the fastener adjacent the end thereof, and secured to the opposite tape, thereby forming a stop means for preventing the slide from becoming disengaged from the fastener elements, said folded transversely extending tape being secured in folded condition by stitching securing the overlying portion of the folded tape to the underlying portion thereof and to the garment portion, said stitching being disposed sufficiently distant from the inner margin of the tape and from the fastener elements to permit application of the slide to the fastener elements, said folded transversely extending tape being free from stitching or securing means where it overlies said fastener elements.

5. In combination with a garment or other article having adjacent portions providing an opening, a closure device for said opening comprising a slide fastener with tapes or strips of material carrying the fastener elements and secured to said adjacent portions, a slide joining

and mounted on said fastener elements, one of said tapes being folded upon itself and extending transversely across and overlying fastener elements of the fastener adjacent the end thereof, and secured to the opposite tape, thereby forming a stop means for preventing the slide from becoming disengaged from the fastener elements, said folded transversely extending tape being folded on a diagonal fold line extending outwardly from a point adjacent the terminal fastener elements on the tape, and being secured in folded condition by stitching securing the overlying portion of the folded tape to the underlying portion thereof and to the garment portion, said stitching being an extension of the lengthwise line of stitching which secures the tape to the garment portion, and being sufficiently distant from the inner margin of the tape and from the fastener elements to permit application of the slide to the fastener elements.

6. In combination with a garment or other article having adjacent portions providing an opening, a closure device for said opening comprising a slide fastener with tapes or strips of material carrying the fastener elements and secured to said adjacent portions, a slide joining and mounted on said fastener elements, one of said tapes being folded upon itself to extend transversely across the fastener adjacent the end thereof, and secured to the opposite tape, thereby forming a stop means for preventing the slide from becoming disengaged from the fastener elements, said transversely extending tape overlying a terminal section of said fastener elements, with its inwardly facing edge free of stitching or securing means where it overlies the fastener elements, said edge of the tape serving as a direct stop for the slide or as a stop pocket to receive the slide depending upon the degree of tightness of said tape.

7. In combination with a garment or other article having adjacent portions providing an opening, a closure device for said opening comprising a slide fastener with tapes or strips of material carrying the fastener elements and secured to said adjacent portions, a slide joining and mounted on said fastener elements, one of said tapes being folded upon itself and extending transversely across and overlying fastener elements of the fastener adjacent the end thereof, and secured to the opposite tape, thereby forming a stop means for preventing the slide from becoming disengaged from the fastener elements, said folded transversely extending tape being free from stitching or securing means where it overlies said fastener elements, and said folded tape being folded on a diagonal fold line extending from a point adjacent the terminal fastener elements on the tape outwardly to a point at the outer margin of the tape.

8. In combination, in a pair of trousers, a closure device for the fly of said trousers, comprising a slide fastener with tapes or strips of material carrying the fastener elements and secured to the adjacent fly portions of the trousers forming said fly opening, a slide joining and mounted on said fastener elements, one of said tapes at its lower end being folded over upon itself and extending transversely across and overlying fastener elements of the fastener adjacent the end thereof, and secured to the opposite tape, thereby forming a stop means for preventing the slide from becoming disengaged from the fastener elements, and stitching in the form of tack stitching or bartacking at the lower

- end of the fly passing through one fly portion and through the folded over transverse tape portion and through the said opposite tape and through the other fly portion, said folded over transverse tape portion being secured to said opposite tape by stitching extending substantially lengthwise of said opposite tape, and said bartacking or tack stitching embracing said tape stitching.
9. In combination, in a pair of trousers, a closure device for the fly of said trousers, comprising a slide fastener with tapes or strips of material carrying the fastener elements and secured to the adjacent fly portions of the trousers forming said fly opening, a slide joining and mounted on said fastener elements, one of said tapes at its lower end being folded over upon itself and extending transversely across and overlying fastener elements of the fastener adjacent the end thereof, and secured to the

opposite tape, thereby forming a stop means for preventing the slide from becoming disengaged from the fastener elements, and stitching in the form of tack stitching or bartacking at the lower end of the fly passing through one fly portion and through the folded over transverse tape portion and through the said opposite tape and through the other fly portion, said transverse tape portion being folded back upon itself where it is secured to said opposite tape and said bartack stitching passing through the double thickness of said transverse tape at this point.

10. The trouser construction according to claim 7 in which the folded over tape provides an open pocket in which the teeth or fastener elements forming the end of the fastener are disposed, said fastener elements extending substantially to the bottom of said pocket.

LEWIS I. LEVY. 20