Feb. 11, 1941. F. ULRICH 2,231,645

BRIDGE TOP STOP FOR SLIDE FASTENERS

Filed April 5, 1938

Fig. 1.

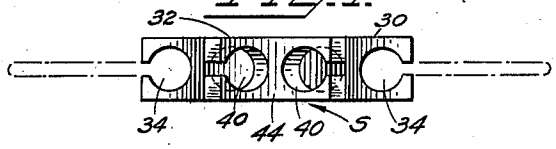
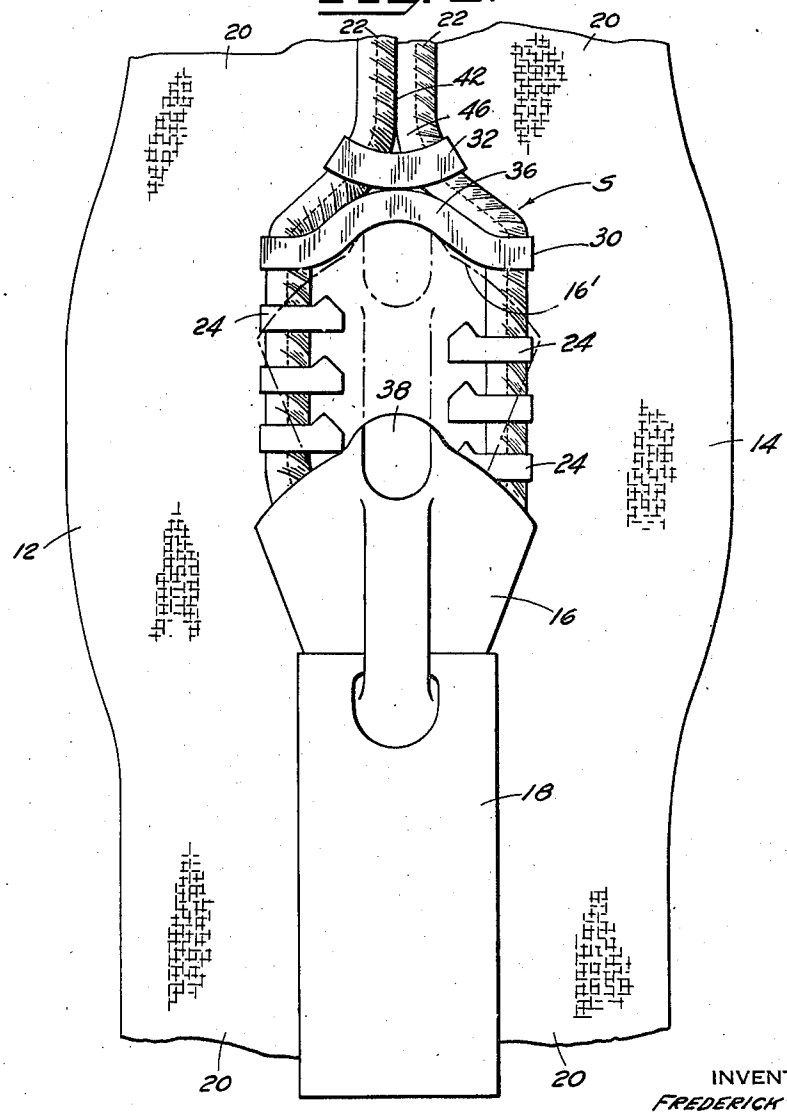


Fig. 2.



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Patented Feb. 11, 1941 2,231,645

UNITED STATES PATENT OFFICE

2,231,645

BRIDGE TOP STOP FOR SLIDE FASTENERS

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Application April 5, 1938, Serial No. 200,068

6 Claims. (Cl. 24—205)

This invention relates to slide fasteners, and more particularly slide fasteners intended for use in a handbag or other application wherein both ends of the slide fastener are united at all times.

The primary object of my invention is to generally improve the top stop used in such a slide fastener. More particular objects reside in the provision of a top stop which holds the tapes apart an amount approximately equal to the spacing of the channels at the top of the slider, and which brings the tapes together in edge to edge contact above the stop; which is so shaped as to conform to the upper end of the slider so that the slider and top stop nest together in intimate and compact fashion when the slide fastener is closed; which is made of two separate parts, each of extremely simple, inexpensive construction and adapted to be manufactured with ease from simple wire stock with a minimum of waste; and which is easy to apply to the tapes of the slide fastener, the parts being disposed in back-to-back contact, thus dispensing with any problem of location of the parts relative to one another on the tapes. In accordance with a feature and object of my invention, the upper member of the two-part stop functions not merely to bring the tapes fairly close together, but instead to bring them into actual edge to edge contact because of the direction in which the said member and tapes are secured together, and at the same time the arrangement is such that any pull on the tapes tending to separate the same is directed substantially perpendicular to the member and is directly restrained by the clamped jaws of the member.

To the accomplishment of the foregoing and such other objects as will hereinafter appear, my invention consists in the bridge stop members and their relation one to the other and to the slide fastener, as are hereinafter more particularly described in the specification and sought to be defined in the claims. The specification is accompanied by a drawing in which:

Fig. 1 is a plan view of the bridge top stop with the tapes omitted except for a schematic representation of the same; and

Fig. 2 is a side elevation of a slide fastener provided with a bridge top stop constructed in accordance with my invention.

Referring to the drawing, the slide fastener is conventional in comprising stringers 12 and 14 and a slider 16, the latter being moved by an appropriate finger piece or pull 18. Each stringer consists of a fabric tape 20 having a beaded edge 22 along which are secured a series of interlockable fastener elements 24. The beaded edge 22 may be formed on the tape either by weaving the same directly into the tape, or, as is perhaps more commonly done, by stitching cords on opposite sides of the edge of the tape.

As so far described the slide fastener may be conventional in character, but the arrangement at the top end of the fastener is believed to be novel. I employ what may be termed a "bridge" top stop, generally designated S. This stop is made up of a relatively long member 30 and a short member 32 disposed above the long member 30. These parts need not be and are preferably not secured together. They are each formed from simple wire stock which, as here illustrated, is rectangular in cross-section. The stock is fed through an appropriate press equipped with a die which punches the jaws and severs and bends or forms the stock to the desired configuration illustrated in the drawing.

The long member 30 has its jaw openings 34 spaced apart an amount substantially equal to the spacing between the channels of the slider 16 at the top of the slider. In this way there is no interference with movement of the slider to the uppermost position on the fastener. Moreover, the middle part 36 of the long member intermediate the jaw openings 34 is bent convexly upwardly, as is clearly shown in the drawing, and the curvature of part 36 is preferably made such as to approximately conform to or in any event to receive the convex upper end 38 of the slider 16. In this way the parts may be nested closely together when the slider is moved all the way up, as is indicated by the broken line position 16', for at this time the neck 38 of the slider is received within the top stop.

From the viewpoint of the manufacturer of the ladies' handbag or other device having a slit which is closed at both ends and the edges of which are to be joined by the slide fastener, it is inconvenient to leave the tapes 20 at the wide spacing produced by the long member 30. The tapes may be sewed into the article with much greater expedition and convenience if the tapes are brought closely together at the upper end in the same manner as they are brought together by the conventional bottom stop at the lower end. The problem of bringing these parts close together is much more difficult at the upper end, however, because they are to be brought together from a wide spacing and with as little waste of longitudinal dimension as possible.

In accordance with my invention, the tapes are brought in edge to edge relation by the short

upper member 32. This is also made of wire stock and is punched at its ends to form jaw openings 40, best shown in Fig. 1. In this case, however, the member is bent convexly downward. One advantage of this is that the jaws are secured to the edges of the tape in substantially perpendicular position, thus facilitating the insertion of the beads in the jaws when clamping the member 32 in place. Another advantage is that the member 32 may be moved down against the member 30, the parts being properly spaced when actually in back-to-back contact. This speeds up the process of attaching the member 32. It will be observed that the member 32 draws the beaded edges of the tape directly around and against the upper wall of the curved part 36 of the long member 30. The compression of the beaded edge by the jaws of members 30 and 32 when they are clamped together, also helps expand the intervening part of the beaded edge, which then substantially fills the space between members 30 and 32. Another and most important advantage of giving the member 32 the configuration shown is that the beaded edges of the tapes are directed angularly toward one another and are thus brought into direct edge to edge contact, as is indicated at 42 in the drawing. It may be explained that it is impossible to bring these parts into edge to edge contact at an element such as the member 32 because it is absolutely essential to leave at least some metal between the jaw openings 40, as is indicated at 44 in Fig. 1. However, by directing the beaded edges angularly toward one another, they come together in close contact at a point slightly above the member 32, as will be evident from inspection of the drawing, this resulting, of course, from the stiffness of the beaded edge which is enough to cause it to take a gradual rather than a sharp bend at the point 46 just above member 32. Still another advantage of the construction shown, deals more with the appearance than the mechanical operation of the top stop, and that is that the disclosed arrangement possesses an attractive appearance and actually ornaments the slide fastener.

The jaw ends of the long member 30 are preferably kept horizontal, for if bent downwardly they would tend to expand the tape edges still further outwardly. In respect to the long member 30, it is solely the middle portion that is bent convexly upwardly. The short member 32 is, however, bent convexly downwardly throughout its length.

It is believed that the construction and method of manufacture of my improved bridge top stop, as well as the many advantages thereof, will be apparent from the foregoing detailed description.

It will also be apparent that while I have shown and described my invention in a preferred form, changes and modifications may be made in the structure disclosed, without departing from the spirit of the invention defined in the following claims.

In some claims the tapes are referred to as extending vertically, while the jaws extend horizontally, and the convexity of the long member is upward, etc., but this terminology is conventional and is used merely for convenience, it being understood that the complete slide fastener may be disposed and operated in any desired position.

I claim:

1. A bridge top stop for a slide fastener, said stop comprising a long member and a short member, said long member having jaws at its ends clamped on the beaded edges of the tapes of a slide fastener and curved convexly upward intermediate the end jaws, said short member also having jaws at its ends clamped on the beaded edges of the tape, the long member functioning to hold the tapes apart, the short member being disposed adjacent the upwardly convex part of the long member and functioning to draw the tapes together and close to the upwardly convex part of the long member.

2. A bridge top stop for a slide fastener, said stop comprising a long member and a short member, said long member being curved convexly upward and having jaws at its ends clamped on the beaded edges of the tapes of a slide fastener, said short member being curved convexly downward and also having jaws at its ends clamped on the beaded edges of the tape, the long member functioning to hold the tapes apart, the short member being arranged in back-to-back contact with the long member, and functioning to draw the tapes close to the upwardly convex long member and to bring the same in edge to edge relation above the bridge top stop.

3. A bridge top stop for use with a slide fastener comprising fastener stringers each including a beaded tape with interlockable elements secured therealong, and a slider movable along said stringers and having a convex upper end, said stop comprising a long member and a short member, said long member having jaws at its ends clamped on the beaded edges of the tapes of the slide fastener to hold the same apart, and being curved convexly upward to conform generally to the convex upper end of the slider in order to receive the same when the slider is moved to its uppermost position, said short member having jaws at its ends clamped on the beaded edges of the tape and being disposed adjacent the long member on the side opposite the slider and functioning to draw the tapes against the long member and to bring the tapes together above the bridge top stop.

4. A bridge top stop for use with a slide fastener comprising fastener stringers each including a beaded tape with interlockable elements secured therealong and a slider movable along said stringers and having a convex upper end, said stop comprising a long member and a short member, said long member having jaws at its ends clamped on the beaded edges of the tapes of the slide fastener to hold the same apart. and being curved convexly upward to conform generally to the convex upper end of the slider in order to receive the same when the slider is moved to its uppermost position, said short member having jaws at its ends clamped on the beaded edges of the tape and being curved convexly downward, said short member being disposed back-to-back with said long member and functioning to draw the tapes against the long member and to bring the tapes in edge to edge relation above the bridge top stop.

5. A bridge top stop for use with a slide fastener comprising fastener stringers each including a beaded tape with interlockable elements secured therealong, said stop comprising main and auxiliary parts, the main part being a relatively long strip of flat metal wire stock disposed transversely of the stringers with only its edge visible when looking at the front of the fastener, the ends of said strip of metal being bifurcated to form jaws localized at the ends and extending generally horizontally and clamped

on the beaded edges of the vertically extending tapes of the slide fastener, said jaws tending to maintain said tapes in parallel vertical relation and to hold the same well apart, the strip of metal being arched convexly upward between the jaws, and said auxiliary part being an additional independent means secured to said tapes directly above the main part and having an effective length much shorter than that of the main part in order to draw the tapes against the upwardly convexed strip of metal and to bring the tapes in edge to edge relation.

6. A bridge top stop for use with a slide fastener comprising fastener stringers each including a beaded tape with interlockable elements secured therealong and a slider movable along said stringers and having a convex upper end, said stop comprising main and auxiliary parts, the main part being a relatively long strip of flat metal wire stock disposed transversely of the stringers with only its edge visible when looking at the front of the fastener, the ends of said strip of metal being bifurcated to form jaws localized at the ends and extending generally horizontally and clamped on the beaded edges of the vertically extending tapes of the slide fastener, said jaws tending to maintain said tapes in parallel vertical relation and to hold the same well apart, the strip of metal being arched convexly upward between the jaws to conform generally to the convex upper end of the slider in order to receive the same when the slider is moved to its uppermost position, and said auxiliary part being an additional independent means secured to said tapes directly above the main part and having an effective length much shorter than that of the main part in order to draw the tapes against the upwardly convexed strip of metal and to bring the tapes in edge to edge relation.

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