

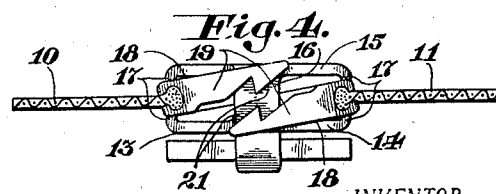
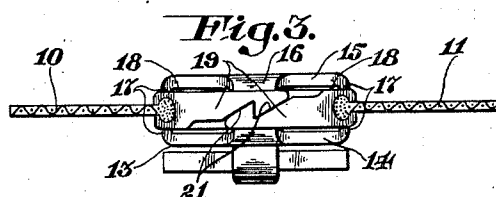
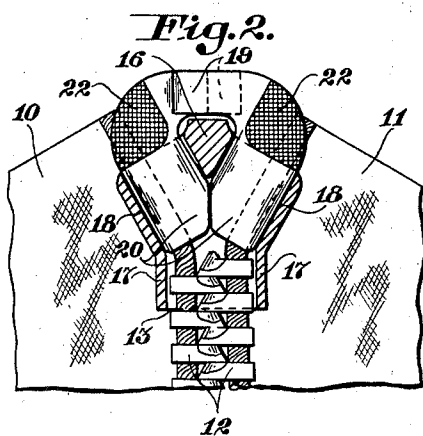
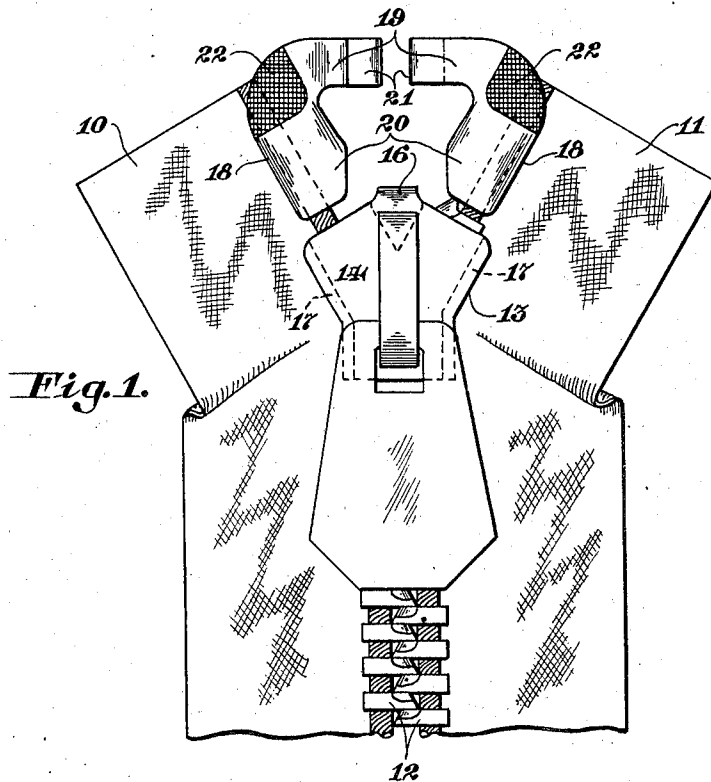
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SLIDE FASTENER

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2,190,609

SLIDE FASTENER

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3 Claims. (Cl. 24-205)

My invention relates to slide fasteners and particularly to means for holding the slider in the closed position.

In the application of slide fasteners to foundation garments, trouser flies, skirt plackets, and other garments, it is usual to provide sliders with locking or retaining devices. Such sliders are commonly called lock sliders and ordinarily depend for their unlocking upon the lifting of the pull tab. It often happens that the wearer of the garment tries to tear open the fastener, thus placing a heavy stress on the locking device. If a pin lock slider, for example, is used, such stresses may cause the pin to slip out of locking engagement with the fastener elements, or misplace the elements along the stringer.

According to my invention, there is provided at the top end of the fastener a separable connection between the stringers which will resist the tearing stresses. In this manner no tearing action can come upon the slider and accordingly, there is no tendency for the slider to slip along the stringers and no need for any lock slider. Preferably the separable connection operates automatically when the slider is moved to fully closed position to fasten itself, but which requires a deliberate unfastening before the slider can be moved to open the fastener.

I am aware of the fact that buttons and hooks have been employed to accomplish, in a measure, this same general purpose, but in my improved fastener the fastening parts are carried directly by the fastener stringers, thereby requiring no special construction of the garment itself. Furthermore, they operate automatically to fasten themselves upon pulling up the slider.

In the accompanying drawing, I have shown for the purposes of illustration, one embodiment which my invention may assume in practice. In the drawing:

Fig. 1 is a plan view of the upper end of a fastener combination in accordance with my invention showing my improved slider retaining device in open position;

Fig. 2 is a detail sectional view showing the parts in locked position;

Fig. 3 is an end view of Fig. 2; and

Fig. 4 is a top view of the retaining members showing them being disengaged from each other for opening the fastener.

The fastener illustrated is a conventional type of slide fastener, and comprises a pair of flexible stringers 10, 11 having attached to their adjacent longitudinal edges cooperating series of spaced fastener elements 12. The series of fastener elements are engaged and disengaged with each other by a slider 13. The slider comprises upper and lower wing portions 14, 15 respectively connected together at one end by a narrow neck portion 16, the wing portions having inturned flanges 17 at their outer edges to define a Y-shaped interior channel.

In order to limit the closing movement of the slider, I provide the stringer connecting members 18 at the upper end of the fastener, attached one to each stringer adjacent the end of the series of fastener elements. These members have opposite laterally projecting hook-like portions 19 on their upper ends, which are adapted to engage with each other to hold the stop member together when the slider is moved to the upper end of the fastener to the closed position. The projecting hook-like portions 19 have beveled faces 21 which are adapted to slide over each other to bring the hook portions into engagement when the slider is moved to its fully closed position.

The lower extending portions 20 of the members are adapted to enter the slider channel, one on each side of the neck portion and are wide enough to substantially fill the channel at the upper end of the slider. The members may have knurled surfaces as at 22 for easy manipulation in opening.

It will be noted that when the slider is moved to the closed position, the members enter the slider channel and the inner surfaces of the flanges 17 of the slider act on the outside edges of the members tending to automatically cam the members inwardly together around the neck portion of the slider, and the hook-like portions 19 of the members ride over each other to connect them automatically together. When the members 18 are connected together, the slider entering portions engage under the neck to prevent the slider movement until the hooks have been manually disconnected. When it is desired to open the fastener the hook-like members are twisted out of engagement as shown in Fig. 4, and the slider moved in the opening direction.

While I have shown and described in this application, one embodiment which my invention may assume in practice, it will be understood that this embodiment is merely for the purposes of illustration and description, and that other forms may be devised within the scope of my invention as set forth in the appended claims.

What I claim as my invention is:

1. In a slide fastener, a pair of stringers having spaced fastener elements along their adjacent

edges, a slider movable along said elements for opening and closing the fastener, said slider having an interior channel with two branches diverging at an acute angle at the top of the slider, and a pair of top stops one attached to each stringer, each of the top stops having a portion of substantially the same length and shape as one of said diverging branches, the adjacent corners of the stops when inserted in said branches being bevelled so as to abut against one another, each of the top stop members also having a hook-like portion which extends at an acute angle to the other portion and of sufficient length to overlap the hook-like portion on the opposite stop member over the top of the slider, said hook-like portions having interengaging means to hold them together.

2. In a slide fastener, a pair of stringers having spaced fastener elements along their adjacent edges, a slider movable along said elements for opening and closing the fastener, said slider having an interior channel with two branches diverging at an acute angle at the top of the slider, and a pair of top stops one attached to each stringer, each of the top stops having a portion of substantially the same length and shape as one of said diverging branches, the adjacent corners of the stops when inserted in said branches being bevelled so as to abut against one another, said top stops having similarly shaped hook-like portions extending toward one another

over the top of the slider, the ends of said hook-like members being oppositely bevelled to permit them to slide over one another and automatically hook together when the slider is pulled into closed position.

3. In a slide fastener, a pair of stringers having spaced fastener elements along their adjacent edges, a slider movable along said elements for opening and closing the fastener, said slider having an interior channel with two branches diverging at an acute angle at the top of the slider, the slider having a central neck spreading the diverging branches at the top of the slider, and a pair of top stops each of which has an attaching portion of substantially the same size and shape as one of said diverging branches and having a loose fit therein, and interengaging portions extending from said attaching portions toward each other over the slider into overlapping relation, said interengaging portions having cooperating projections and recesses on their adjacent overlapping faces, the overlapping ends of said interengaging portions being adapted to be spread apart by relative twisting movement of the attaching portions in the slider channel to disengage said projections and recesses, the attaching portions engaging under the slider neck to hold the slider in position when said projections and recesses are engaged.

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