Sept. 23, 1941. F. LEMMER 2,256,680

SLIDER LOCK FOR SLIDE FASTENERS

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Fig. 1.

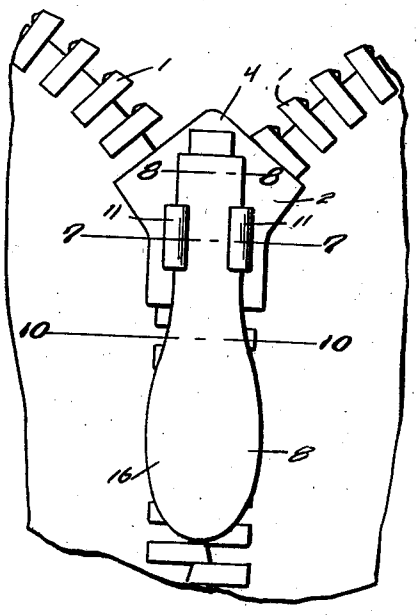


Fig. 2.

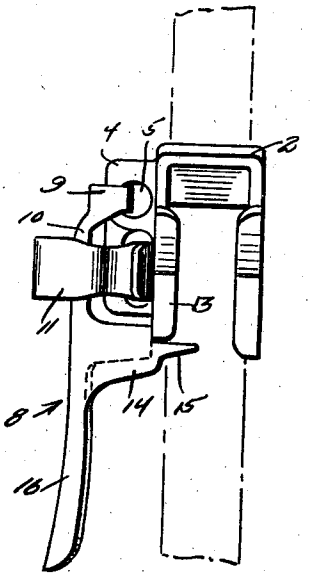


Fig. 3.

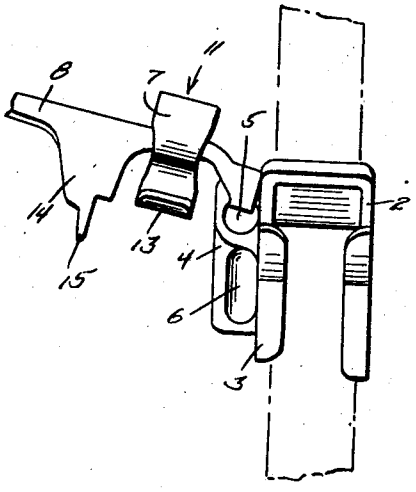
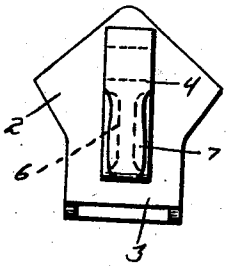


Fig. 4.



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Fig. 5.

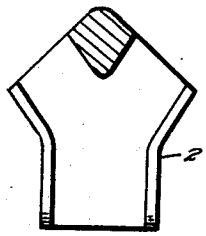


Fig. 7.

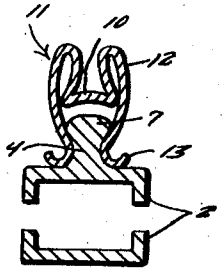


Fig. 6.

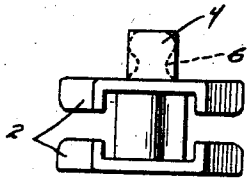


Fig. 8.

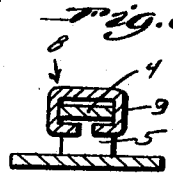


Fig. 9.

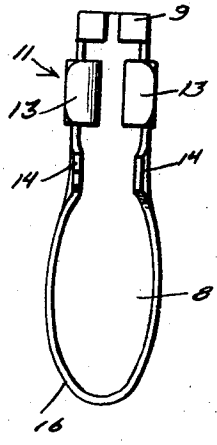
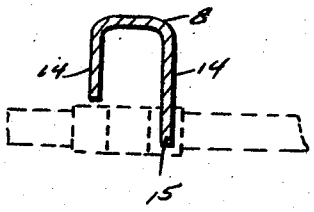


Fig. 10.



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Patented Sept. 23, 1941 2,256,680

UNITED STATES PATENT OFFICE

2,256,680

SLIDER LOCK FOR SLIDE FASTENERS

Frederick Lemmer, Irvington, N. J.

Application April 7, 1941, Serial No. 387,307

4 Claims. (Cl. 24—205.5)

This invention relates to a slider lock for slide fasteners or "zippers," the general object of the invention being to provide a handle which is pivotally connected with the front part of the slider and which has a projection thereon for fitting between some of the inter-engaging coupling or fastening elements of the slide fastener for firmly holding the slider in adjusted position.

Another object of the invention is to provide spring means for holding the handle in locking position and also to provide means for preventing the handle being pressed too far toward the slider which might cause the locking projection to damage the coupling elements of the zipper.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claims.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:

Figure 1 is a fragmentary elevational view showing parts of a zipper with the invention applied thereto.

Figure 2 is an edge view of the slider and the parts associated therewith.

Figure 3 is a view similar to Figure 2 but showing the handle in raised position so that the slider can be moved.

Figure 4 is a view of the slider with the handle removed.

Figure 5 is a sectional view through the slider.

Figure 6 is an end view of the slider.

Figure 7 is a section on the line 7—7 of Figure 1.

Figure 8 is a section on the line 8—8 of Figure 1.

Figure 9 is a view of the handle and looking toward the underside of the handle.

Figure 10 is a section on the line 10—10 of Figure 1.

The zipper or slide fastener is, as is well known, composed of the coupling elements 1 and the slider 2 which as it passes over the elements 1 couples them together so as to close the opening in the garment or other object to which the zipper or slide fastener is connected. The slider 2 is of substantially conventional form with the exception that its front limb 3 is made shorter than its rear limb, see Figure 2, and the front face of said front limb has an elongated bar-like member 4 connected therewith. This member has a laterally extending hole 5 therein adjacent one end thereof and the other end portion is formed with the recesses or notches 6 in its sides, these notches being elongated and extending longitudinally of the bar and above these notches the bar is rounded as shown at 7, see Figure 7. Thus this portion of the bar is of a cross-sectional shape which provides a head part at its outer edge and concavities or recesses in its side portion.

A handle member 8 is preferably formed of a single piece of material cut and bent to provide an elongated handle member having the channel-shaped part 9 at one end thereof, this part being of short length with its flanges bent inwardly to engage the hole 5, see Figures 2 and 8, so that the handle member is pivoted to the bar 4. Inwardly of the channel-shaped part 9, the handle is formed with an arched part 10 from the side edges of which wings 11 extend and these wings are bent upwardly to form the loops 12 and then the wings extend downwardly and have their free ends bent into rounded hooks 13. These wings as formed as shown in Figure 7 form spring jaws with the hooks 13 engaging the notches or recesses 6 in the bar 4 when the handle is in operative position so that the handle is held to the bar though by pulling the handle outwardly the spring parts will release the bar. Beyond the arched part 10 the handle is formed with the inwardly extending limbs 14, one of which is provided with a pointed projection 15. The rest of the handle is shaped to form a hand grip as shown at 16. Thus part of the limb 14 which is free of the projection 15 forms a stop and the other limb 14 has its free end forming a stop, these stops engaging the limb 3 of the slider for limiting movement of the handle toward the slider and this prevents the projection 15 from entering between the elements 1 a too great an extent. Thus it will be seen that when the handle 8 is in raised position as shown in Figure 3 the slider can be moved to open or close the opening to the edges of which the elements 1 are connected. The slider can be moved by gripping the bar 4 or it may be moved by the handle 8. Then when the slider has been moved to the desired extent in a closing movement of the opening the handle 8 is swung from the position shown in Figure 3 to that shown in Figure 2. This will cause the projection 15 to enter between some of the elements 1 though this penetration is limited by the stops formed by the limbs 14 engaging the slider. Also, the spring jaws will engage the recesses 6 and thus firmly hold the handle in closed position with the projection 15 engaging between

some of the elements 1 and thus the slider will be firmly locked in adjusted position and it cannot be moved until the handle 8 is forcibly moved from the position shown in Figure 2 to that shown in Figure 3.

By shortening the front limb 3 it is not necessary to form a hole in said limb for the locking member 15 and the spring members 11 should be so formed that they will not lose their resiliency or gripping qualities even though the device is used for a long time.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts provided that such changes fall within the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. In a slide fastener, a slider and coupling elements, a bar on the front face of the slider having recesses in its side edges, a handle pivotally connected with the bar, a projection on the handle for engaging parts of the coupling elements to lock the slider in adjusted position, and spring jaws connected with the handle for engaging the recesses for holding the handle in position with the projection engaging the coupling elements.

2. In a slide fastener including coupling elements and a slider, a bar on the front face of the slider having recesses in its side edges, a handle pivoted to the bar, spring jaws connected with the handle for engaging the recesses for holding the handle in closed position, a projection on the handle for engaging portions of the coupling elements to lock the slider in adjusted position, the front part of the slider to which the bar is connected being shorter than the rear portion and the projection passing the end of the short part when in operative position.

3. In a slide fastener including coupling elements and a slider, a bar on the front face of the slider having recesses in its side edges, a handle pivoted to the bar, spring jaws connected with the handle for engaging the recesses for holding the handle in closed position, a projection on the handle for engaging portions of the coupling elements to lock the slider in adjusted position, the front part of the slider to which the bar is connected being shorter than the rear portion and the projection passing the end of the short part when in operative position, and a stop formed on the handle engaging the front of the slider for limiting inward movement of the handle.

4. In combination with a slide fastener including coupling elements and a slider, a bar formed on the front of the slider and having a hole in one end and recesses in the sides thereof, a handle having a channel-shaped part at one end thereof, inwardly extending projections on the flanges for engaging the hole to pivotally connect the handle to the bar, hook-shaped wings on an intermediate part of the handle with the outer limb of each loop extending beyond the other limb and terminating in a rounded gripping part, said gripping parts gripping the recessed part of the bar for holding the handle in closed position, a pair of limbs extending inwardly from the handle and spaced from the wings, said last-mentioned limbs having flat parts for engaging the front face of the slider for limiting inward movement of the handle, a projection on one of the last-mentioned limbs for engaging parts of the coupling elements to prevent movement of the slider and the front limb of the slider being shorter than the rear limb for permitting passage of the projection.

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