March 31, 1942. W. HOFLICH 2,277,978

SLIDE FASTENER

Filed Sept. 14, 1940

Fig. 1

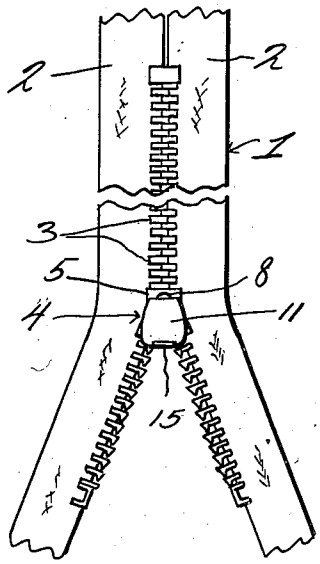


Fig. 3

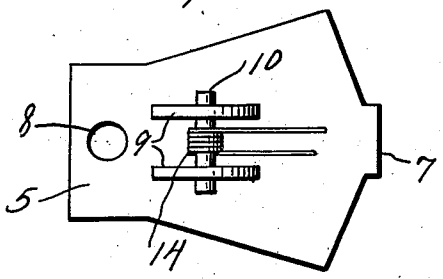


Fig. 2

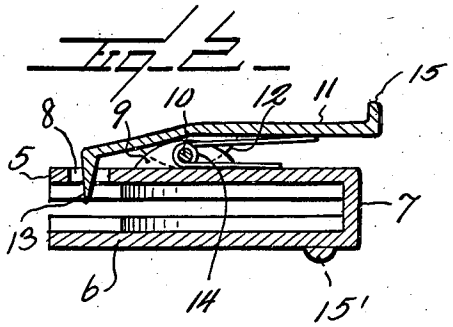
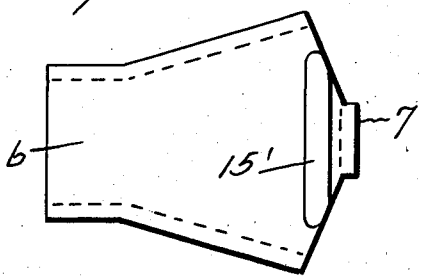


Fig. 4



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SLIDE FASTENER

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4 Claims. (Cl. 24—205.5)

This invention relates generally to the class of garment fastening devices and pertains particularly to improvements in the type of fastener known as a slide fastener.

As is, of course, known, the slide fastening devices which are in popular use for closing garments and the openings of various articles such as bags, etc., are provided with a pivoted or freely hung tab for facilitating taking a hold upon the slide of the fastening device and shifting the same as is necessary for the purpose of opening or closing the device. Because of the provision of this tab which is attached to the outer face of the fastener slide, it has frequently occurred that, where the slide is used to close an article of clothing, in shifting the slide for the purpose of closing the same, other articles become caught or jammed between the slide and the interlocking members which the slide brings together, resulting in inconvenience and possibly the tearing of clothing.

The present invention has for its primary object to provide a slide fastener which is designed in such a manner that it is necessary for the person using the same, when shifting the slide, to take the slide between the thumb and index finger, thus making it impossible for the user to catch any part of the clothing between the interlocking members and the slide as the members are shifted into interlocking relation, because of the fact that the fingers are disposed between the edges of the material which the fastener draws together and they, therefore, function to shift or move aside any portion of the clothing which might get in between the members.

Another object of the invention is to provide an improved slide fastener designed to accomplish the above stated result, in which a novel means is employed for securing or locking the slide in position when it is released from between the fingers, said locking or fastening means being actuated when the slide is taken between the fingers to a position where it releases the interconnected members so as to permit the slide to be readily shifted for opening or closing the device.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming part of this specification, with the understanding, however, that the invention is not to be confined to any strict conformity with the showing of the drawing but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawing:

Fig. 1 is a view in plan of a slide fastener showing the improved slide forming the present invention.

Fig. 2 is a longitudinal sectional view through the slide member per se.

Fig. 3 is a view in top plan of the slide with the latching plate removed.

Fig. 4 is a view in bottom plan of the slide.

Referring now more particularly to the drawing, the numeral 1 generally designates a slide fastener unit as it may be obtained ready for installation in a garment opening or in any other opening which the device is intended to control, such fastener comprising the usual pair of tapes 2 along an edge of each of which is secured a number of locking members 3, which are in the form of short bars, each having at the end remote from the edge of the tape, a lug and a depression for interlocking connection with corresponding lugs and depressions of the members along the edge of the other tape. The construction and operation of this interlocking member is well known, therefore, further detailed description of the same is considered unnecessary.

In accordance with the present invention there is provided a slide body which is indicated generally by the numeral 4. This body consists of the usual pair of spaced parallel plate members 5 and 6, which are joined together at one end, as indicated at 7, and between which the interlocking members pass when the slide is shifted longitudinally of the fastening device, the interlocking members being drawn in together so as to be arranged in the desired interlocking relation.

The plate 5 of the slide body is provided adjacent the constricted end of the slide with an aperture 8 and upon the longitudinal center of this plate and in spaced relation with the aperture 8, there are secured or formed a pair of spaced ears 9 transversely of which extend a pivot pin 10.

The numeral 11 designates a latch plate which is preferably of a size to substantially cover the plate 5 in which the aperture 8 is formed. This latch plate has one or more ears 12 upon its under side which position between the ears 9 and are traversed by the pivot pin 10, so that the latching plate is oscillatably supported upon the slide plate 5.

At the constricted or forward end of the slide, the latching plate 11 is provided with a locking

tongue or prong 13, which is arranged to extend through the aperture 8 when the latching plate is oscillated in one direction. When the prong is projected through the aperture 8, it engages between a pair of the interlocked members 3 and thus holds the slide against accidental movement.

In order that the prong 13 may be held in securing relation with the members 3, there is provided a light spring 14, which may be wound around the pin 10 or secured in any other suitable manner between the plates 5 and 11 to exert the necessary pressure upon the under side of the plate 11, so as to effect the oscillation of the latch plate in a direction to project the prong through the aperture 8.

The rear edge of the latching plate 11 is provided with a flange 15 which extends transversely of the plate and formed across the under side of the slide plate 6 remote from the plate 11, is a corresponding flange or rib 15'. These flanges 15—15' assist the user of the device in obtaining a proper hold upon the slide when shifting the same, particularly when moving the slide in a direction to interlock the members 3 so as to close the fastening device.

From the foregoing, it will be readily apparent that in a slide fastener constructed in accordance with the present invention, it will not be possible to grasp the slide element 4 comfortably in order to shift it for the opening or closing of the fastener without taking the entire slide and the latching plate between two fingers such as the thumb and index finger. In order to do this, one of the fingers will have to be placed inside of the opening and thus that finger will operate to push aside any part of a garment which may tend to bulge through the opening and would thus be likely to be caught in the slide as the same is drawn to closed position. It will also be readily seen that in taking the slide between the fingers, pressure may be applied thereto so as to oscillate the latching plate 11 to shift the prong 13 out of engagement with the members 3, thus simultaneously releasing the slide for movement as it is grasped to be shifted.

Because of the fact that the usual hanging tab is eliminated from the slide of the present invention, it will be seen that it will not be possible for any one to shift the slide in any way other than the way intended and, therefore, the accidental catching of clothing or other bodies in the slide will be positively prevented.

In certain types of slide fasteners such as are at present in use, where a resiliently actuated fastener is employed, when the slide is being shifted for the purpose of closing the fastener, the securing device corresponding to the pin 13 of the present invention, drags over the interlocking members 3 and, therefore, is subjected to considerable wear in addition to causing wear of the interlocking members. In the present invention, however, it will be noted that when the slide is grasped for the purpose of shifting it in either direction and particularly in shifting it in a direction to close the fastener, the locking point 13 will be held raised or free from contact with the interlocking members 3 and, therefore, no wear occurs either upon the locking pin or upon the interlocking members.

What is claimed is:

1. In a slide fastener of the character employing two rows of interconnected members and a slide body facilitating the interconnection and release of such members, a slide body including a pair of spaced plates joined together to facilitate the slipping of the interconnected members therebetween, a latching plate disposed in spaced substantially parallel relation with one of the slide plates for movement of an end from said parallel relation toward and from the adjacent slide plate and having a prong adapted for connection between a pair of the interconnected members, means coupling the latching plate with said adjacent slide plate by which said movement is facilitated, and means resiliently resisting movement of the latter plate toward the adjacent slide plate and maintaining said prong connected between interconnected members whereby to require the compression of the said end of the latching plate toward the slide plate to effect the movement of said prong from the interconnected members to release the prong therefrom.

2. In a slide fastener of the character including a pair of rows of interconnected members, a slide body having a passageway therethrough through which the rows of members slide, the slide body having an opening through one side thereof directed toward the interconnected members, a plate disposed upon the side of the body having the opening therethrough and lying substantially parallel with the said side of the body, pivot means spaced from the ends of the plate and located between the plate and the slide body by which the plate has limited oscillatory movement on the body, a prong at one end of the plate arranged for extension through said opening for engagement between a pair of connected members, and spring means interposed between the plate and the body and normally urging the plate to oscillate in a direction to move the other end of the plate away from the body for the projection of the prong through the opening.

3. In a slide fastener of the type having two rows of interconnectible members and a slide body facilitating connection and disconnection of the members, a latching member disposed upon one side of the slide body and extending lengthwise thereof, means joining said member to the body by which movement of a portion of the member may be effected relative to the body while maintaining at all times the disposition of the member lengthwise of the body, resilient means coupling the member with the body and resisting movement of the said portion of the member toward the body, and means carried by the member remote from said portion for connection between a pair of interconnected members and having such connection maintained by the action of said resilient means, the said last means being shifted for disengagement from the interconnected members only by compressing the latching member toward the body against the tension of the resilient means.

4. In a slide fastener of the type having two rows of interconnectible members and a slide body facilitating connection and disconnection of the members, an elongated latching member disposed upon one side of the slide body and extending lengthwise thereof, a pivot element interposed between the latching member and the adjacent side of the slide body for the support of the latching member for oscillation on an axis extending transversely of the slide body and located substantially midway between the ends of the latching member, said latching member having an inwardly directed prong extending from one end through an opening in the adjacent side of the slide body for connection between

a pair of connected members, the latching member from said pivotal connection to its other end being disposed substantially parallel with the adjacent side of the slide body, the said other end being held against movement outwardly from the slide body beyond its said parallel relation with the slide body, and a spring interposed between the said other end of the latching member and the slide body and resisting the inward movement of the said other end of the latching member for the disengagement of said prong from the connected members.

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