Jan. 27, 1959 N. J. POUX 2,870,507

SLIDER FOR SLIDE FASTENERS

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Fig. 1.

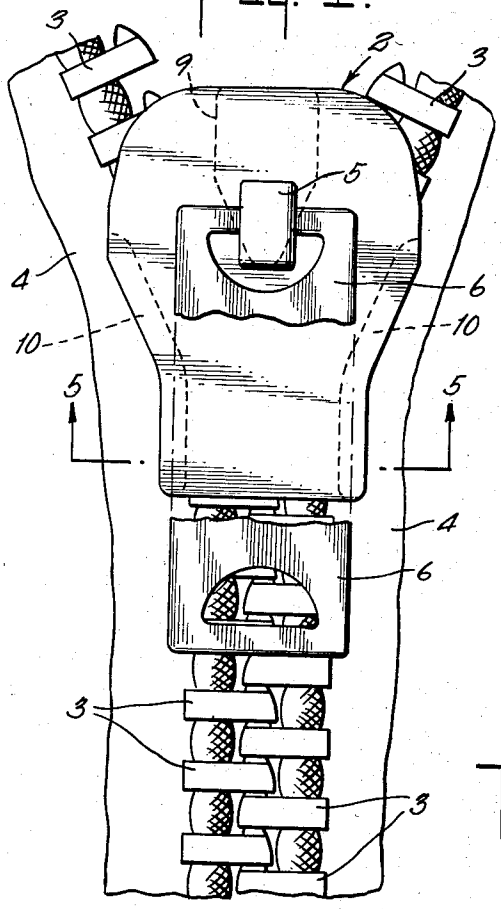


Fig. 2.

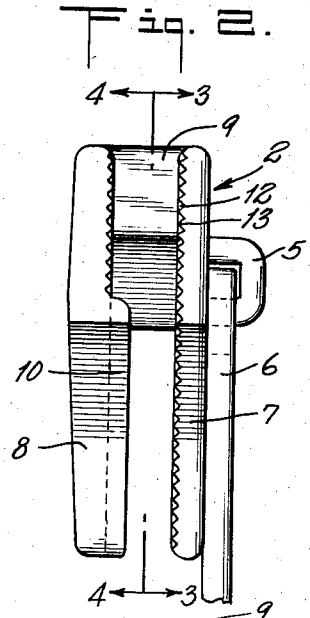


Fig. 4.

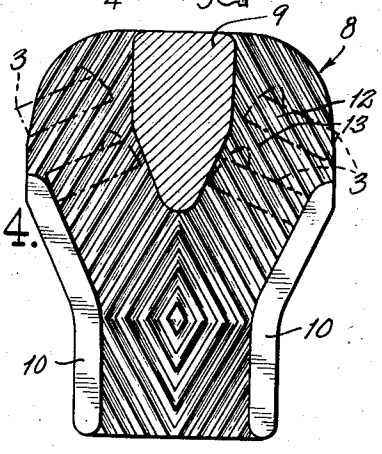
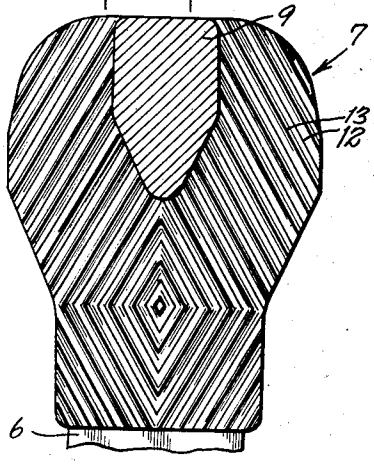


Fig. 3.



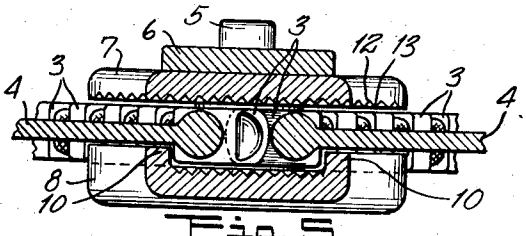


Fig. 5.

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SLIDER FOR SLIDE FASTENERS

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2 Claims. (Cl. 24—205.15)

This invention relates to slide fasteners, and particularly to an improved slider therefor.

It is the general object of the present invention to provide an improved slider for slide fasteners which will function more smoothly on the slide fastener chain to open and close the fastener than any other slider heretofore suggested or used.

It is another object of the invention to provide an improved slider of such a construction that foreign objects or materials will tend to be deflected or guided out from between the wing portions thereof in the event that such materials pass into the slider between the wing portions thereby tending to eliminate any catching or jamming of the slider.

It is a further object of this invention to provide a slider which is simple and inexpensive in its construction and, at the same time, efficient and effective in its use.

It is a more specific object of my invention to provide an improved slider having ridges therein which act both as bearing surfaces for the fastener element as they pass into and through the slider thereby reducing frictional contact to a minimum, and as means for guiding foreign materials from between the wings and out of the slider.

Various other objects and advantages of this invention will be more apparent in the course of the following specification, and will be particularly pointed out in the appended claims.

In the accompanying drawings, there is shown for the purpose of illustration, an embodiment which my invention may assume in practice.

In these drawings:

Fig. 1 is a fragmentary plan view of a slide fastener having the improved slider of my invention incorporated therewith;

Fig. 2 is a side view of my improved slider;

Fig. 3 is a sectional view taken on line 3—3 of Fig. 2, showing fastener elements in phantom;

Fig. 4 is a sectional view taken on line 4—4 of Fig. 2; and

Fig. 5 is a sectional view taken on line 5—5 of Fig. 1.

Referring more particularly to the drawings, there is shown in Fig. 1, a conventional type slide fastener having the improved slider 2 of my invention shown therewith. Such a fastener consists generally of cooperating rows of spaced-apart interlocking fastener elements 3 attached to the opposed beaded edges of stringer tapes 4. The slider is movable along the fastener elements to open and close the fastener in a well-known manner. On the outer side of the upper wing, there is provided preferably a lug 5 to which a pull member 6 is pivotally attached for manipulating the slider.

Such a slider consists generally of a body member having spaced-apart upper and lower wing portions 7 and 8, respectively, integrally connected together at one end thereof by means of a neck portion 9. Along the marginal edges of one of the wing portions, the lower wing portion 8 as shown in the present instance, there are arranged inwardly extending marginal flanges 10 so as

to provide substantially a Y-shaped channel in the body member into and through which the fastener elements pass in the opening and closing movement of the slider. It will be seen that in the present instance there are no marginal flanges on the upper wing 7 as usually provided in conventional sliders, but in some instances it may be desirable to provide flanges on both wing portions as is conventional. The flanges have been eliminated from one of the wings so as to tend to reduce to a minimum any danger of catching foreign materials between such flanges and the fastener elements which might tend to happen if such flanges were supplied.

According to the present invention, there is arranged on the inner surface of each of the wing portions 7 and 8 a plurality of grooves 12 so as to provide a plurality of knife-like ridges 13. These grooves and ridges extend transversely of the wing portions and at an angle to the center line of the slider, and with the grooves and ridges on one side of the center line of the slider arranged angularly to those on the opposite side thereof. Also, the grooves 12 and ridges 13 are arranged angularly to the path of the fastener elements through the slider which is an important aspect of the present invention. It is preferable that the grooves and ridges on the upper portion of the wings extend in one direction while those on the lower portion thereof extend in another direction for a reason and purpose hereinafter to be described. As shown, the grooves and ridges on one side of the upper portions of the wings are arranged substantially perpendicular to those on the same side of the wings on the lower portions thereof.

These grooves 12 and ridges 13 serve a multiple purpose. In the first place, the edges of the knife-like ridges serve as bearing points or surfaces for the fastener elements as they pass into and through the slider thereby reducing to a minimum the frictional contact of the elements with the inner surfaces of the wing portions. It is the general practice to wax or otherwise lubricate the fastener elements 3 so as to provide a smooth running fastener and, consequently, wax or lubricant will collect in these grooves and tend to continuously lubricate the elements as they pass therethrough.

One of the most important functions of the ridges 13 especially at the mouth of the channel due to the arrangement thereof is to deflect or guide flimsy material or other foreign objects toward the marginal edges of the wings upon movement of the fastener elements into and through the channel so as to aid in preventing foreign materials from entering the channel with the fastener elements. This is due to the angular arrangement of the ridges at both ends of the channel. That is to say, the ridges are so arranged that in the event foreign materials pass into the slider channel they are deflected or guided by the ridges to the marginal edges thereof and out of the slider channel. It will be understood that these ridges and grooves may be arranged in any one of several forms or angles to obtain the desired result. Also, while in the present instance there is shown grooves and ridges on both wing portions, they may be disposed merely on one of the wing portions if desired.

As a result of my invention, it will be seen that there is provided a simple and inexpensive slider construction which serves to lubricate the fastener, to reduce to a minimum frictional contact of the elements with the wing portions, and to eliminate the catching of materials or foreign objects in the slider thereby preventing jamming and catching.

While I have shown and described an embodiment which my invention may assume in practice, it will be understood that this embodiment is merely for the purpose of illustration and description, and that other forms

may be devised within the scope of my invention as defined in the appended claims.

What I claim as my invention is:

1. A slider for slide fasteners of the type having a series of spaced-apart interlocking fastener elements attached to the opposed edges of a pair of stringer tapes, comprising a body member having spaced-apart wing portions connected by a neck portion at one end thereof, at least one of said wing portions having inwardly extending marginal flanges so as to provide substantially a Y-shaped channel therebetween, at least one of said wing portions having two sets of closely spaced grooves arranged on the inner side thereof so as to provide a plurality of closely spaced knife-like ridges having inclined side walls over which ridges the fastener elements pass in the opening and closing of the fastener, one set of grooves and ridges arranged in the upper portion of said wing and the other set of grooves and ridges arranged in the lower portion thereof, both sets of grooves and ridges extending outwardly from substantially the longitudinal center line of said wing and arranged angularly relative to the path of the fastener elements through the channel of said slider body with the grooves and ridges in the upper portion of said wing tending to converge toward the upper end of the slider body and with the grooves and ridges in the lower portion of said wing tending to converge toward the lower end of said wing.

2. A slider for slide fasteners of the type having two stringers comprising tapes provided with a series of spaced-apart interlocking fastener elements, said slider comprising a front wing and a rear wing spacedly connected at the upper end of the slider by a neck portion, at least one of said wings having inturned side flanges along its side edges to thereby provide a substantially Y-shaped internal

channel having a stem portion and upwardly diverging arm portions for the engagement and disengagement of the interlocking elements, at least one of said wings having a plurality of closely spaced grooves arranged on the inner side of the arm portions to either side of the longitudinal center line of the wing and extending outwardly therefrom so as to provide a plurality of closely spaced knife-like ridges having inclined side walls over which ridges the fastener elements pass in the opening and closing of the fastener, said grooves and ridges covering substantially the entire area of said wing and converging toward the neck portion and the longitudinal center line of the wing and a plurality of similar closely spaced grooves arranged on the inner side of the stem portion to either side of the longitudinal center line of said wing and extending outwardly therefrom so as to provide a plurality of similar closely spaced knife-like ridges having inclined side walls over which ridges the fastener elements pass, said last mentioned grooves and ridges diverging outwardly from the longitudinal center line of said wing toward the neck portion of said slider.

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