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PULL LOCK FOR SLIDERS

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Fig. 1.

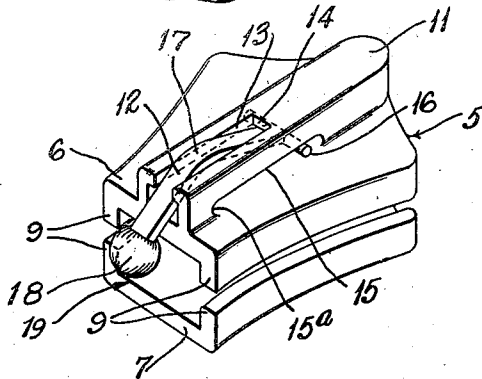
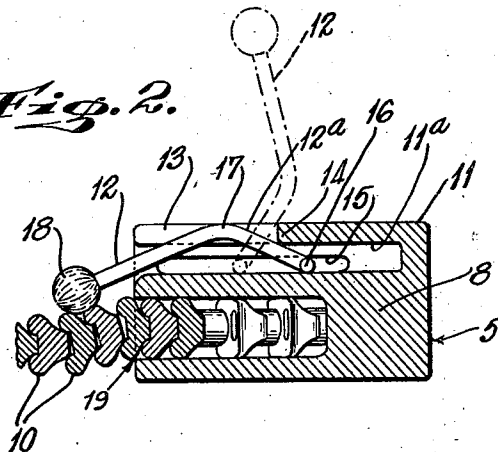


Fig. 2.



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PULL LOCK FOR SLIDERS

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7 Claims. (Cl. 24—205.5)

This invention relates to a novel and improved form of pull lock for sliders, the novel features of which will be best understood from the following description and the annexed drawing, in which I have shown a selected embodiment of the invention and in which:

Fig. 1 is a perspective view of a lock slider made according to my invention;

Fig. 2 is a longitudinal sectional view through the slider shown in Fig. 1 and illustrating its locking action.

The invention relates to lock sliders for separable fasteners of the type commonly referred to as zippers, and with such fasteners employing a lock slider it has been common to place the locking element near or at the pivot end of the pull used to operate the slider or to engage the links of the fastener by some kind of a lock element disposed within the boundaries of the slider. According to my invention, however, I utilize the end of the pull as a locking member, as will be explained more fully.

In the accompanying drawing, 5 represents a channeled slider body having spaced top and bottom walls 6 and 7, joined at the wide end of the slider by a connecting web 8 forming the usual diverging channels at the wide or upper end of the slider, which merge into a single channel at its narrow or lower end. The top and bottom walls 6 and 7 have inturned flanges 9 at their side edges which engage the links 10 of the fastener stringers in coupling said stringers together in the usual manner. The coupled or engaged links are illustrated at the contracted end portion of the slider as seen in Fig. 2 of the drawing.

Extending centrally and longitudinally of the top wall and on its upper surface is an elongated lug 11 on which is slidably and pivotally supported a finger piece or pull 12. The lug 11 has an elongated slot 13 therein which extends from an end wall 14 thereof to the narrow or lower end of the slider, at which end the slot is open, as plainly shown in the drawing.

The lug 11 has a chamber 11a therein, in the side walls of which are formed elongated apertures 15, the edges of which form elongated bearings which extend lengthwise of the slider and slidably and pivotally engage the pivot 16 of the pull. In the illustrated embodiment, this pivot may be in the form of a crosshead at the end of the pull.

The pull which is preferably made of resilient material such as metal is bent intermediate its ends, as shown at 17 and thus provided with an arm 12 and an arm or wedge portion 12a, and

the free end of the pull is provided with a locking member, here shown as a ball 18, the parts being so arranged that this ball 18 is adapted to extend beyond the lower end of the slider and approximately into alignment with the channel at that end.

The function of the device is to lock the slide against movement in one direction (to the left as shown in Fig. 2) in the following manner:

The ball 18 and the body of the slide are grasped between the fingers and the portion 12a of the shank of the pull is forced or jammed in the chamber 11a between the wall or stop 14 and the top wall 6 of the slide. This forces and holds the ball 18 against the links 10 and, in turn, jams the links 10 against the edge 19 of the lower wall 7 of the slide and out of their normal alignment with the channel between the top and bottom walls 6 and 7. Downward movement of the slide (movement to the left as shown in Fig. 2) is then prevented by engagement of the edge 19 with the links 10.

To release the slide from the locked position, the pull is moved out of the jammed position shown in Fig. 2 by moving it to the left of the position shown in full lines in Fig. 2. The slide can then be freely moved along the links. In moving the slide to the left of the position shown in Fig. 2, the ball is normally held by the fingers with the cross head 16 engaging the end 15a of the slot 13. In moving the slide to the right of the position shown in Fig. 2, the pull may conveniently occupy the position shown in dot and dash lines in Fig. 2.

Normally the pull is moved to the right (which may be an upward movement) as far as it will go and in contact with a conventional stop. It is then locked in position in the manner set forth and movement in the opposite direction is prevented.

Preferably, the pull is arranged as shown and described in a manner such that the locking member will operate in alignment with the single channel at the lower or narrow end of the slider, but, if desired for any reason, the invention could be adapted to have the locking member operate in either one of the other channels. Ordinarily, however, the arrangement shown is preferable.

While I have shown the invention as embodied in a specific form, it is to be understood that various changes in details may be made without departing from the scope of the invention as defined by the appended claims.

I claim:

1. A slider for separable fasteners of the class

described, comprising a body having diverging channels at its upper end merging into a single channel at its lower end, a pull having a pivot at one end thereof, elongated bearings extending lengthwise of the slider and slidably and pivotally engaging said pivot, a locking member on the other end of said pull and adapted to extend beyond said lower end of the slider into locking position in line with said single channel, and a stop on the slider and a cam on the pull arranged to engage each other to cam said pull downwardly to bring said locking member into said locking position.

2. A slider for separable fasteners of the class described, comprising a body having diverging channels at its upper end merging into a single channel at its lower end, a pull having a pivot at one end thereof, elongated bearings extending lengthwise of the slider and slidably and pivotally engaging said pivot, a locking member on the other end of said pull and adapted to extend beyond one end of the slider into locking position in line with one of said channels, and a stop on the slider and a cam on the pull arranged to engage each other to cam said pull downwardly to bring said locking member into said locking position.

3. A slider for separable fasteners of the class described, comprising a body having diverging channels at its upper end merging into a single channel at its lower end, a pull having a pivot at one end thereof, elongated bearings extending lengthwise of the slider and slidably and pivotally engaging said pivot, a locking member on the other end of said pull and adapted to extend beyond one end of the slider into locking position in line with one of said channels, and a stop on the slider and a cam on the pull arranged to engage each other to cam said pull downwardly to bring said locking member into said locking position, said pull being freely movable on said bearings to operate the slider.

4. The combination with a slider for separable fastener stringers adapted to couple and uncouple the links of the stringers, of a pull having a free end, means pivotally and slidably mounting the pull on the slider, the free end of the pull having a ball thereon positioned beyond the boundaries of the slider, and means for moving the ball into engagement with coupled links of the stringers

beyond one end of the slider to check opening movement of the slider on said stringers.

5. A slider for separable link fasteners of the class described comprising a channeled body portion adapted to house the links, said channeled body portion having upper and lower channel walls terminating in edges respectively, a pull having a wedge portion pivotally and slidably mounted on the upper channel wall, said pull having also a locking portion extending downwardly toward the lower channel wall and being adapted to contact with the links at a point beyond the boundaries of the slider to displace the links from their normal alignment with the axis of the channel; and means carried by the slide body to releasably receive and engage the wedge portion of the pull and to hold the locking portion of the pull in a position forcing the links out of their normal alignment with the axis of the channel and into locking engagement with an edge of the lower channel wall whereby movement of the slide longitudinally of the links in one direction thereof is prevented.

6. A slider for separable fasteners of the class described comprising a body having diverging channels at one end merging into a single channel at its other end, a pull having a pivot at one end thereof, a locking member at the other end and a bend intermediate said ends forming a pair of arms, elongated bearings extending lengthwise of the slider and slidably and pivotally engaging said pull, and a stop on said slide body extending transversely of the pull and adapted to engage one of said arms and force said locking member into line with one of said channels.

7. A slider for separable fasteners of the class described comprising a body having diverging channels at one end merging into a single channel at its other end, a pull having a pivot at one end thereof, a locking member at the other end and a bend intermediate said ends forming a pair of arms, a housing on said slide body having portions forming a bearing for said pull which is slidably and pivotally mounted in said bearing and stop means on said slide adapted to releasably and frictionally engage one of said arms adjacent the pivot end of said pull and force said locking member at the other end of the pull into line with one of said channels.

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