(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 090 370**
A2

(12) EUROPEAN PATENT APPLICATION

(21) Application number: **83102987.1**

(22) Date of filing: **25.03.83**

(51) Int. Cl.³: **A 44 B 19/26**

(30) Priority: **25.03.82 JP 42170/82**

(43) Date of publication of application: **05.10.83 Bulletin 83/40**

(84) Designated Contracting States: **BE CH DE FR IT LI NL SE**

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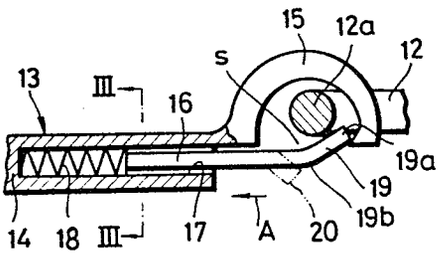
(54) Slide fastener slider having detachable pull tab.

(57) A slide fastener slider (10) having a pull tab (13) removable attached to a pull tab connector (12) pivotally connected to a slider body (11). The pull tab (13) includes an elongate base (14) having at one end a generally C-shaped neck portion (15), and a closure rod (16) telescopically supported by the base (14) and normally urged by a spring (18) to close a gap s between opposite ends of the C-shaped neck portion (15) to thereby prevent the pull tab (13) from being removed from the connector (12). When the closure rod (16) is retracted from the gap s against the bias of the spring (18), a pintle (12a) of the connector (12) is allowed to pass through the gap s so that the pull tab (13) can be removed from the connector (12).



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SLIDE FASTENER SLIDER HAVING DETACHABLE PULL TAB

The present invention relates to slide fasteners, and more particularly to a slide fastener slider having a detachable pull tab.

French Patent 2,453,614 discloses a slide fastener slider having a pull tab which is removably attached to a connector pivotally connected to a slider body. The disclosed pull tab however has a relatively complex mechanism by which the pull tab is removably attached to the connector and which requires a special tool or jig to detach the pull tab from the connector. Further, this complex mechanism bulges on opposite surfaces of the pull tab, thus making the latter unsightly.

According to the present invention, there is provided a slide fastener slider comprising: a slider body having a support lug; a pull tab connector pivotally connected at one end to the support lug and having at the other end a pintle; and a pull tab detachable and pivotally connected to the pintle of the connector; characterized in that said pull tab includes an elongate base having at one end a generally C-shaped neck portion,

a closure rod telescopically supported by said base and movable with respect thereto between a first position in which said closure rod closes a gap s between opposite ends of such a C shape of said neck portion to thereby prevent said pintle of said connector to pass through said gap s, and a second position in which said closure rod is retracted from said gap s to thereby allow said pintle of said connector to pass through said gap s, and means normally urging said closure rod to said first position.

It is therefore an object of the invention to provide a slide fastener slider in which a pull tab can be surely attached to pull tab connector and also can be easily detached therefrom without using a special tool or jig.

Another object of the invention is to provide a slide fastener slider having a detachable pull tab which is simple in construction with no bulges on either its top or bottom surface so that a design or emblem, as desired, can be borne over virtually the whole area of either pull tab surface.

Many other advantages, features and additional objects of the present invention will become manifest to those versed in the art upon making reference to the detailed description and the accompanying drawings in which two preferred embodiments incorporating the principles of the present invention are shown by way of illustrative example.

Figure 1 is a plan view of a slide fastener slider having a detachable pull tab embodying the present invention;

Figure 2 is an enlarged, partially cross-sectional view taken along line II-II of Figure 1, showing the pull tab having been attached to a pull tab connector;

Figure 3 is a transverse cross-sectional view taken along line III-III of Figure 2;

Figure 4 is a partially cross-sectional view similar to Figure 2, showing the manner in which the pull tab is detached from the pull tab connector; and

Figure 5 is a partially cross-sectional view similar to Figure 2, showing a modified pull tab.

The principles of the present invention are particularly useful when embodied in a slide fastener slider such as shown in Figure 1, wholly indicated by the numeral 10. The slide fastener slider 10 generally comprises a slider body 11, a pull tab connector 12 pivotally connected at one end to a support lug 11a on the slider body 11 and having at the other end a pintle 12a, and a pull tab 13 pivotally connected to the connector pintle 12a and detachable therefrom in a manner described below.

As shown in Figure 2, the pull tab 13 includes an elongate base 14 having at one end a generally C-shaped neck portion 15, and a closure rod 16 telescopically supported by the base 14. The closure rod 16 is partially received in a longitudinal or axial hole 17 of the base

14 and is movable with respect to the latter between a first or "closed" position (Figure 2) in which the closure rod 16 closes a gap s between opposite ends of such a C shape of the neck portion 15 to thereby prevent the passage of the connector pintle 12a through the gap s, and a second or "open" position (Figure 3) in which the closure rod 16 is retracted from the gap s to thereby allow the connector pintle 12a to pass through the gap s. A compression spring 18 is mounted in the hole 17 of the base 14 to normally urge the closure rod 16 to the closed position (Figure 2).

At its free or right end portion 19, the closure rod 16 is dog-legged upwardly, i.e. toward the C-shaped neck portion 15, so that when the closure rod 16 is in the closed position (Figure 2), its distal end 19a is engageable with the free end 15a of the neck portion 15 so as to limit the outward or rightward movement of the closure rod 16 against the bias of the spring 18.

To detach the pull tab 13 from the connector 12, the closure rod 16 is moved simply by the finger (not shown) in the direction of an arrow A against the bias of the spring 18 until the closure rod 16 is retracted from the gap s to allow the connector pintle 12a to pass therethrough. Thus the pull tab 13 can be detached from the connector 12 by simply getting the connector pintle 12a out of the C shape of the neck portion 15. To attach the pull tab 13 again; with the closure rod 16 held in

the retracted or open position (Figure 4), the connector pintle 12a is placed in the C shape of the neck portion 15, and then the closure rod 16, when released, is moved to the advanced or closed position (Figure 2) by the action of the spring 18.

Accordingly, the pull tab 13 can be easily and surely attached to the connector 12 and also can be easily detached therefrom without using a special tool or jig. Further, since the closure rod 16 is telescopically supported through the base 14, there appear no bulges on either the top or bottom surface of the base 14 so that a design or emblem, as desired, can be borne over the whole area of either surface of the base 14.

In order to facilitate its manual retraction, the closure rod 16 may have on its bottom side (opposite to the C-shaped neck portion 15) a projection 20 adjacent to the heel 19b of the dog-leg shape, as indicated by phantom lines in Figures 2 and 4.

Figure 5 shows a modified pull tab 23 in which the base 14 has, in one side opposite to the C-shaped neck portion 15, a longitudinal slot 24 communicating with the hole 17 and in which a straight closure rod 16 has a projection 25 received in the slot 24 and slidable therealong in response to the movement of the closure rod 16 between the closed and open positions. With this arrangement, the extent to which the closure rod 16 is moved is limited within the length of the slot 24.

CLAIMS:

1. A slide fastener slider (10) comprising: a slider body (11) having a support lug (11a); a pull tab connector (12) pivotally connected at one end to the support lug (11a) and having at the other end a pintle (12a); and a pull tab (13, 23) detachable and pivotally connected to the pintle (12a) of the connector (12); characterized in that said pull tab (13, 23) includes (a) an elongate base (14) having at one end a generally C-shaped neck portion (15), (b) a closure rod (16) telescopically supported by said base (14) and movable with respect thereto between a first position in which said closure rod (16) closes a gap s between opposite ends of such a C shape of said neck portion (15) to thereby prevent said pintle (12a) of said connector (12) to pass through said gap s, and a second position in which said closure rod (16) is retracted from said gap s to thereby allow said pintle (12a) of said connector (12) to pass through said gap s, and (c) means (18) normally urging said closure rod (16) to said first position.

2. A slide fastener slider according to claim 1, characterized in that said base (14) has a longitudinal hole (17) in which said closure rod (16) is partially received and in which said urging means (18) is mounted.

3. A slide fastener slide according to claim 2, characterized in that said urging means comprises a compression spring (18).

4. A slide fastener slider according to claim 1, a free end portion (19) of said closure rod (16) being so dog-legged that when said closure rod (16) is in said first position, its distal end (19a) is engageable with a free end (15a) of said neck portion (15) so as to limit the movement of said closure rod (16) against the bias of said urging means (18).

5. A slide fastener slider according to claim 4, characterized in that said closure rod (16) has on one side opposite to said neck portion (15) a projection (20) disposed adjacent to a heel (19b) of such a dog-leg shape.

6. A slide fastener slider according to claim 2, characterized in that said base (14) has in one side opposite to said neck portion (15) a longitudinal slot (24) communicating with said hole (17), and said closure rod (16) having a projection (25) received in said slot (24) and slidable therealong in response to the movement of said closure rod (16), the extent to which said closure rod (16) is moved being thereby limited within the length of said slot (24).

FIG. 1

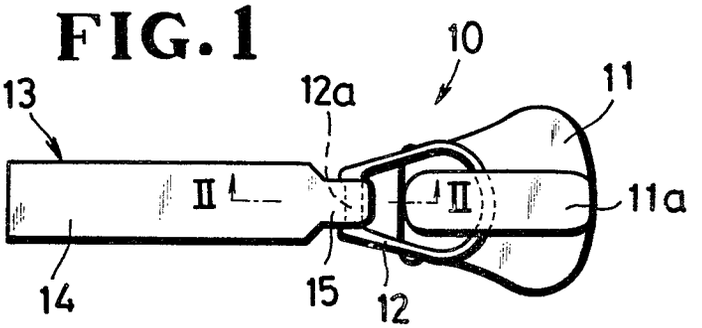

FIG. 2

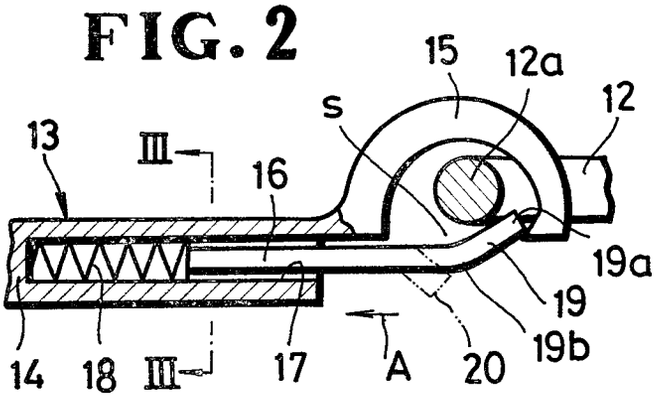

FIG. 3

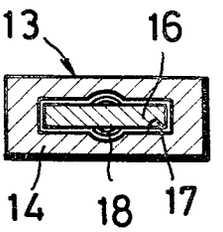

FIG. 4

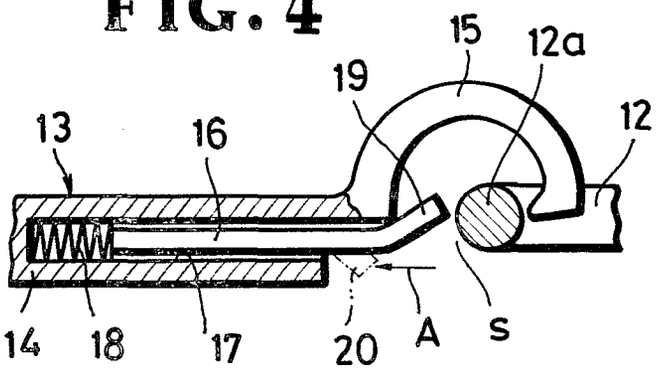

FIG. 5