

Description

This invention relates generally to slide fasteners and particularly to a slider therefor.

There have been heretofore proposed numerous slide fastener sliders of various forms and designs. However, to the best knowledge of the present inventors, there are known no such sliders which are suitable for use in extremely cold environment where a slider, if made of a metal, tends to give unpleasant chilling feel and at worse a frostbite to the skin of the user.

One prior art is known as disclosed in Japanese Laid-Open Utility Model Publication No. 48-30003, in which a metallic slider is covered with a soft material such as plastics at its surface portions located internally of a camera case so as to eliminate possible damage to the camera.

Such prior device is however not capable of application onto garment articles such as ski wear, wind jackets, shirts and the like which would come into direct contact with the human skin particularly in extremely cold weather. The plastic cover used in the prior device is simply mounted on the underside of a slider and hence is liable to separation if used on such garments which need laundering and press.

FR-A-1 039 704, on which the preamble to claim 1 is based discloses a slider for a slide fastener, said slider comprising: a slider body including an upper wing and a lower wing joined together at their front ends by a connecting neck, said upper wing having a downwardly directed flange disposed along each of a pair of opposed side edges and said lower wing having an upwardly directed flange disposed along each of a pair of opposed side edges; and a thermally insulating backing secured to said lower wing.

However, FR-A-1 039 704 does not disclose a slide fastener slider in which the thermally insulating backing is in the form of a snap-fit cover structure.

Furthermore, FR-A-1 039 704 does not disclose a slide fastener slider in which a thermally insulating air pocket is provided between the thermally insulating backing and the lower wing.

Whereas, the present invention seeks to provide a slide fastener slider which incorporates a thermally insulating means whereby the user can be protected against adverse effect of extremely cold weather upon his skin which would otherwise result in freezing touch or frostbite by bare metal portions of the slider.

This and other objects and features of the invention will appear apparent from the following description taken in conjunction with the accompanying drawings.

According to the present invention, there is provided a slider for a slide fastener, said slider comprising: a slider body including an upper wing and a lower wing joined together at their front ends by a connecting neck, said upper wing having a downwardly direct-

ed flange disposed along each of a pair of opposed side edges and said lower wing having an upwardly directed flange disposed along each of a pair of opposed side edges; and a thermally insulating backing secured to said lower wing; said slider being characterised in that said thermally insulating backing is substantially co-extensive with said lower wing; in that said backing is provided with a first hook at one end and with a second hook at an opposite end, said first hook being engagable in a first recess provided in said neck of said slider and said second hook being engagable in a second recess formed in a rear end of said lower wing of said slider; and in that an enclosed air-accommodating pocket is defined between said backing and a lower surface of said lower wing of said slider.

Figure 1 is a partly exploded, perspective view of a slide fastener slider according to an embodiment of the invention;

Figure 2 is an elevational perspective view of the same but showing the upside down without a backing;

Figure 3 is a view similar to Figure 2 but showing a backing attached coextensively to an outer surface of a slider body;

Figure 4 is a view similar to Figure 3 but showing the backing protruding beyond a peripheral edge of the lower wing;

Figure 5 is a longitudinal cross-sectional view taken on the line V-V of Figure 3;

Figure 6 is a partly exploded, perspective view of a slide fastener slider according to still another embodiment of the invention; and

Figure 7 is a longitudinal cross-sectional view of the slider of Figure 6 taken on the same reference line as in Figure 5.

Referring now to the drawings and Figure 1 in particular, there is shown a slider 10 to be mounted on and adapted to open and close a slide fastener (not shown) in a manner well known in the art. The slider 10 is formed by molding a metal such as a zinc alloy into a Predetermined shape and has a slider body 11 which includes an upper wing 12 and a lower wing 13 which are spaced in parallel relation and joined at their one or front ends by a connecting neck 14 commonly known as a diamond. The upper and lower wings 12, 13 are generally similar in shape and inwardly directed along their respective lateral side edges to form lateral flanges 15 and 16.

The upper and lower wings 12 and 13 define therebetween a generally Y-shaped guide channel 17 for passing therethrough a pair of fastener stringers (not shown) in a manner well known in the art.

Formed on the upper surface of the upper wing 12 is a trunnion 18 having an opening 19 for pivotally receiving a pull tab 20 with which to manipulate a reciprocating movement of the slider 10 on the slide fastener in a manner well known in the art.

According to the invention, there is provided a thermal insulating backing 21 made of a synthetic resin such as for example PBT and polyamide (nylon 66) which are preferably reinforced with glass fiber, semi-hardness urethane foams, polyethylene and the like.

The backing 21 may be, if desired, provided on its outer surface 21a with a metal foil carrying colored indicia such as marks, letters, designs and the like thereby affording an ornamental effect.

The backing 21 shown in Figure 1 coextensive with and hence substantially a replica of a lower or outer surface 22 of the lower wing 13 of the slider body 11 as observed in plan view.

A thermal insulating backing 21 shown in Figure 1 is in the form of a snap-fit cover structure having a generally square web 36 surrounded by a continuous inwardly directed peripheral flange 37 including opposed longitudinal side portions 38a and 38b and opposed front and rear end portions 39a, 39b. The flange 37 registers peripherally with the lower wing 13 of the slider 10. A clamping lug 40 extends vertically centrally from the front end portion 39a of the flange 37 and has a horizontally inwardly directed hook 41 engageable in a recess 42 formed in the neck 14 of the slider 10. An elongate clamping jaw 40' protrudes inwardly from the rear end portion 39b of the flange 37 and has a horizontally inwardly directed hook 43 engageable in a recess 44 formed in a rear end of the lower wing 13 of the slider 10.

The backing 21 shown in Figure 1 or Figure 3 is mounted snappingly in place on the lower wing 13 of the slider 10 with the hooks 41 and 43 received in the recesses 42 and 44, respectively, in which instance there is developed a pocket 45 in the form of a convex lens, as viewed in Figure 5, between the outer surface 22 of the lower wing 13 and an inner surface 36a of the web 36 of the backing 21. The pocket 45 accommodates an air which serves as a heat insulator to preclude direct transmission to the human skin of cold temperature of the metal slider body 11.

A backing 21 shown in Figure 4 is identical with that shown in Figures 1 and 3, except that the side portions 38a and 38b of the flange 37 respectively protrude slightly beyond and embrace the lateral flanges 16 of the lower wing 13.

Figures 6 and 7 show a backing 21 which is similar to that shown in Figures 1 and 3 except that it has a flat inner web surface 36a' and is devoid of the peripheral flange 37. The backing 21 of Figures 6 and 7 is mounted on the lower wing 13 of the slider in the manner already described and as shown in Figure 7, in which instance an air accommodating pocket 45' substantially rectangular as viewed in Figure 7 is formed between the inner surface 36a' of the backing 21 and a large square recess 46 formed in the outer surface 22 of the lower wing 13 and defined by a continuous peripheral rib 47.

Claims

1. A slider (10) for a slide fastener, said slider (10) comprising:-

a slider body (11) including an upper wing (12) and a lower wing (13) joined together at their front ends by a connecting neck (14), said upper wing (12) having a downwardly directed flange (15) disposed along each of a pair of opposed side edges and said lower wing (13) having an upwardly directed flange (16) disposed along each of a pair of opposed side edges; and

a thermally insulating backing (21) secured to said lower wing (13);

said slider (10) being characterised in that said thermally insulating backing (21) is substantially co-extensive with said lower wing (13);

in that said backing (21) is provided with a first hook (41) at one end and with a second hook (43) at an opposite end, said first hook (41) being engageable in a first recess (42) provided in said neck (14) of said slider (10) and said second hook (43) being engageable in a second recess (44) formed in a rear end of said lower wing (13) of said slider (10); and

in that an enclosed air-accommodating pocket (45, 45') is defined between said backing (21) and a lower surface (22, 46) of said lower wing (13) of said slider (10).

2. A slider (10) according to claim 1 wherein said backing (21) has a web (36), said web (36) being provided with a continuous, upwardly directed peripheral flange (37), whereby said web (36), said peripheral flange (37) and said lower surface (22) of said lower wing (13) define said air-accommodating pocket (45).
3. A slider (10) according to claim 1 wherein said backing (21) has a web (36), and wherein said lower surface (46) of said slider (10) is provided with a downwardly directed peripheral rib (47), whereby said web (36), said peripheral rib (47) and said lower surface (46) of said lower wing (13) define said air-accommodating pocket (45').

Patentansprüche

1. Schieber (10) für einen Reißverschluß, wobei der Schieber (10) umfaßt: -

einen Schieberkörper (11) mit einem Oberschild (12) und einem Unterschild (13), die an ihrem vorderen Ende durch einen Schieberkeil (14) miteinander verbunden sind, wobei der Oberschild (12) zwei nach unten gerichtete Flansche (15) hat, die entlang eines jeden von zwei gegenüberliegenden Seitenrändern angeordnet



According to the invention, there is provided a thermal insulating backing 21 made of a synthetic resin such as for example PBT and polyamide (nylon 66) which are preferably reinforced with glass fiber, semi-hardness urethane foams, polyethylene and the like.

The backing 21 may be, if desired, provided on its outer surface 21a with a metal foil carrying colored indicia such as marks, letters, designs and the like thereby affording an ornamental effect.

The backing 21 shown in Figure 1 coextensive with and hence substantially a replica of a lower or outer surface 22 of the lower wing 13 of the slider body 11 as observed in plan view.

A thermal insulating backing 21 shown in Figure 1 is in the form of a snap-fit cover structure having a generally square web 36 surrounded by a continuous inwardly directed peripheral flange 37 including opposed longitudinal side portions 38a and 38b and opposed front and rear end portions 39a, 39b. The flange 37 registers peripherally with the lower wing 13 of the slider 10. A clamping lug 40 extends vertically centrally from the front end portion 39a of the flange 37 and has a horizontally inwardly directed hook 41 engageable in a recess 42 formed in the neck 14 of the slider 10. An elongate clamping jaw 40' protrudes inwardly from the rear end portion 39b of the flange 37 and has a horizontally inwardly directed hook 43 engageable in a recess 44 formed in a rear end of the lower wing 13 of the slider 10.

The backing 21 shown in Figure 1 or Figure 3 is mounted snappingly in place on the lower wing 13 of the slider 10 with the hooks 41 and 43 received in the recesses 42 and 44, respectively, in which instance there is developed a pocket 45 in the form of a convex lens, as viewed in Figure 5, between the outer surface 22 of the lower wing 13 and an inner surface 36a of the web 36 of the backing 21. The pocket 45 accommodates an air which serves as a heat insulator to preclude direct transmission to the human skin of cold temperature of the metal slider body 11.

A backing 21 shown in Figure 4 is identical with that shown in Figures 1 and 3, except that the side portions 38a and 38b of the flange 37 respectively protrude slightly beyond and embrace the lateral flanges 16 of the lower wing 13.

Figures 6 and 7 show a backing 21 which is similar to that shown in Figures 1 and 3 except that it has a flat inner web surface 36a' and is devoid of the peripheral flange 37. The backing 21 of Figures 6 and 7 is mounted on the lower wing 13 of the slider in the manner already described and as shown in Figure 7, in which instance an air accommodating pocket 45' substantially rectangular as viewed in Figure 7 is formed between the inner surface 36a' of the backing 21 and a large square recess 46 formed in the outer surface 22 of the lower wing 13 and defined by a continuous peripheral rib 47.

Claims

1. A slider (10) for a slide fastener, said slider (10) comprising:-
a slider body (11) including an upper wing (12) and a lower wing (13) joined together at their front ends by a connecting neck (14), said upper wing (12) having a downwardly directed flange (15) disposed along each of a pair of opposed side edges and said lower wing (13) having an upwardly directed flange (16) disposed along each of a pair of opposed side edges; and
a thermally insulating backing (21) secured to said lower wing (13);
said slider (10) being characterised in that said thermally insulating backing (21) is substantially co-extensive with said lower wing (13);
in that said backing (21) is provided with a first hook (41) at one end and with a second hook (43) at an opposite end, said first hook (41) being engageable in a first recess (42) provided in said neck (14) of said slider (10) and said second hook (43) being engageable in a second recess (44) formed in a rear end of said lower wing (13) of said slider (10); and
in that an enclosed air-accommodating pocket (45, 45') is defined between said backing (21) and a lower surface (22, 46) of said lower wing (13) of said slider (10).
2. A slider (10) according to claim 1 wherein said backing (21) has a web (36), said web (36) being provided with a continuous, upwardly directed peripheral flange (37), whereby said web (36), said peripheral flange (37) and said lower surface (22) of said lower wing (13) define said air-accommodating pocket (45).
3. A slider (10) according to claim 1 wherein said backing (21) has a web (36), and wherein said lower surface (46) of said slider (10) is provided with a downwardly directed peripheral rib (47), whereby said web (36), said peripheral rib (47) and said lower surface (46) of said lower wing (13) define said air-accommodating pocket (45').

Patentansprüche

1. Schieber (10) für einen Reißverschluss, wobei der Schieber (10) umfaßt: -
einen Schieberkörper (11) mit einem Oberschild (12) und einem Unterschild (13), die an ihrem vorderen Ende durch einen Schieberkeil (14) miteinander verbunden sind, wobei der Oberschild (12) zwei nach unten gerichtete Flansche (15) hat, die entlang eines jeden von zwei gegenüberliegenden Seitenrändern angeordnet



sind, und wobei der Unterschild (13) einen nach oben gerichteten Flansch (16) hat, der entlang eines jeden von zwei gegenüberliegenden Seitenrändern angeordnet ist; und

eine wärmeisolierende Unterlage (21), die an dem Unterschild (13) befestigt ist;

wobei der Schieber (10) dadurch gekennzeichnet ist, daß die wärmeisolierende Unterlage (21) im wesentlichen die gleiche Ausdehnung wie der Unterschild (13) hat;

und daß die Unterlage (21) mit einem ersten Haken (41) an einem Ende und mit einem zweiten Haken (43) an einem gegenüberliegenden Ende versehen ist, wobei der erste Haken (41) mit einer im Schieberkeil (14) des Schiebers (10) angeordneten ersten Ausnehmung (42) in Eingriff bringbar ist und der zweite Haken (43) mit einer im hinteren Ende des Unterschildes (13) des Schiebers (10) ausgebildeten zweiten Ausnehmung (44) in Eingriff bringbar ist; und

daß zwischen der Unterlage (21) und einer Unterseite (22, 46) des Unterschildes (13) des Schiebers (10) eine luftaufnehmende geschlossene Tasche (45, 45') begrenzt ist.

2. Schieber (10) nach Anspruch 1, wobei die Unterlage (21) einen Steg (36) aufweist, der mit einem ununterbrochenen, nach oben gerichteten Umfangsflansch (37) versehen ist, wodurch der Steg (36), der Umfangsflansch (37) und die Unterseite (22) des Unterschildes (13) die besagte luftaufnehmende Tasche (45) begrenzen.
3. Schieber (10) nach Anspruch 1, wobei die Unterlage (21) einen Steg (36) aufweist und wobei die Unterseite (46) des Schiebers (10) mit einer nach unten gerichteten Umfangsrippe (47) versehen ist, wodurch der Steg (36), die Umfangsrippe (47) und die Unterseite (46) des Unterschildes (13) die besagte luftaufnehmende Tasche (45') begrenzen.

Revendications

1. Curseur (10) pour fermeture à glissière, ledit curseur (10) comprenant :

- un corps de curseur (11) incluant une aile supérieure (12) et une aile inférieure (13) réunies à leur extrémité avant par une pièce de liaison (14) de section cunéiforme, ladite aile supérieure (12) présentant un rebord (15) orienté vers le bas, placé le long de chaque bord d'une paire de bords latéraux en vis-à-vis, et ladite aile inférieure (13) présentant un rebord (16) orienté vers le haut, placé le long de chaque bord d'une paire de bords latéraux en vis-à-vis, et

- un dos (21) isolant thermique, fixé à ladite aile inférieure (13),

ledit curseur (10) étant caractérisé :

- en ce que ledit dos (21) isolant thermique a sensiblement la même étendue que ladite aile inférieure (13),

- en ce que ledit dos (21) est pourvu d'un premier crochet (41) en une extrémité et d'un second crochet (43) en une extrémité opposée, ledit premier crochet (41) pouvant s'accrocher dans un premier évidement (42) placé dans ladite pièce de liaison (14) de section cunéiforme dudit curseur (10) et ledit second crochet (43) pouvant s'accrocher dans un second évidement (44) formé dans une extrémité arrière de ladite aile inférieure (13) dudit curseur (10), et

- en ce qu'une poche d'air fermée (45, 45') est définie entre ledit dos (21) et une surface inférieure (22, 46) de ladite aile inférieure (13) dudit curseur (10).

2. Curseur (10) selon la revendication 1, dans lequel ledit dos (21) comprend une bande (36), ladite bande (36) étant pourvue d'un rebord périphérique (37) continu, dirigé vers le haut, ce qui fait que ladite bande (36), ledit rebord périphérique (37) et ladite surface inférieure (22) de ladite aile inférieure (13) définissent ladite poche d'air (45).
3. Curseur (10) selon la revendication 1, dans lequel ledit dos (21) comprend une bande (36), et dans lequel ladite surface inférieure (46) dudit curseur (10) est pourvue d'une nervure périphérique (47) dirigée vers le bas, ce qui fait que ladite bande (36), ladite nervure périphérique (47) et ladite surface inférieure (46) de ladite aile inférieure (13) définissent ladite poche d'air (45').