

Description

The present invention relates generally to a slider for slide fasteners and more particularly to an ornamental pull tab pivotally attached to the slider to reciprocate the slider to open and close the slide fastener.

Heretofore, there has never existed any such pull tab as comprising a base plate made of a synthetic resin and an ornamental pattern molded thereon by injecting a different synthetic resin on the upper surface of the base plate. However, there was often seen a key for a personal computer of the construction described above. In manufacture of the key, first a base plate is made of a synthetic resin. As shown in FIGS. 4 and 5, the base plate comprises a flat rectangular base plate proper A and a protuberant pattern portion B projecting on the upper surface of the base plate proper A to assume a pattern such as an alphabetical letter, a numeral and a symbol. In FIG. 4, the pattern portion B assumes the shape of the numeral 8. Then, as best shown in FIG. 6, a different synthetic resin is injection-molded onto the remaining portions of the upper surface of the base plate proper A up to the level of the protuberant pattern portion B to thus provide a background portion C, against which the numeral 8 is clearly seen.

However, in this conventional key for personal computers, since the pattern portion B need to be formed protuberantly on the base plate proper A, it is very difficult to depict a complex pattern on the key.

Furthermore, in order to depict a pattern which involves an insular portion D such as the manual 8 shown in FIG. 5, the pattern portion B must have a guide channel E through which the synthetic resin is injected for forming the insular portion D. The necessity of providing such a guide channel E in the pattern portion B disadvantageously limits patterns to be depicted on the key.

Consequently, mere application of this method to an ornamental pull tab would not result in satisfactory effect.

FR-A-1 531 615 discloses an ornamental pull tab for being pivotally connected to the slider body of a slide fastener slider and having on its upper surface a desired pattern. The grip portion of this pull tab comprises a base plate made from synthetic resin having in the upper surface recesses in the form of a pattern and a pattern portion formed in the recesses of the base plate 6.

Furthermore, the base plate 6 does not form the grip portion alone, but only its cover part and is fixed to a support part 2 which is pivotally connected to the slider body 1. This structure involves several manufacturing and mounting steps.

FR-A-859 485 relates to the production of articles bearing pattern portions. These articles are produced by injection-molding in a mold having an upper portion and a lower portion. The upper portion is provided with a profile having projections or recesses corresponding to the form of the desired pattern. After forming of the article, the upper mold part is replaced by another mold part leaving open the recess thus formed by the first upper mold part. Now the recesses are filled by injection-molding of synthetic resin, whereby the desired pattern is formed.

With the above described state of the art in view, it is therefore an object of the present invention to provide an ornamental pull tab for slide fastener sliders wherein a complex pattern can be formed thereon accurately and a pattern involving an insular portion can be formed with ease.

As claimed, the ornamental pull tab of the present invention is made from synthetic resin and adapted for being pivotally connected to the slider body of a slide fastener slider, the tab having on its upper surface a desired pattern. The ornamental pull tab comprises a base plate formed by injection-molding of synthetic resin having in the upper surface a recess adapted to receive the pattern. According to the invention, the base plate forms a grip portion intended to be gripped by fingers of a user. The base plate is formed by injection-molding of synthetic resin. Furthermore, the pattern portions are formed by injection-molding of synthetic resin in the recess.

By this invention, also a method for producing a grip portion is provided, which grip portion is of an ornamental pull tab for being pivotally connected to the slider body of a slide fastener slider. A base plate and a pattern portion(s) are provided. The method comprises the following steps: The base plate is made by injection-molding of synthetic resin into a mold having an upper mold half and a lower mold half, the upper mold half having projections corresponding to the desired recesses. After cooling of the mold another upper mold half is placed on the lower mold half, the cavities of the upper mold half being in registry with the recesses. Finally synthetic resin is injected into the cavities to provide the pattern portions in the base plate.

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

FIG. 1 is a plan view of a slide fastener slider provided with an ornamental pull tab according to the present invention, with its slider body shown in phantom lines;

FIG. 2 is a longitudinal cross-sectional view taken on line II-II of FIG. 1;

FIG. 3 is a lateral cross-sectional view taken on line III-III of FIG. 1;

FIG. 4 is a perspective view showing a key for personal computers as a related art to the present invention;

FIG. 5 is a perspective view of a base plate of the key of FIG. 4; and

FIG. 6 is a longitudinal cross-sectional view taken on LINE VI-VI of FIG. 4.

FIG. 1 shows a slider 14 provided with an ornamental pull tab 11 according to the present invention. As shown in phantom lines in FIG. 1, in addition to the pull tab 11, the slider 14 includes a slider body 14' having a protuberant lug 15 provided on the upper surface thereof. As shown in FIG. 1, the ornamental pull tab 11 comprises a pull tab support 12 and a grip portion 13 joined with the pull tab support 12. The pull tab support 12 has at its one end a clamping portion 17 clamping the front end of the grip portion 13 and at the other end a loop portion 16 pivotally connected to the protuberant lug 15 on the slider body 14'.

The grip portion 13 is intended to be gripped by fingers of a user to manipulate the slider 14 for opening and closing the slide fastener. The grip portion 13 includes a base plate 18 and a plurality of pattern portions 19 formed on the base plate 18 to provide patterns thereon. The base plate 18 and the pattern portions 19 are made, through injection-molding, of synthetic resins which are capable of adhering to each other, such as acrylate resin, polycarbonate resin, nylon resin and ABS resin. The base plate 18 and the pattern portion 19 may be formed of either the same resin or different resins, and may be transparent or non-transparent.

The base plate 18 is formed by injecting molten synthetic resin into a mold (not shown) comprising an upper and a lower mold halves. In this instance, the base plate 18 is formed in its upper surface with recesses 20, 21 in the form of a desired pattern. After the mold is cooled, the upper mold half is removed. Subsequently, another upper mold half is placed on the lower mold half with the cavities of the former disposed in registry with the recesses 20, 21 of the base plate 18. Then, either transparent or non-transparent synthetic resin is injected into the cavities to provide a plurality of pattern portions 19. In FIG. 3, the pattern portions 19 protrude slightly beyond the upper surface of the base plate 18. However, the pattern portion 19 may be formed with its upper surface held coplanar with the upper surface of the base plate 18.

With the construction of the present invention as set forth above, however complex patterns might be depicted, or even if the patterns involve

an insular portion, they could be formed on the pull tab accurately and with great ease.

Furthermore, since the synthetic resin constituting patterns is filled in the recesses and hence is adhered to the base plate over an increased area, the patterns are firmly retained on the base plate against accidental detachment, so that the ornamental pull tab can maintain its attractive appearance for a prolonged period of time.

Claims

1. An ornamental pull tab (11) made from synthetic resin, for being pivotally connected to the slider body (14') of a slide fastener slider (14), and having on its upper surface a desired pattern, wherein
 - the ornamental pull tab (11) comprises a base plate (18) made from synthetic resin having in the upper surface a recess (20, 21) adapted to receive the pattern, characterised in that
 - the base plate (18) forms a grip portion (13) intended to be gripped by fingers of a user, the base plate being formed by injection-molding of synthetic resin, and
 - the pattern portion is formed by injection-molding of synthetic resin in the recess.
2. The ornamental pull tab (11) according to claim 1, characterised in that the material of the base plate (18) is made from transparent synthetic material and the pattern portion (19) is made from non-transparent material.
3. The ornamental pull tab (11) according to claim 1, characterised in that the base plate (18) and the pattern portion (19) are made from different synthetic resins, respectively.
4. The ornamental pull tab (11) according to any of claims 1 to 3, characterised by including a pull tab support (12) joined at its one end with the grip portion (13) and pivotally connected at the other end to the slider body (14').
5. A method for producing a grip portion (13) of an ornamental pull tab (11) for being pivotally connected to the slider body (14') of a slide fastener slider (14) having a base plate (18) and a pattern portion(s) (19), and in particular according to any of claims 1 to 4, wherein characterised in that
 - a base plate (18) having a recess (20, 21) is made by injection-molding of synthetic resin into a mold having an upper mold half and a lower mold half, the upper mold half having projections cor-



FIG. 2 is a longitudinal cross-sectional view taken on line II-II of FIG. 1;

FIG. 3 is a lateral cross-sectional view taken on line III-III of FIG. 1;

FIG. 4 is a perspective view showing a key for personal computers as a related art to the present invention;

FIG. 5 is a perspective view of a base plate of the key of FIG. 4; and

FIG. 6 is a longitudinal cross-sectional view taken on LINE VI-VI of FIG. 4.

FIG. 1 shows a slider 14 provided with an ornamental pull tab 11 according to the present invention. As shown in phantom lines in FIG. 1, in addition to the pull tab 11, the slider 14 includes a slider body 14' having a protuberant lug 15 provided on the upper surface thereof. As shown in FIG. 1, the ornamental pull tab 11 comprises a pull tab support 12 and a grip portion 13 joined with the pull tab support 12. The pull tab support 12 has at its one end a clamping portion 17 clamping the front end of the grip portion 13 and at the other end a loop portion 16 pivotally connected to the protuberant lug 15 on the slider body 14'.

The grip portion 13 is intended to be gripped by fingers of a user to manipulate the slider 14 for opening and closing the slide fastener. The grip portion 13 includes a base plate 18 and a plurality of pattern portions 19 formed on the base plate 18 to provide patterns thereon. The base plate 18 and the pattern portions 19 are made, through injection-molding, of synthetic resins which are capable of adhering to each other, such as acrylate resin, polycarbonate resin, nylon resin and ABS resin. The base plate 18 and the pattern portion 19 may be formed of either the same resin or different resins, and may be transparent or non-transparent.

The base plate 18 is formed by injecting molten synthetic resin into a mold (not shown) comprising an upper and a lower mold halves. In this instance, the base plate 18 is formed in its upper surface with recesses 20, 21 in the form of a desired pattern. After the mold is cooled, the upper mold half is removed. Subsequently, another upper mold half is placed on the lower mold half with the cavities of the former disposed in registry with the recesses 20, 21 of the base plate 18. Then, either transparent or non-transparent synthetic resin is injected into the cavities to provide a plurality of pattern portions 19. In FIG. 3, the pattern portions 19 protrude slightly beyond the upper surface of the base plate 18. However, the pattern portion 19 may be formed with its upper surface held coplanar with the upper surface of the base plate 18.

With the construction of the present invention as set forth above, however complex patterns might be depicted, or even if the patterns involve

an insular portion, they could be formed on the pull tab accurately and with great ease.

Furthermore, since the synthetic resin constituting patterns is filled in the recesses and hence is adhered to the base plate over an increased area, the patterns are firmly retained on the base plate against accidental detachment, so that the ornamental pull tab can maintain its attractive appearance for a prolonged period of time.

Claims

1. An ornamental pull tab (11) made from synthetic resin, for being pivotally connected to the slider body (14') of a slide fastener slider (14), and having on its upper surface a desired pattern, wherein
 - the ornamental pull tab (11) comprises a base plate (18) made from synthetic resin having in the upper surface a recess (20, 21) adapted to receive the pattern, characterised in that
 - the base plate (18) forms a grip portion (13) intended to be gripped by fingers of a user, the base plate being formed by injection-molding of synthetic resin, and
 - the pattern portion is formed by injection-molding of synthetic resin in the recess.
2. The ornamental pull tab (11) according to claim 1, characterised in that the material of the base plate (18) is made from transparent synthetic material and the pattern portion (19) is made from non-transparent material.
3. The ornamental pull tab (11) according to claim 1, characterised in that the base plate (18) and the pattern portion (19) are made from different synthetic resins, respectively.
4. The ornamental pull tab (11) according to any of claims 1 to 3, characterised by including a pull tab support (12) joined at its one end with the grip portion (13) and pivotally connected at the other end to the slider body (14').
5. A method for producing a grip portion (13) of an ornamental pull tab (11) for being pivotally connected to the slider body (14') of a slide fastener slider (14) having a base plate (18) and a pattern portion(s) (19), and in particular according to any of claims 1 to 4, wherein characterised in that
 - a base plate (18) having a recess (20, 21) is made by injection-molding of synthetic resin into a mold having an upper mold half and a lower mold half, the upper mold half having projections cor-



- responding to the desired recesses (20, 21),
- after cooling of the mold another upper mold half is placed on the lower mold half, the cavities of the upper mold half being in registry with the recesses (20, 21),
 - synthetic resin is injected into the cavities to provide the pattern portions (19) in the base plate (18).

Patentansprüche

1. Aus Kunststoff hergestellter Ziergriff (11) zur schwenkbaren Verbindung mit einem Schieberkörper (14') eines Reißverschlußschiebers (14), der auf seiner Oberseite ein gewünschtes Muster aufweist, wobei
 - der Ziergriff (11) eine aus Kunststoff hergestellte Basisplatte (18) umfaßt, deren Oberseite eine zur Aufnahme des Musters geeignete Ausnehmung (20, 21) aufweist, dadurch gekennzeichnet,
 - daß die Basisplatte (18) einen vom Benutzer mit den Fingern zu erfassenden Griffbereich (13) bildet, wobei die Basisplatte durch Spritzgießen des Kunststoffs hergestellt ist, und
 - daß der Musterbereich durch Spritzgießen des Kunststoffs in die Ausnehmung hergestellt ist.
2. Ziergriff (11) nach Anspruch 1, dadurch gekennzeichnet, daß das Material der Basisplatte (18) aus einem durchsichtigen Kunststoff hergestellt ist und daß der Musterbereich (19) aus einem undurchsichtigen Material hergestellt ist.
3. Ziergriff (11) nach Anspruch 1, dadurch gekennzeichnet, daß die Basisplatte (18) und der Musterbereich (19) aus verschiedenen Kunststoffen hergestellt sind.
4. Ziergriff (11) nach einem der Ansprüche 1 bis 3, gekennzeichnet durch eine Griffabstützung (12), die an ihrem einen Ende mit dem Griffbereich (13) verbunden ist und an ihrem gegenüberliegenden Ende mit dem Schieberkörper (14') schwenkbar verbunden ist.
5. Verfahren zur Herstellung eines Griffbereichs (13) eines mit dem Schieberkörper (14') eines Reißverschlußschiebers (14) schwenkbar verbindbaren Ziergriffs (11), der eine Basisplatte (18) und einen Musterbereich(e) (19) aufweist, insbesondere nach einem der Ansprüche 1 bis

4, dadurch gekennzeichnet,

- daß eine eine Ausnehmung (20, 21) aufweisende Basisplatte (18) hergestellt ist durch Spritzgießen eines Kunststoffs in eine Form, die eine obere und eine untere Formhälfte hat, wobei die obere Formhälfte Vorsprünge aufweist, die den gewünschten Ausnehmungen (20, 21) entsprechen,
- daß nach dem Abkühlen der Form eine andere obere Formhälfte auf der unteren Formhälfte angeordnet wird, wobei die Hohlräume der oberen Formhälfte mit den Ausnehmungen (20, 21) fluchten,
- daß Kunststoff in die Hohlräume eingespritzt wird, um die Musterbereiche (19) in der Basisplatte (18) zu bilden.

Revendications

1. Tirette ornementale (11) formée de résine synthétique, destinée à être articulée sur le corps (14') d'un curseur (14) d'une fermeture à glissière et comportant sur sa surface supérieure un motif voulu, la tirette ornementale (11) comprenant une plaque de base (18) formée de résine synthétique et comportant dans sa surface supérieure un évidement (20, 21) adapté pour recevoir le motif, caractérisée en ce que:
 - la plaque de base (18) forme une partie de préhension (13) destinée à être saisie par les doigts d'un utilisateur, la plaque de base étant formée par moulage par injection d'une résine synthétique, et
 - la partie ornement est formée par moulage par injection de résine synthétique dans l'évidement.
2. Tirette ornementale (11) selon la revendication 1, caractérisée en ce que la matière de la plaque de base (18) est une matière synthétique transparente et la partie ornement (19) est formée d'une matière non transparente.
3. Tirette ornementale (11) selon la revendication 1, caractérisée en ce que la plaque de base (18) et la partie ornement (19) sont formées de résines synthétiques différentes, respectivement.
4. Tirette ornementale (11) selon l'une quelconque des revendications 1 à 3, caractérisée par le fait qu'elle comprend un support (12) de tirette relié à une de ses extrémités à la partie de préhension (13) et est articulée à son autre extrémité sur le corps (14') du curseur.



5. Procédé pour produire une partie de préhension (13) d'une tirette ornementale (11) destinée à être articulée sur le corps (14') d'un curseur (14) de fermeture à glissière et comportant une plaque de base (18) et une ou des partie(s) ornement(s) (19) et en particulier selon l'une quelconque des revendications 1 à 4, caractérisé en ce que:

- on forme une plaque de base (18) comportant un évidement (20, 21) par moulage par injection d'une résine synthétique dans un moule comportant un demi-moule supérieur et un demi-moule inférieur, le demi-moule supérieur comportant des saillies correspondant aux évidements désirés (20, 21),
- après refroidissement du moule, on place un autre demi-moule supérieur sur le demi-moule inférieur, les cavités du demi-moule supérieur se trouvant en regard des évidements (20, 21), et
- on injecte une résine synthétique dans les cavités pour obtenir les parties ornement(s) (19) de la plaque de base (18).

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