

Description

This invention relates to slide fasteners and more particularly to such a slide fastener which has an ornamental appearance compatible with a garment article to which the fastener is applied.

The role of conventional slide fasteners has been primarily to ensure efficient and smooth closing and opening of a garment fabric to which they are attached, thus with emphasis on the functional aspect of the slide fastener. Great emphasis is now on its ornamental aspect to render the fastener compatible or harmonious with a companion garment article such as apparels, sportswear, bags and the like which have recently become more and more fashionable and sophisticated. Thus, fashionableness of slide fasteners themselves is now an important design consideration in their manufacture. There have been proposed various devices for providing such fashionable slide fasteners typically by applying an ornament in the form of indicia, markings, pictorial images and the like onto the fastener tapes. In such instance, it would be desirable to locate the ornaments integrally over and across the confronting longitudinal edges of a pair of stringer tapes in order to present a slide fastener in the most impressive, harmonious manner. However, the stringer tapes carry rows of coupling elements along their respective longitudinal edges, which rows of elements tend to disrupt the continuity and integrity of the ornaments applied onto the tapes, resulting in indistinct, unsightly appearance of the slide fastener.

In DE-A-2 729 088, it has been proposed a slide fastener of the conventional type, wherein ornaments are printed on the exposed surface including the coupling elements. In such a slide fastener, the ornaments are prone to get scratched by the slider moving to open or close the fastener.

In GB-A-1 408 196, it has been proposed a slide fastener wherein the coupling elements are concealed so that the exposed surface appears to be continuous. However, such a slide fastener comprises no ornaments on said exposed surface.

In attempts to eliminate the aforesaid difficulties and lack of ornamental aspect, it has been proposed to provide a slide fastener having a continuous helical or meander formation of coupling elements attached to one surface of each of two opposed stringer tapes along the respective longitudinal edges which can be brought closely together when the fastener is closed. The opposite surface of each tape is used as a front exposed to view for application of desired ornaments by means of printing or dyeing, which ornaments are arranged to extend over and across the confronting edges of the tapes. This proposal has however met with the difficulty that the ornaments are as in DE-

A-2 729 088 prone to get scratched on repeated frictional contact with a slider moving to open or close the fastener. This is aggravated where sewing threads securing the coupling elements to the tapes are exposed on the ornaments, resulting in very unsightly fastener product.

It has also been proposed, as disclosed for example in U. S. Patent No. 2,251,137, to use a pair of ornamental strips having identical ornament halves and sewn to respective stringer tapes of a slide fastener so as to couple the ornament halves together to present a continuous ornamental in closed disposition of the slide fastener. This prior art device has a drawback in that the ornamental strips superposed on the respective stringer tapes make the slide fastener necessarily bulky, hence disharmonious with some garment articles and therefore restrict the extent to which such fastener can be used in commerce. Another drawback is in that the ornamental strips are disposed to flap freely up and down as they are stitched at their blank or ornament-free areas to the stringer tapes and are therefore liable to make the arrangement of the ornaments somewhat discontinuous even when the strips meet closely together. This would be noticeable particularly when lateral pull is exerted tending to spread the opposed strips apart.

With the foregoing difficulties and drawbacks of the prior art in view, the present invention seeks to provide a slide fastener having an arrangement of ornaments which is provided in such a manner that the ornaments may be displayed most impressively as a continuous image and protected against the effect of a slider operation which would otherwise impair the ornaments.

The present invention seeks to provide an ornamental arrangement extending over and across the longitudinal edges of a pair of opposed stringer tapes.

The present invention further seeks to provide an ornamental arrangement only on one of the two stringer tapes.

According to one embodiment of the invention, there is provided a slide fastener which as claimed comprises a pair of opposed stringer tapes each having a web portion and an upper strip extending integrally from said web portion along an inner longitudinal edge of said tape, an abutting rib about which said upper strip is folded, a lower strip extending from said rib and underlying said upper strip, a row of coupling elements secured to said lower strip said rib on one tape is intimately engageable with that on the opposite tape and said upper strip and said lower strip define therebetween a guide channel extending longitudinally throughout the length of each of said tapes and adapted to receive a slider, and a series of ornaments subdivided to provide one half on said

upper strip on one tape and the other half on said upper strip on the other tape. According to the present invention said series of ornaments each extends beyond a marginal edge of said upper strip into the region of said abutting rib.

According to another embodiment of the invention, there is provided a slide fastener which as claimed comprises a pair of opposed stringer tapes each having a web portion and an upper strip extending integrally from said web portion along an inner longitudinal edge of said tape, an abutting rib about which said upper strip is folded, a lower strip extending from said rib and underlying said upper strip, and a row of coupling elements secured to said lower strip, said rib on one tape being intimately engageable with that on the opposite tape and said upper strip and said lower strip defining therebetween a guide channel extending longitudinally throughout the length of each of said tapes and adapted to receive a slider. According to the present invention said upper strip on one stringer tape is wider than that on the other stringer tape and adapted to provide thereon a series of ornaments said upper strip being thicker than said web portion and said ornaments being embedded in said upper strip to lie flush with the upper surface thereof.

The invention will be described in detail with reference to the accompanying drawings which illustrate by way of example some preferred embodiments.

Figure 1 is a fragmentary perspective view of a slide fastener embodying the invention;

Figure 2 is a view similar to Figure 1 but showing the fastener partly open;

Figure 3 is a transverse cross-sectional view taken on the line III - III of Figure 1 with a slider indicated by phantom line;

Figure 4 is a view similar to Figure 3 but showing the slide fastener subjected to lateral pull exerted in the direction of the arrow;

Figure 5 is a transverse cross-sectional view of another modified form of a slide fastener according to the invention;

Figure 6 is a transverse cross-sectional view of a further modified form of a slide fastener according to the invention; and

Figure 7 is a fragmentary perspective view of still another modified form of a slide fastener according to the invention.

Referring now to the drawings and Figure 1 in particular, there is shown a slide fastener 10 which comprises a pair of opposed stringer tapes 11a and 11b each of which consists of a web portion 12 and a thickened upper strip 13 extending integrally from the web portion 12 along an inner longitudinal edge of the tape 11a (11b). The upper strip 13 may be formed by Dobby or Jacquard loom, or by

lacing whichever is more convenient, while the web portion 12 is formed by an ordinary weaving or knitting loom. The upper strip 13 is folded on itself to provide an abutting rib 14 and a lower strip 15 extending therefrom to underly the upper strip 13. The lower strip 15 and the upper strip 13 define therebetween a guide channel 16 having a substantially "U"-shape cross-section and extending longitudinally throughout the length of the tape 11a (11b) for receiving a slider 17 as shown in Figure 3.

A row of continuous coupling elements E in the form of a helical coil or meandering structure is secured by stitchings S to the lower surface of one lower strip 15 and is taken into and out of coupling engagement with a companion row of elements E on the opposite lower strip 15 by the action of the slider in a manner well known in the art.

In the embodiment shown in Figures 1 - 3, there is provided a series of ornaments 18 in the form of alphabets as presently shown or other suitable indicia, pictorial images and the like which contribute to enhanced ornamental representation compatible or harmonious with any garment article. One half of each ornament 18 extends beyond a marginal edge 13a of the upper strip 13 into the abutting rib 14 and terminates short of the lower surface of the lower strip 15, so that when the ribs 14 on the respective tapes 11a, 11b are brought into intimate abutting engagement by manipulation of the slider 17, the one half of ornament 18 on one tape 11a is likewise brought into abutting engagement with the other half of ornament 18 on the opposite tape 11b to present a substantially continuous, integral ornamental image, as better shown in Figure 1.

Extension of the ornaments 18 into the region of the rib 14 about which the upper strip 13 is folded, ensures continuity or integrity of the ornaments 18 even in the event a lateral pull is extended to spread the two tapes 11a and 11b apart as shown in Figure 4.

There may be considered various ways of providing the ornaments 18 on the tapes 11a and 11b. The ornaments 18 may be printed or dyed on the tapes 11a, 11b prior to attachments thereto of coupling elements E, or after this attachment while the tapes 11a, 11b are subjected to transverse or lateral tension. Alternatively, the ornaments 18 may be formed on a plastics film or a flocked fabric and applied to the tapes 11, 11 by means of high frequency, supersonic, heat and pressure or adhesive treatment. The ornaments 18 may also be formed by direct electrostatic flocking of the tapes 11a, 11b.

Figure 5 shows a variation of the ornamental slide fastener 10 (Figures 1 - 3) in which the ornaments 18 are embedded in the upper strip 13 to lie flush with the upper surface of the latter.

Figure 6 shows another variation which is substantially similar to the fastener 10 except that the coupling elements E attached to the respective tapes 11a, 11b are in the form of a discrete structure.

Figure 7 shows a modified form of ornamental slide fastener 10 embodying the invention which comprises a narrow width stringer tape 11c of a thickness uniform throughout its whole area including the folded edge and a wide width stringer tape 11d which has a thickened upper strip 13d similar to but somewhat wider than the upper strip 13 in Figure 1. The ornaments 18 are applied onto the region of the upper strip 13d by means already described hereinabove.

Advantageously, in all of the illustrated embodiments of the invention, the ornaments 18 are displayed distinctly and impressively as a continuous image and are protected against abrasive wear by the arrangement in which the slider 17 is guidedly received in the guide channel 16 formed between the upper strips 13, (13b) and the lower strips 15.

Claims

1. A slide fastener (10) which comprises a pair of opposed stringer tapes (11a, 11b) each having a web portion (12) and an upper strip (13) extending integrally from said web portion (12) along an inner longitudinal edge of said tape (11a, 11b), an abutting rib (14) about which said upper strip (13) is folded, a lower strip (15) extending from said rib (14) and underlying said upper strip (13), a row of coupling elements (E) secured to said lower strip (15), said rib (14) on one tape (11a) is intimately engageable with that on the opposite tape (11b) and said upper strip (13) and said lower strip (15) define therebetween a guide channel (16) extending longitudinally throughout the length of each of said tapes (11a, 11b) and adapted to receive a slider (17), characterized in that it comprises a series of ornaments (18) subdivided to provide one half on said upper strip (13) on one tape (11a) and the other half on said upper strip (13) on the other tape (11b), and in that said series of ornaments (18) each extends beyond a marginal edge (13a) of said upper strip (13) into the region of said abutting rib (14).
2. A slide fastener (10) according to claim 1 characterized in that said ornaments (18) extend into the region of said rib (14) and terminate short of the lower surface of said lower strip (15).

3. A slide fastener (10) which comprises a pair of opposed stringer tapes (11a, 11b) each having a web portion (12) and an upper strip (13) extending integrally from said web portion (12) along an inner longitudinal edge of said tape (11a, 11b), an abutting rib (14) about which said upper strip (13) is folded, a lower strip (15) extending from said rib (14) and underlying said upper strip (13), and a row of coupling elements (E) secured to said lower strip (15), said rib (14) on one tape (11a) being intimately engageable with that on the opposite tape (11b) and said upper strip (13) and said lower strip (15) defining therebetween a guide channel (16) extending longitudinally throughout the length of each of said tapes (11a, 11b) and adapted to receive a slider (17) characterized in that said upper strip (13) on one stringer tape (11b) is wider than that on the other stringer tape (11a) and adapted to provide thereon a series of ornaments (18), said upper strip (13) being thicker than said web portion (12) and said ornaments (18) being embedded in said upper strip (13) to lie flush with the upper surface thereof.

4. A slide fastener (10) according to claim 3 characterized in that said upper strip (13) on one stringer tape (11b) is thicker than that on the other stringer tape (11a).

Patentansprüche

1. Reißverschluß (10), umfassend zwei einander gegenüberliegende Tragbänder (11a, 11b), die jeweils einen Bahnbereich (12) und einen oberen Streifen (13) aufweisen, der sich von dem Bahnbereich (12) entlang einem inneren Längsrand des Tragbandes (11a, 11b) einstückig erstreckt, eine Anschlagrippe (14), um die der obere Streifen (13) umgefaltet ist, einen unteren Streifen (15), der von der Rippe (14) ausgeht und unter dem oberen Streifen (13) zu liegen kommt, eine Kuppelgliederreihe (E), die an dem unteren Streifen (15) befestigt ist, wobei die Rippe (14) an einem Tragband (11a) mit derjenigen an dem gegenüberliegenden Tragband (11b) in innige Berührung bringbar ist und wobei der obere Streifen (13) und der untere Streifen (15) dazwischen einen Führungskanal (16) begrenzen, der sich in Längsrichtung über die gesamte Länge eines jeden der Tragbänder (11a, 11b) erstreckt und der einen Schieber (17) aufnehmen kann, dadurch gekennzeichnet, daß er eine Reihe von Verzierungen (18) umfaßt, die unterteilt sind, um eine Hälfte auf dem oberen Streifen (13) eines Tragbandes (11a) und die andere Hälfte auf



Figure 6 shows another variation which is substantially similar to the fastener 10 except that the coupling elements E attached to the respective tapes 11a, 11b are in the form of a discrete structure.

Figure 7 shows a modified form of ornamental slide fastener 10 embodying the invention which comprises a narrow width stringer tape 11c of a thickness uniform throughout its whole area including the folded edge and a wide width stringer tape 11d which has a thickened upper strip 13d similar to but somewhat wider than the upper strip 13 in Figure 1. The ornaments 18 are applied onto the region of the upper strip 13d by means already described hereinabove.

Advantageously, in all of the illustrated embodiments of the invention, the ornaments 18 are displayed distinctly and impressively as a continuous image and are protected against abrasive wear by the arrangement in which the slider 17 is guidedly received in the guide channel 16 formed between the upper strips 13, (13b) and the lower strips 15.

Claims

1. A slide fastener (10) which comprises a pair of opposed stringer tapes (11a, 11b) each having a web portion (12) and an upper strip (13) extending integrally from said web portion (12) along an inner longitudinal edge of said tape (11a, 11b), an abutting rib (14) about which said upper strip (13) is folded, a lower strip (15) extending from said rib (14) and underlying said upper strip (13), a row of coupling elements (E) secured to said lower strip (15), said rib (14) on one tape (11a) is intimately engageable with that on the opposite tape (11b) and said upper strip (13) and said lower strip (15) define therebetween a guide channel (16) extending longitudinally throughout the length of each of said tapes (11a, 11b) and adapted to receive a slider (17), characterized in that it comprises a series of ornaments (18) subdivided to provide one half on said upper strip (13) on one tape (11a) and the other half on said upper strip (13) on the other tape (11b), and in that said series of ornaments (18) each extends beyond a marginal edge (13a) of said upper strip (13) into the region of said abutting rib (14).
2. A slide fastener (10) according to claim 1 characterized in that said ornaments (18) extend into the region of said rib (14) and terminate short of the lower surface of said lower strip (15).

3. A slide fastener (10) which comprises a pair of opposed stringer tapes (11a, 11b) each having a web portion (12) and an upper strip (13) extending integrally from said web portion (12) along an inner longitudinal edge of said tape (11a, 11b), an abutting rib (14) about which said upper strip (13) is folded, a lower strip (15) extending from said rib (14) and underlying said upper strip (13), and a row of coupling elements (E) secured to said lower strip (15), said rib (14) on one tape (11a) being intimately engageable with that on the opposite tape (11b) and said upper strip (13) and said lower strip (15) defining therebetween a guide channel (16) extending longitudinally throughout the length of each of said tapes (11a, 11b) and adapted to receive a slider (17) characterized in that said upper strip (13) on one stringer tape (11b) is wider than that on the other stringer tape (11a) and adapted to provide thereon a series of ornaments (18), said upper strip (13) being thicker than said web portion (12) and said ornaments (18) being embedded in said upper strip (13) to lie flush with the upper surface thereof.

4. A slide fastener (10) according to claim 3 characterized in that said upper strip (13) on one stringer tape (11b) is thicker than that on the other stringer tape (11a).

Patentansprüche

1. Reißverschluß (10), umfassend zwei einander gegenüberliegende Tragbänder (11a, 11b), die jeweils einen Bahnbereich (12) und einen oberen Streifen (13) aufweisen, der sich von dem Bahnbereich (12) entlang einem inneren Längsrand des Tragbandes (11a, 11b) einstückig erstreckt, eine Anschlagrippe (14), um die der obere Streifen (13) umgefaltet ist, einen unteren Streifen (15), der von der Rippe (14) ausgeht und unter dem oberen Streifen (13) zu liegen kommt, eine Kuppelgliederreihe (E), die an dem unteren Streifen (15) befestigt ist, wobei die Rippe (14) an einem Tragband (11a) mit derjenigen an dem gegenüberliegenden Tragband (11b) in innige Berührung bringbar ist und wobei der obere Streifen (13) und der untere Streifen (15) dazwischen einen Führungskanal (16) begrenzen, der sich in Längsrichtung über die gesamte Länge eines jeden der Tragbänder (11a, 11b) erstreckt und der einen Schieber (17) aufnehmen kann, dadurch gekennzeichnet, daß er eine Reihe von Verzierungen (18) umfaßt, die unterteilt sind, um eine Hälfte auf dem oberen Streifen (13) eines Tragbandes (11a) und die andere Hälfte auf



dem oberen Streifen (13) des anderen Tragbandes (11b) zu bilden, und daß sich die Reihe von Verzierungen (18) jeweils über eine Randkante (13a) des oberen Streifens (13) hinaus in den Bereich der Anschlagrippe (14) hinein erstreckt.

2. Reißverschluß (10) nach Anspruch 1, dadurch gekennzeichnet, daß sich die Verzierungen (18) in den Bereich der Rippe (14) hinein erstrecken und kurz vor der Unterseite des unteren Streifens (15) enden.

3. Reißverschluß (10), umfassend zwei einander gegenüberliegende Tragbänder (11a, 11b), die jeweils einen Bahnbereich (12) und einen oberen Streifen (13) aufweisen, der sich von dem Bahnbereich (12) entlang einem inneren Längsrand des Tragbandes (11a, 11b) einstückig erstreckt, eine Anschlagrippe (14), um die der obere Streifen (13) umgefaltet ist, einen unteren Streifen (15), der von der Rippe (14) ausgeht und unter dem oberen Streifen (13) zu liegen kommt, eine Kuppelgliederreihe (E), die an dem unteren Streifen (15) befestigt ist, wobei die Rippe (14) an einem Tragband (11a) mit derjenigen an dem gegenüberliegenden Tragband (11b) in innige Berührung bringbar ist und wobei der obere Streifen (13) und der untere Streifen (15) dazwischen einen Führungskanal (16) begrenzen, der sich in Längsrichtung über die gesamte Länge eines jeden der Tragbänder (11a, 11b) erstreckt und der einen Schieber (17) aufnehmen kann, dadurch gekennzeichnet, daß der obere Streifen (13) an dem einen Tragband (11b) biefter ist als derjenige an dem anderen Tragband (11a) und geeignet ist, darauf eine Reihe von Verzierungen (18) anzuordnen, wobei dieser obere Streifen (13) dicker ist als der Bahnbereich (12) und wobei die Verzierungen (18) in diesen oberen Streifen (13) eingebettet sind, so daß sie mit dessen Oberseite flächenbündig sind.

4. Reißverschluß (10) nach Anspruch 3, dadurch gekennzeichnet, daß der obere Streifen (13) an dem einen Tragband (11b) dicker ist als derjenige an dem anderen Tragband (11a).

Revendications

1. Fermeture à glissière (10) comprenant une paire de rubans opposés (11a, 11b) de bandes d'accrochage dont chacun comporte une partie âme (12) et une bande supérieure (13) s'étendant de façon intégrée depuis ladite partie âme (12) le long d'un bord longitudinal intérieur dudit ruban (11a, 11b), une nervure de

butée (14) autour de laquelle ladite bande supérieure (13) est pliée, une bande inférieure (15) s'étendant depuis ladite nervure (14) et en-dessous de ladite bande supérieure (13) une rangée d'éléments d'accouplement (E) fixés à ladite bande supérieure (15), ladite nervure (14) présente sur un (11a) des rubans pouvant venir en contact intime avec celle présente sur le ruban opposé (11b), et ladite bande supérieure (13) et ladite bande inférieure (15) définissant entre elles un canal de guidage (16) s'étendant longitudinalement sur la totalité de la longueur de chacun desdits rubans (11a, 11b) et étant adaptées pour recevoir un curseur (17), caractérisée en ce qu'elle comprend une série d'ornements (18) divisés de manière à former une moitié sur ladite bande supérieure (13) de l'un (11a) des rubans et une autre moitié sur ladite bande supérieure (13) de l'autre ruban (11b), et en ce que lesdites séries d'ornements (18) s'étendent chacune au-delà d'un bord marginal (13a) de ladite bande supérieure (13) jusque dans la région de ladite nervure de butée (14).

2. Fermeture à glissière (10) selon la revendication 1, caractérisée en ce que lesdits ornements (18) s'étendent jusque dans la région de ladite nervure (14) et se terminent en-deça de la surface inférieure de ladite bande inférieure (15).

3. Fermeture à glissière (10) comprenant une paire de rubans opposés (11a, 11b) de bandes d'accrochage comportant chacun une partie âme (12) et une bande supérieure (13) s'étendant de façon intégrée depuis ladite partie âme (12) le long d'un bord longitudinal intérieur dudit ruban (11a, 11b), une nervure de butée (14) autour de laquelle ladite bande supérieure (13) est pliée, une bande inférieure (15) s'étendant depuis ladite nervure (14) et en-dessous de ladite bande supérieure (13), et une rangée d'éléments d'accouplement (E) fixés à ladite bande inférieure (15), ladite nervure (14) présente sur l'un (11a) des rubans pouvant venir en contact intime avec celle se trouvant sur le ruban opposé (11b) et ladite bande supérieure (13) ainsi que ladite bande inférieure (15) définissant entre elles un canal de guidage (16) s'étendant longitudinalement sur la totalité de la longueur de chacun desdits rubans (11a, 11b) et étant adapté pour recevoir un curseur (17), caractérisée en ce que ladite bande supérieure (13) se trouvant sur un (11b) des rubans de bandes d'accrochage est plus large que celle se trouvant sur l'autre ruban (11a) de bande d'accrochage et étant adaptée



pour former sur ce dernier une série d'ornements (18), ladite bande supérieure (13) étant plus épaisse que ladite partie d'âme (12) et lesdits ornements (18) étant encastrés dans ladite bande supérieure (13) de manière à se trouver de niveau avec la surface supérieure de cette dernière.

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4. Fermeture à glissière (10) selon la revendication 3, caractérisée en ce que ladite bande supérieure (13) se trouvant sur l'un (11b) des rubans de bandes d'accrochage est plus épaisse que celle se trouvant sur l'autre ruban (11b) de bande d'accrochage.

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