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(54) **Pression button active male element**

Aktives Druckknopfsteckelement

Élément mâle actif de bouton pression

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EP 2 361 522 B1

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Description

BACKGROUND OF THE INVENTION

[0001] The present invention relates to an active male element for an improved pression button.

[0002] The invention also relates to a pression button including the inventive active male element.

[0003] The field of the invention is that of the pression buttons conventionally used for mutually attaching two flaps, for example of a garments or other article in general, said garment or article being made of a fabric, paper, plastic material, preferably in a sheet form.

[0004] The above pression buttons usually comprise a male portion to be attached to a first flap to be coupled, and a female portion, rigid or integral with the other flap.

[0005] Each button portion is in turn constituted by an active element, forming the male/female component of the button, and by a clamping element for clamping the active element on the fabric, paper or the like flap.

[0006] In particular, the pression button male component active element comprises a contoured or shaped body, made by plastically deforming a sheet element, and including a peripheral annular groove, designed for clamping therein an elastic element of the button female portion.

[0007] The above prior pression buttons have the drawback that their annular groove is undesirably deformed under load, as the pression button male portion is applied to the fabric flat.

[0008] Thus, the pression button coupling and releasing force undesirably changes, thereby in turn preventing a proper operation of the pression button.

[0009] To the above drawbacks, the disadvantage is further added that, because of its comparatively large size, the male portion constitutes an anti-aesthetic component of the fabric the pression button is applied to.

[0010] The document WO 2004/095966 relates to a clamping device, including an eyelet on an engagement section of the active male element engaging the fabric material, to allow the active male element to be detached from the female portion by turning said active male element within the eyelet.

[0011] AU 3430171 discloses a pression button active male element including a solid body associated with a male clamping element having a contoured annular body including a downward turned portion. The head of the solid body active male element includes an under-head groove for engaging with said downward turned portion, thereby clamping the corresponding fabric flap at its portion included in a profile formed by the downward turned portion and under-head groove.

SUMMARY OF THE INVENTION

[0012] Thus, the main object of the present invention is to provide such a pression button active male element overcoming the above drawbacks occurring as the active

male element is applied to its supporting fabric flap.

[0013] Within the scope of the above mentioned aim, a main object of the invention is to provide such an active male element and related pression button which do not have the antiaesthetic effects affecting like prior art pression buttons.

[0014] According to one aspect of the present invention, the above aim and objects, as well as yet other objects, which will become more apparent hereinafter, are achieved by the active male element and pression button as claimed in the accompanying claims.

[0015] Preferred embodiments of the invention are disclosed in the dependent claims.

[0016] With respect to prior pression buttons, the inventive button has the advantage that its active male portion preserves its designed dimensions, and is not negatively affected by the operating effort exerted for applying the active male portion on the fabric flap.

[0017] Moreover, the inventive pression button has the advantage of a pleasant aesthetic aspect, owing to its small size and the very simple and essential pattern of the exposed to the view pression button active male portion section.

BRIEF DESCRIPTION OF THE DRAWINGS

[0018] The above mentioned and further objects, advantages and features of the invention will become more apparent hereinafter from the following detailed disclosure of a preferred embodiment of the active male element and pression button according to the present invention as shown, by way of a non limitative but indicative example, in the accompanying drawings, where:

Figure 1 is an exploded cross-sectional view of a prior art pression button;

Figure 2 is a further exploded cross-sectional view showing an exemplary embodiment of the pression button according to the present invention;

Figure 3 is a further cross-sectional view showing a detail of the male portion, in a position thereof assembled on the fabric, included in the pression button of figure 2;

Figures 4 to 8 show modified embodiments of the pression button active male element of figures 2 and 3; and

Figures 9 and 10 show a further modified embodiment of the active male element.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0019] A prior art pression button, generally indicated by 1 in figure 1, comprises a female portion 2 clamped on a flap 4, for example of a fabric material, and a male portion 3, clamped on the other fabric flap 5.

[0020] In turn, the female portion 2 comprises a clamping element 6 and an active female element 7, whereas the male portion 3 comprises a clamping element 8 and

an active male element 9.

[0021] In operation, a projection 10 of the active male element 9 will be fitted in a seat 11 of the active female element 7.

[0022] In clamping the male element 3 to the fabric flap 5, the connection of the male clamping element 8 made in the active male element 9, may deform an annular or ring groove 12 formed outside of said projection 10.

[0023] Thus, the clamping of said projection 10 in said seat 11 is changed, with a consequent variation of the pression button 1 releasing load.

[0024] In order to overcome the above drawback, the pression button 13 according to the present invention, shown in figure 2, comprises an active male element 14 which is not formed by a deformed sheet metal element, as in the prior art, but by a solid body, for example made by mechanically machining a bar member.

[0025] More specifically, said active male element 14 comprises an active male element head 15 and an active male element stem 16, said head 15 comprising a peripheral annular groove 17 for engagement in said active female element 7 seat 11.

[0026] Moreover, in the under-head portion of the element 4, a second groove 18, for engaging therein the corresponding fabric flap 5, by pressing on the male clamping element 19, is provided.

[0027] According to the present invention, said clamping male element 19 comprises moreover a contoured or shaped annular body 20 including an outward turned portion 21 for engaging in said groove 18 of the active male element 14.

[0028] Said male clamping element 19, in turn, further comprises a cap element 22 assembled on the head 23 of the contoured annular body 20.

[0029] As is clearly shown by the detail of figure 3, in its assembled condition, the pression button 13 male portion 3 has its outward turned portion 21 of the contoured annular body 20 engaged in the groove 18 of the active male element 14 under-head portion, with an interposed fabric flap 5 portion 24.

[0030] In particular, owing to a comparatively large extension of this portion 24, due to the arch contour of the outward turned part 21-groove 18 connection, a very efficient anchoring of the button 13 male portion 3 to the fabric flap 5, even if an active male element 14 including a small size head 15 is used is achieved.

[0031] Figure 3 also shows a pressed on condition of the active male element 14 stem 16 being locked in the clamping element 19 contoured annular body 20.

[0032] In the modified embodiments shown in figures 4 and 5, the active male element 14 stem 16, instead of having a pointed or tip end portion 25 as shown in figure 2, comprises a tapering tip 26 with a flat contour 27, selected depending on the pression button application.

[0033] In the modified embodiment shown in figures 6 and 7, which do not form part of the claimed invention, the active male element 14 under-head portion has a flat configuration, and does not include the groove 18 of the

previous embodiment.

[0034] Moreover, the element 14 of figure 6 has a substantially cylindric pattern head portion 28.

[0035] In this modified embodiment, the function of the annular groove 17 of the preceding modified embodiments being provided by the under-head radiused portion 29.

[0036] The modified embodiment of the male portion of in figure 8 not forming part of the claimed invention, comprises a contoured annular body 35 having an inward turned portion 30 for engagement in the under-head groove 18 of the active male element 14.

[0037] Finally, in the modified embodiment of figures 9 and 10, not forming part of the claimed invention, the active male element 31 is designed as a simple head portion 36, also comprising a solid piece including, in its under-head portion, a seat or recess 32 for engaging therein the stem 33 of a nail element 34 constituting the pression button male clamping element.

[0038] In the assembled condition shown in figure 10, said stem 33 being locked by deforming it within said seat 32.

Claims

1. A pression button active male element, of a type including a solid body (14) associated with a male clamping element (19) for clamping a first fabric flap (5) in a male portion (3) of said pression button (2, 3), said male portion (3) being adapted to be clamped to a female portion (2) to be in turn clamped to a second fabric flap (4), said solid body active male element. (14) comprising a head (15) associated with a stem (16), **characterized in that** said male clamping element (19) comprises a contoured annular body (20) having an outward turned portion (21), said head (15) including an under-head groove (18) for engaging with said outward turned portion (21) thereby clamping said first fabric flap (5) at its portion (24) included in a profile formed by the outward turned portion (21)-under-head groove (18) assembly, said female portion (2) comprising an active female element (7) including a seat (11), said head (15) further comprising a peripheral annular groove (17) engageable in said seat (11).
2. An active male element, according to claim 1, **characterized in that** said stem (16) comprises either a pointed tip portion (25) or a tapering tip portion (26), or a flat profile tip portion (27).
3. A pression button, of a type comprising a female portion (2) including an active female element (7) having a seat (11) for engagement in an annular groove (17) of an active male element (14) according to claims 1 or 2.

Patentansprüche

1. Aktives Druckknopf-Steckelement von einem Typ, der einen massiven Körper (14) aufweist, welcher mit einem Klemmsteckelement (19) zum Festklemmen eines ersten Stofflappens (5) in einem Steckabschnitt (3) des Druckknopfes (2, 3) verbunden ist, wobei der Steckabschnitt (3) dazu ausgebildet ist, an einen Buchsenabschnitt (2) geklemmt zu werden, um seinerseits an einen zweiten Stofflappen (4) geklemmt zu werden, wobei das einen massiven Körper aufweisende aktive Steckelement (14) einen Kopf (15) umfasst, der mit einem Schaft (16) verbunden ist, **dadurch gekennzeichnet, dass** das Klemmsteckelement (19) einen profilierten ringförmigen Körper (20) mit einem nach außen gebogenen Abschnitt (21) umfasst, wobei der Kopf (15) eine Unterkopfrille (18) zum Eingriff mit dem nach außen gebogenen Abschnitt (21) umfasst, wodurch der erste Stofflappen (5) an dessen Abschnitt (24) festgeklemmt wird, der in einem Profil umfasst wird, welches durch die Baugruppe aus nach außen gedrehtem Abschnitt (21) und Unterkopfrille (18) gebildet wird, wobei der Buchsenabschnitt (2) ein aktives Buchsenelement (7) umfasst, das einen Sitz (11) aufweist, wobei der Kopf (15) ferner eine ringförmige Umfangsrille (17) umfasst, die in dem Sitz (11) in Eingriff gebracht werden kann.
2. Aktives Steckelement nach Anspruch 1, **dadurch gekennzeichnet, dass** der Schaft (16) entweder einen spitzen Spitzenabschnitt (25) oder einen sich verjüngenden Spitzenabschnitt (26) oder einen Spitzenabschnitt (27) mit flachem Profil umfasst.
3. Druckknopf von einem Typ umfassend einen Buchsenabschnitt (2), der ein aktives Buchsenelement (7) mit einem Sitz (11) zum Eingriff in einer ringförmigen Rille (17) eines aktiven Steckelements (14) nach Anspruch 1 oder 2 aufweist.

(18)prévues sous la tête afin de s'engager sur la partie retournée vers l'extérieur (21) en serrant ainsi ledit premier rabat de tissu (5) au niveau de sa partie (24) comprise dans un profil formé par l'ensemble partie retournée vers l'extérieur (21)-gorge (18) prévue sous la tête, ladite partie femelle (2) comprenant un élément actif femelle (7) comportant un siège (11), ladite tête (15) comprenant en outre une gorge annulaire périphérique (17) qui peut s'engager dans ledit siège (11).

2. Élément actif mâle, selon la revendication 1, **caractérisée en ce que** ladite tige (16) comprend soit une partie d'embout pointu (25) soit une partie d'embout conique (26), soit une partie d'embout à profil plat (27).
3. Bouton pression, d'un type comprenant une partie femelle (2) comportant un élément actif femelle (7) possédant un siège (11) destiné à s'engager dans une gorge annulaire (17) d'un élément actif mâle (14) selon la revendication 1 ou 2.

Revendications

1. Élément actif mâle d'un bouton pression, d'un type comportant un corps en une seule pièce (14) associé à un élément de fixation mâle (19) destiné à fixer un premier rabat de tissu (5) dans une partie mâle (3) dudit bouton pression (2, 3), ladite partie mâle (3) étant conçue pour être fixée sur une partie femelle (2) afin d'être à son tour fixée sur un second rabat de tissu (4), ledit élément actif mâle du corps en une seule pièce (14) comprenant une tête (15) associée à une tige (16), **caractérisé en ce que** ledit élément de fixation mâle (19) comprend un corps annulaire profilé (20) possédant une partie retournée vers l'extérieur (21), ladite tête (15) comportant une gorge

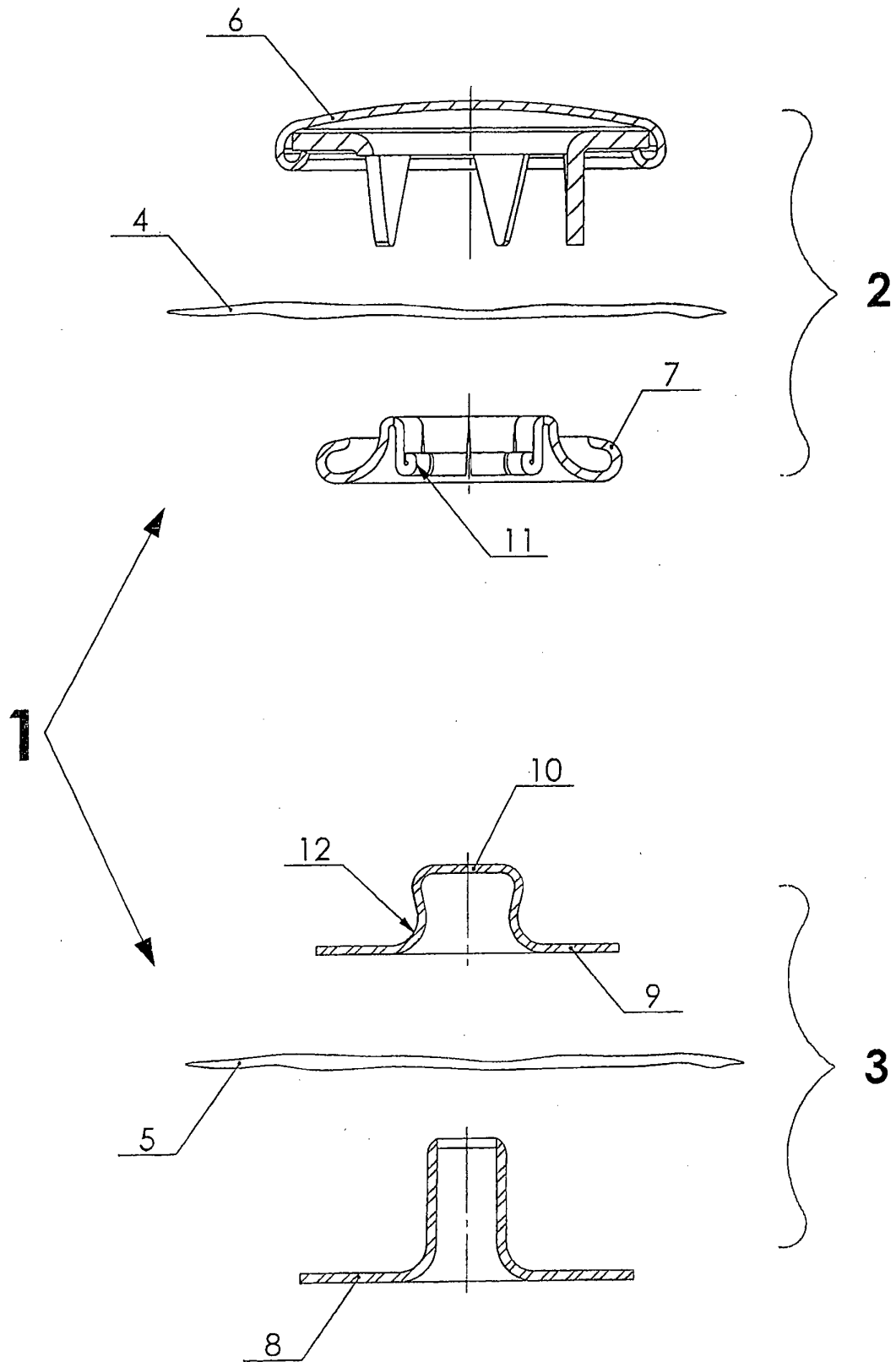


FIG. 1

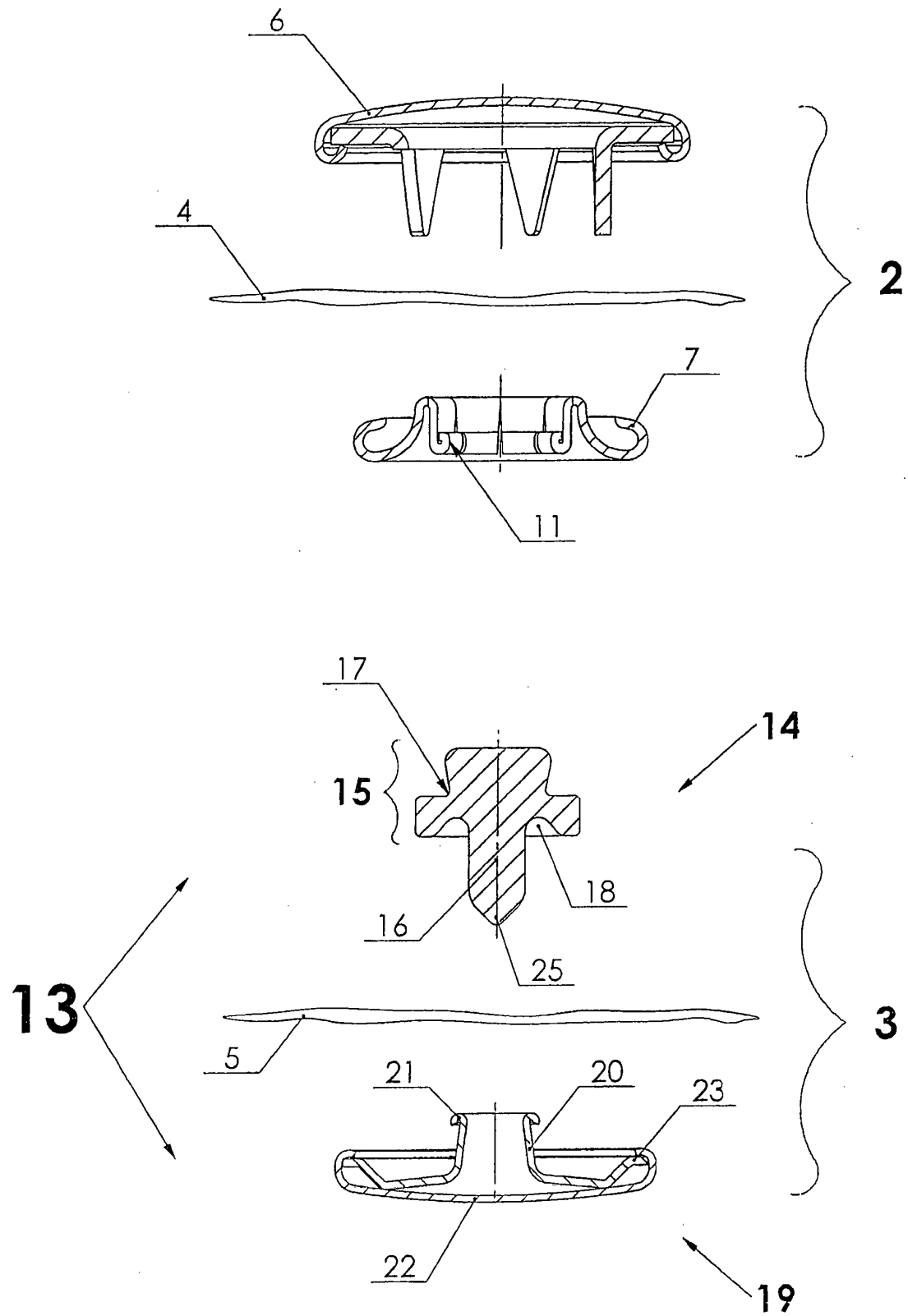


FIG. 2

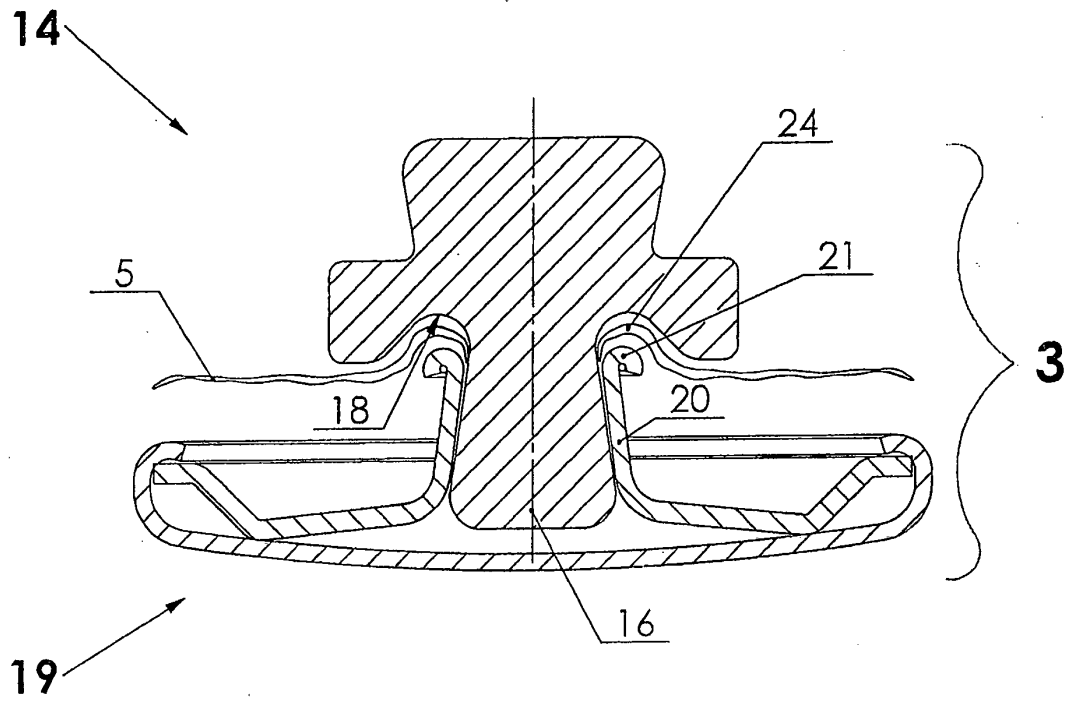


FIG. 3

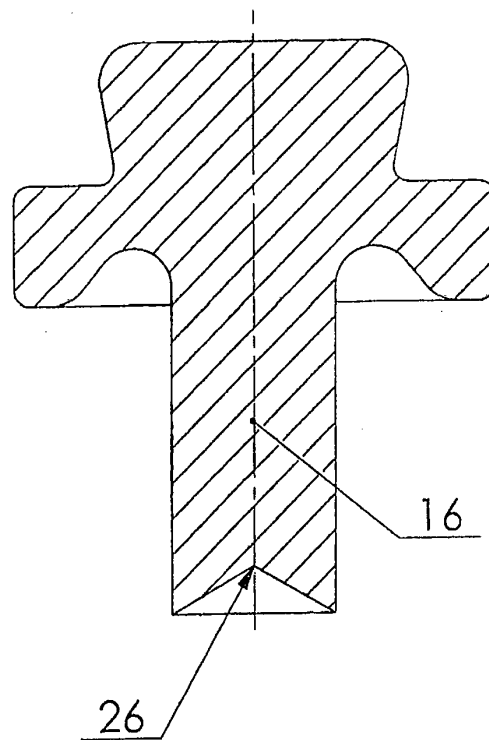


FIG. 4

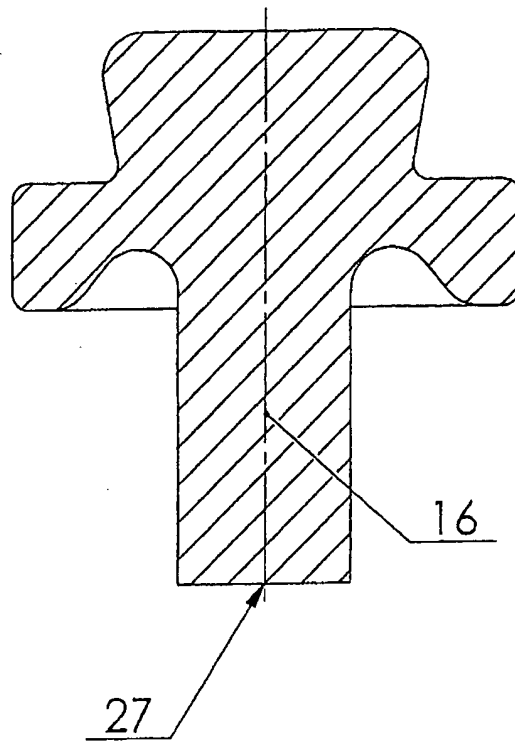


FIG. 5

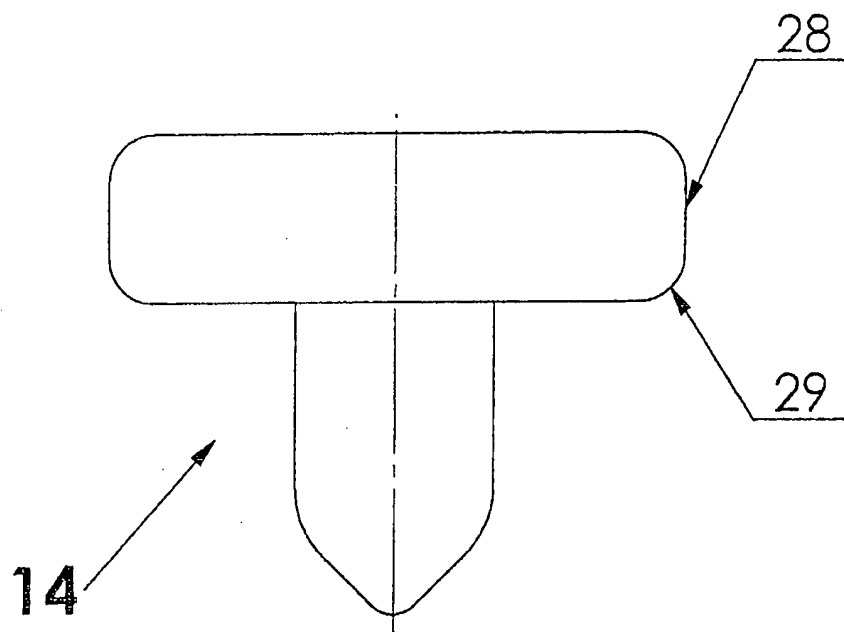


FIG. 6

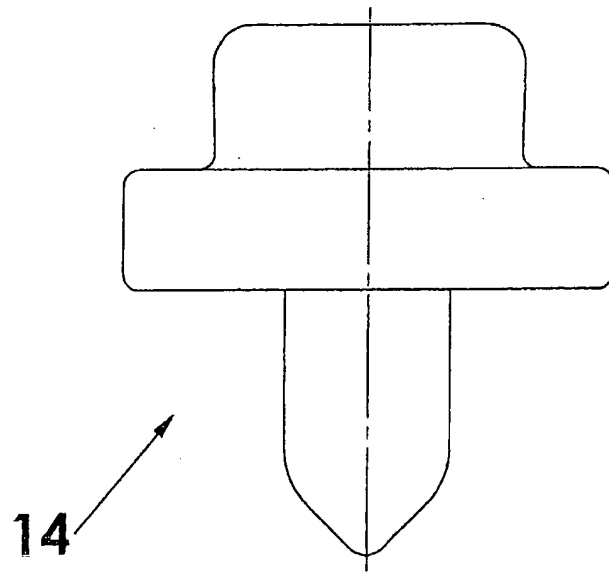


FIG. 7

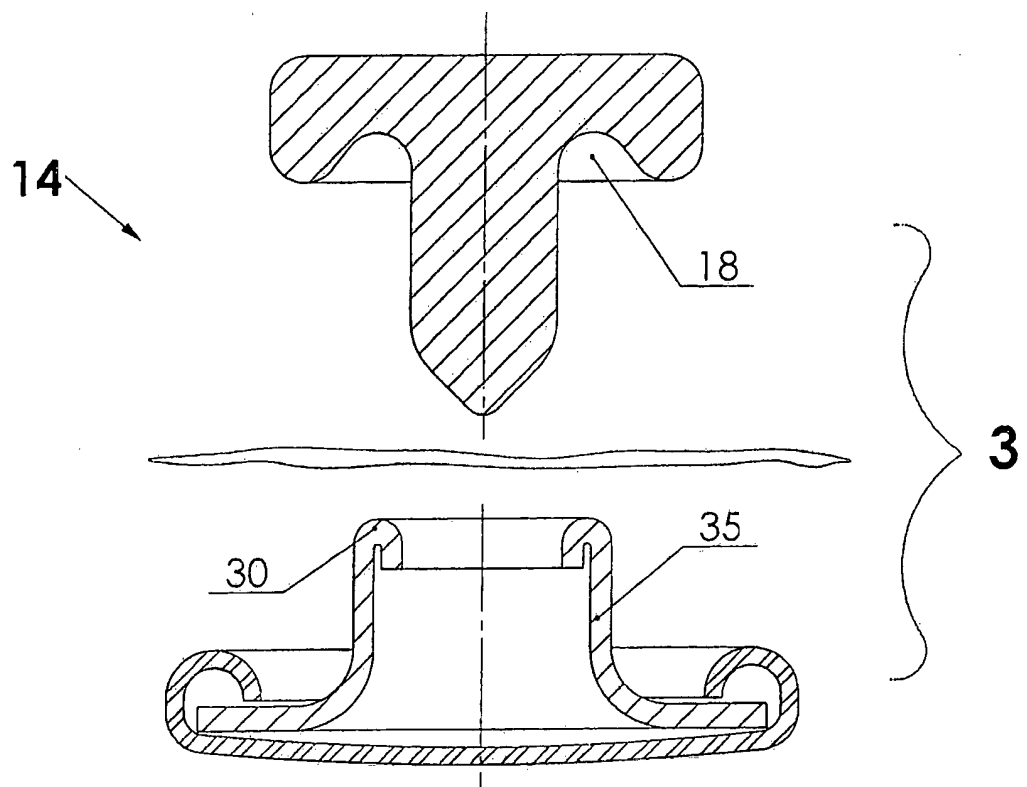


FIG. 8

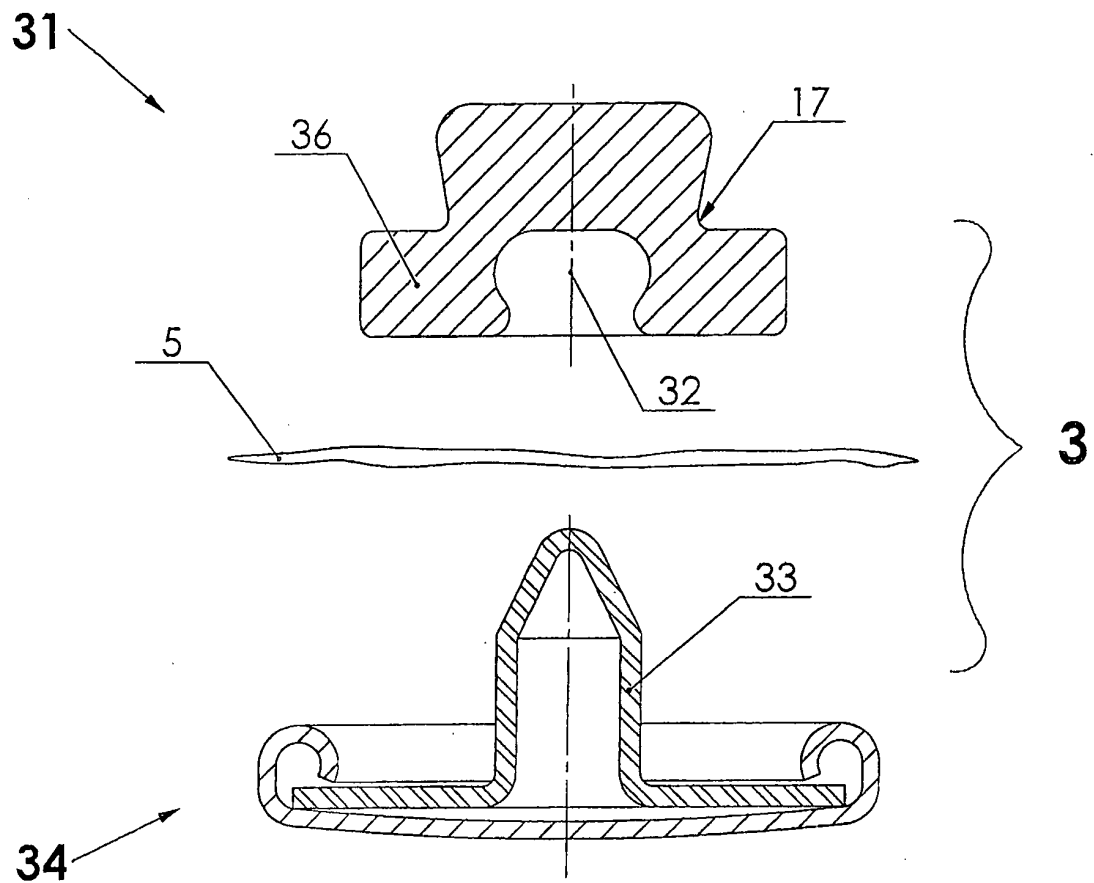


FIG. 9

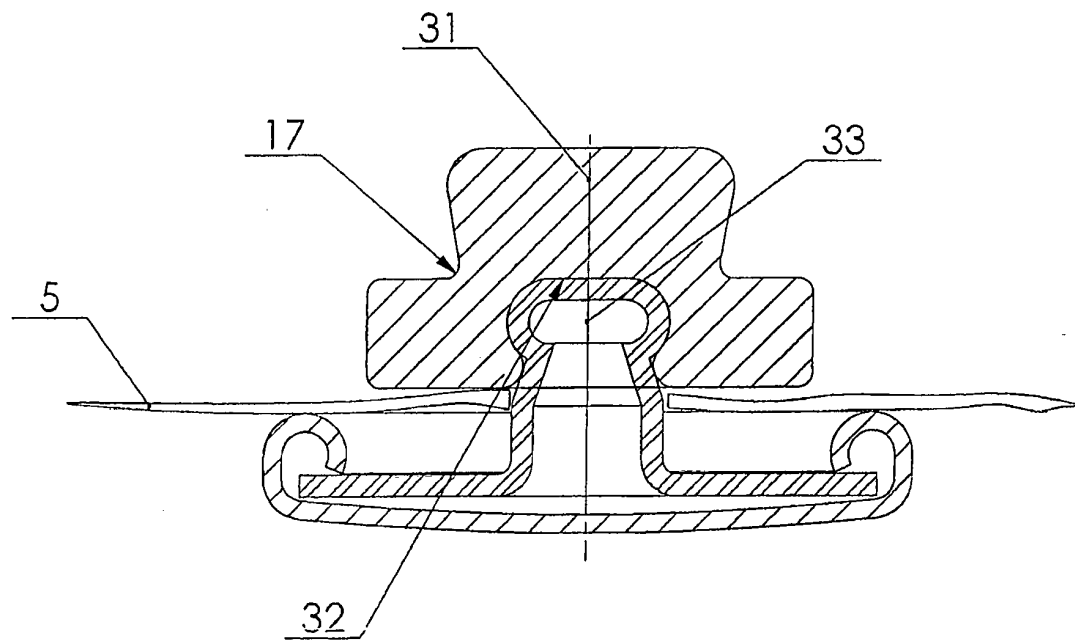


FIG. 10

REFERENCES CITED IN THE DESCRIPTION

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