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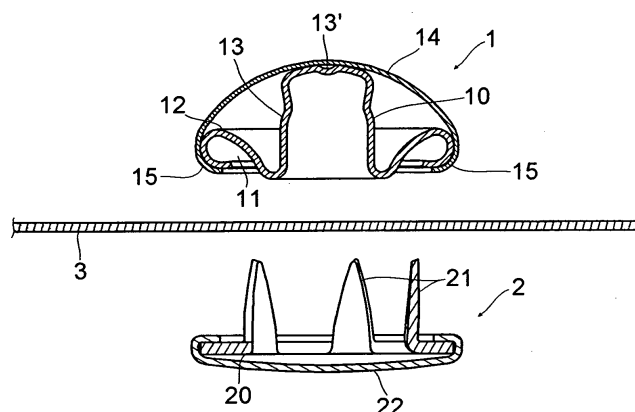
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(54) **Decorative button**

(57) A decorative button (1) includes a base member (10) and a cap member (14). The base member (10) includes a prong-accommodating portion (11) that receives a prong portion (21) of a fixing member (2). The cap member (14) is disposed on the base member (10) and forms an outer surface of the decorative button (1).

The base member (10) is provided with a cap-supporting portion (13) which abuts to a middle portion of a rear surface of the cap member (14) to support the cap member (14), thereby preventing a deformation of the cap member (14). A top portion (13') of the cap-supporting portion (13) is a plane to abut to the rear surface of the cap member (14) along the curving of the rear surface.

FIG. 1



Description

BACKGROUND OF THE INVENTION

1. FIELD OF THE INVENTION

[0001] The present invention relates to a decorative button. Specifically, the invention relates to a dome-shaped decorative button.

2. DESCRIPTION OF RELATED ART

[0002] Dome-shaped decorative buttons are widely used for decoration of garments, shoes and bags, especially for decoration of leather and denim products due to an appearance of a head thereof like an embedded pin or rivet of a dome-like arched shape when the button is fixed to a fabric.

[0003] One example of the dome-shaped buttons is disclosed in JP-U-48-97104. However, in a process for fixing the button to the fabric or in use, the dome made of a metal plate of the button might be deformed relatively easily when a load is applied on a surface of the dome.

[0004] When the dome-shaped decorative button is a solid die cast product, the button becomes relatively heavy. Accordingly, especially when many buttons are used, reduction in total weight of the product may be hindered. Or a prong-accommodating portion for receiving a prong portion (a prong) of a fixing member may need to be provided after die cast molding by the way of curling a lower end portion of the molded product or by another way.

[0005] The present invention has been attained in light of the above-described points. An object of the invention is to provide a decorative button including a cap which is not easily deformed.

SUMMARY OF THE INVENTION

[0006] A decorative button according to an aspect of the invention is fixed to a fabric. The decorative button includes: a base member; and a cap member undetachably disposed on the base member, the cap member forming an outer surface of the decorative button. The base member abuts to a middle portion of a rear surface of the cap member to support the cap member. The base member includes a supporting portion which prevents a deformation of the cap member.

[0007] In the decorative button according to the aspect of the invention, the supporting portion of the base member supports, from the rear side of the cap member, the middle portion of the cap member projecting in a dome-like shape. Accordingly, in attaching of the button to the fabric or when the button is in use, the risk of deforming the dome shape of the cap can be reduced even when a load or an impact is applied on the cap.

[0008] In a decorative button of the invention, a fixing member thereof which fixes the decorative button to a

fabric may preferably include a prong portion to penetrate the fabric. The base member may preferably include a flange portion which forms a prong-accommodating portion deforming and receiving the prong portion of the fixing member. The cap member may preferably include a lower end portion which holds the flange portion of the base member. According to the aspect, the prong portion of the fixing member penetrating the fabric is received in the prong-accommodating portion of the base member of the decorative button, thereby attaching the button to the fabric and engaging the button and the fixing member (see Fig. 3). For example, in another embodiment, a projection provided on the decorative button side along the axial direction may penetrate the fabric to be held on the fixing member side.

[0009] In a decorative button according the invention, a top portion of the supporting portion of the base member curves along the rear surface of the cap member to make a plane-contact to the cap member. Specifically, the top portion of the supporting portion of the base member is adapted to make not a point-contact but a plane-contact to the rear surface of the cap member. The contacting surface of the supporting portion is not horizontal but curved along the rear surface of the curving cap. Accordingly, the cap-supporting capacity of the cap-supporting portion can be enhanced.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010]

Fig. 1 is a cross section showing a decorative button and a fixing member vertically facing to each other with a fabric therebetween;

Fig. 2 is a plan view of the decorative button;

Fig. 3 is a cross section showing the decorative button and the fixing member brought to each other from the state shown in Fig. 1 into engagement in which the decorative button and the fixing member are fixed to the fabric;

Fig. 4 is a process illustration showing a state in which a base member is about to be covered by a cap member; and

Fig. 5 is another process illustration showing a state in which the base member is covered by the cap member.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENT(S)

[0011] A preferred embodiment of a decorative button according to the present invention will be described below with reference to the attached drawings. Fig. 1 is a cross section showing a decorative button 1 and a fixing member (a cap prong) 2 vertically facing to each other with a fabric 3 therebetween, the decorative button 1 and the fixing member 2 to be fixed to the fabric 3. Fig. 2 is a plan view of the decorative button 1. Fig. 3 is a cross

section showing the decorative button 1 attached to the fabric 3.

[0012] The decorative button 1 includes a base member 10 and a dome-shaped cap member 14 disposed on the base member 10, both members being made of brass, stainless steel, aluminum or the like and formed by drawing. The cap member 14 forms an outer surface (a convex and spherical surface) of the dome shape of the decorative button 1. The base member 10 includes a ring-shaped flange portion 12 and a cap-supporting portion 13. The flange portion 12 includes a prong-accommodating portion 11 for accommodating a prong portion 21 of the fixing member 2 when the fixing member 2 is attached to the fabric as shown in Fig. 3. The cap-supporting portion 13 is in the middle of the flange portion 12 i.e. on the inner periphery of the flange portion 12. The cap-supporting portion 13 projects from the lowest portion of the base member 10 toward the upper side thereof to abut to a middle portion of a rear surface of the cap member 14. In the embodiment, the diameter of a bottom portion of the decorative button 1 is approximately 10 mm; the height thereof is approximately 4 mm; and the outside diameter of a top portion 13' of the cap-supporting portion 13 is approximately 3 mm.

[0013] The diameter of the cap-supporting portion 13 of the decorative button 1 is set to be approximately constant from a base end portion of the cap-supporting portion 13 to the top portion 13' as well as to be maximum to the extent possible. The top portion 13', which abuts to an inner surface of the cap member 14, is not a point but a plane. The plane is not horizontal but slightly curved along the curving inner surface of the cap member 14. Accordingly, the cap-supporting portion 13 provides enhanced cap-supporting capacity.

[0014] The fixing member 2 is a general cap prong. The fixing member 2 includes: a prong 20 including the prong portion 21; and a cap 22 to cover the prong 20. Owing to the cap 22 on a rear side of the fabric and the above-described dome-shaped cap member 14 on a front side of the fabric, the front and rear surfaces of the decorative button 1 do not give an untidy impression but have good and neat appearances.

[0015] Figs. 4 and 5 each are an illustration for explaining a process of covering the base member 10 with the cap member 14. Before attached to the base member 10, the cap member 14 has a cylindrical lower end portion 15 of the dome shape (the upper side in Figs. 4 and 5). The cylindrical lower end portion 15 is plastic-deformed by a pressing machine such that the lower end portion 15 holds the flange portion 12 of the base member 10. Specifically, the pressing machine includes: a cap member mount 40 on the lower side, which has a recess 41 in an upper surface, the recess 41 being fittable with the dome shape of the cap member 14; a base member holder 42 on the upper side, which can be vertically moved by the base member holder 42 around the base member holder 42 with a projection 43 which serves such that the base member 10 is held by the cap-supporting portion

13; and a cylindrical press die 44 having a bending die portion 45 for bending the cylindrical lower end portion 15 of the cap portion 14.

[0016] When attaching the cap member 14 to the base member 10, the cap member 14 is placed upside down in the recess 41 of the cap member mount 40. The base member 10 is held by the base member holder 42 that is apart from the cap member mount 40 in the upward direction with the cap-supporting portion 13 accommodating the projection 43. The base member holder 42 is then lowered such that the base member 10 is brought in the cap member 14 and that the top portion 13' of the cap-supporting portion 13 reliably but gently abuts on the rear surface of the cap member 14. While maintaining the base member holder 42 in the state, the press die 44 is lowered (see Fig. 5). The cylindrical lower end portion 15 of the cap member 14 is bent by the bending die portion 45 toward the inner side of the radial direction so as to undetachably cover the flange portion 12 of the base member 10.

[0017] As described above, the cap-supporting portion 13 supports the cap member 14 from the rear side of the cap member 14. Therefore, even when the cap member 14 receives an impact or the like from the outer side, the cap member 14 is not easily deformed by the impact.

Claims

1. A decorative button (1) fixed to a fabric (3), comprising:
 - a base member (10);
 - and a cap member (14) undetachably disposed on the base member (10), the cap member (14) forming an outer surface of the decorative button (1), wherein
 - the base member (10) abuts to a middle portion of a rear surface of the cap member (14) to support the cap member (14), and
 - the base member (10) includes a supporting portion (13) which prevents a deformation of the cap member (14).
2. The decorative button (1) according to claim 1, wherein
 - the decorative button (1) is fixed to the fabric (3) by a fixing member (2) having a prong portion (21) penetrating the fabric (3),
 - the base member (10) includes a flange portion (12) which forms a prong-accommodating portion (11) deforming and receiving the prong portion (21) of the fixing member (2), and
 - the cap member (14) includes a lower end portion (15) which holds the flange portion (12) of the base member (10).
3. The decorative button (1) according to claim 1 or 2,

wherein a top portion (13') of the supporting portion (13) of the base member (10) curves along the rear surface of the cap member (14) to make a plane-contact to the cap member (14).

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Amended claims in accordance with Rule 86(2) EPC.

1. A decorative button (1) fixed to a fabric (3), comprising:

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a base member (10);
and a dome-shaped cap member (14) made of a thin plate material, the cap member being undetachably disposed on the base member (10), the cap member (14) forming an outer surface of the decorative button (1), wherein the base member (10) abuts to an area around the centre of a rear surface of the cap member (14) to support the cap member (14), and includes a supporting portion (13) which prevents a deformation of the cap member (14).

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2. The decorative button (1) according to claim 1, wherein

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the decorative button (1) is fixed to the fabric (3) by a fixing member (2) having a prong portion (21) penetrating the fabric (3),

the base member (10) includes a flange portion (12) which forms a prongaccommodating portion (11) deforming and receiving the prong portion (21) of the fixing member (2), and

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the cap member (14) includes a lower end portion (15) which holds the flange portion (12) of the base member (10).

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3. The decorative button (1) according to claim 1 or 2, wherein a top portion (13') of the supporting portion (13) of the base member (10) curves along the rear surface of the cap member (14) to make a plane-contact to the cap member (14).

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4. The decorative button (1) according to any one of claims 1 to 3, wherein the cap member (14) is made of metal.

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FIG. 1

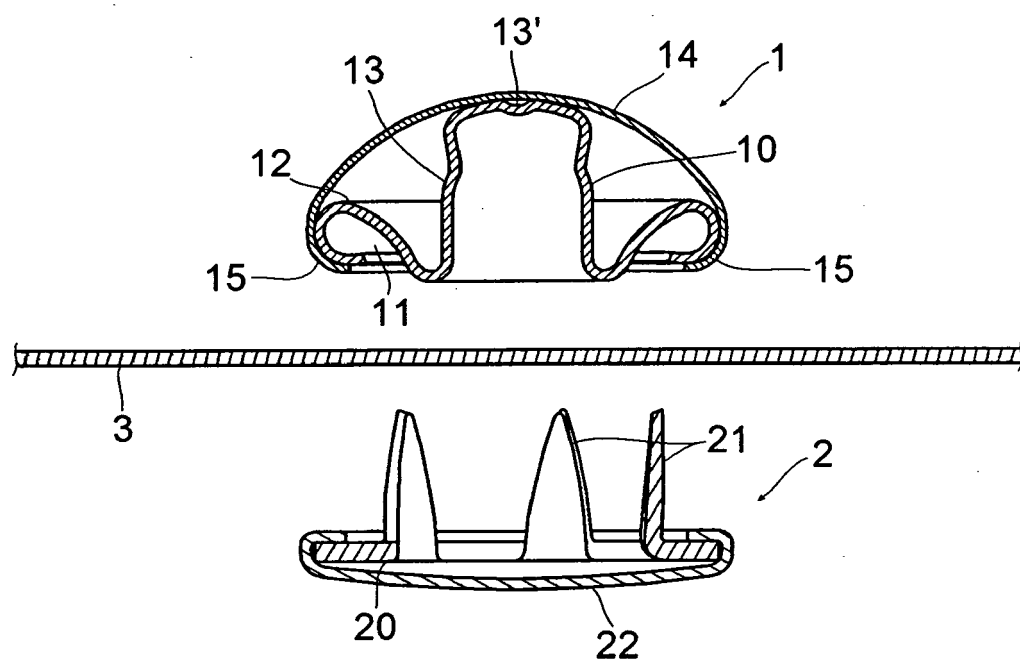


FIG. 2

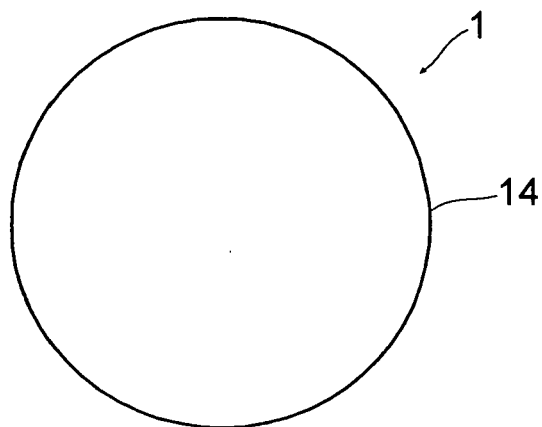


FIG. 3

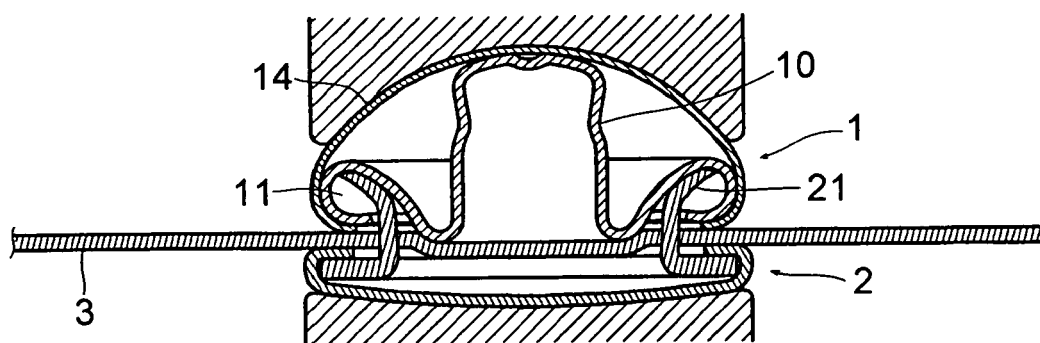


FIG. 4

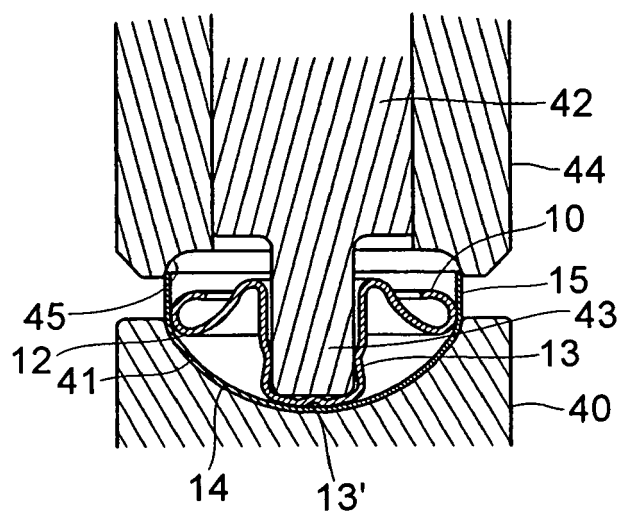
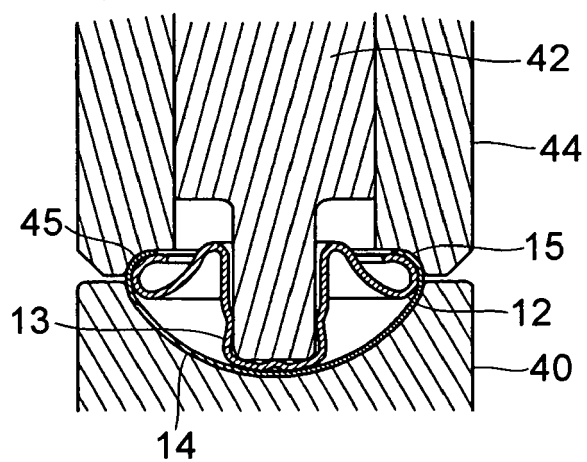


FIG. 5





DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	DE 37 25 439 A1 (PRYM WERKE WILLIAM [DE]) 9 February 1989 (1989-02-09) * column 4, line 21 - line 26; figures 1-6 *	1-3	INV. A44B1/42 A44B1/44
X	DE 87 10 108 U1 (WILLIAM PRYM-WERKE GMBH & CO KG, 5190 STOLBERG, DE) 17 September 1987 (1987-09-17) * page 11 - page 13; figures 1,2 *	1-3	
X	US 3 577 846 A1 (PERRIN BADGER) 11 May 1971 (1971-05-11) * column 1, line 60 - column 2, line 35; figure 3 *	1-3	
X	EP 0 174 606 A2 (NIPPON NOTION KOGYO [JP]) 19 March 1986 (1986-03-19) * page 6, line 14 - line 24; figure 5 *	1,3	
			TECHNICAL FIELDS SEARCHED (IPC)
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 7 March 2007	Examiner Horubala, Tomasz
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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 EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 06 02 4328

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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07-03-2007

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REFERENCES CITED IN THE DESCRIPTION

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