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(54) **Removable covering cap for substantially cylindrical buttons**

(57) Removable covering cap (1) for a substantially cylindrical button (2), of the type comprising an upper portion (10) and coupling means for removably constraining said covering cap (1) to the button (2), and wherein such coupling means comprise at least one annular-shaped side wall (12) jutting from the aforesaid upper portion (10) and shaped so as to engage at least partially with at least part of the outer surface of the button (2). The aforesaid annular-shaped side wall (12) is at least

in part elastically deformable between a narrow shape for being retained in engagement with said button (2) and a widened shape for the at least partial insertion of said button (2) into said annular-shaped side wall (12). The cap advantageously comprises at least one substantially laminar rigid body (11) coupled on the outside of at least said upper portion (10) of the cap (1) or forming at least part thereof, and which has at least part of an ornamental pattern (14) on its outer surface.

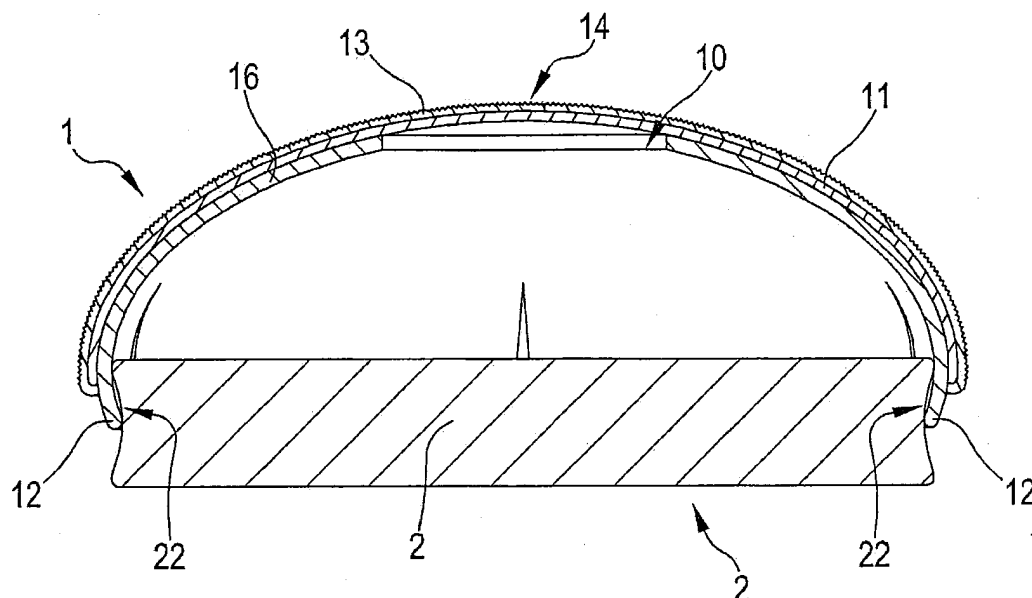


Fig. 1

Description

[0001] The present invention relates to a removable covering cap for covering cylindrical buttons, such as those for fastening a garment, such as a shirt, a cardigan, trousers etc. or ornamental buttons, e.g. for shoes or bags or other clothing accessories or objects, and a kit consisting of a substantially cylindrical button and the respective removable covering cap.

[0002] It is known in the prior art to make buttons, usually consisting of a cylindrical body provided with one or more seats in which a retaining thread is inserted and coupled, which have an upper surface in sight, i.e. facing towards the outside when the button is fixed to the garment or to the clothing accessory/object, comprising one or more decorative patterns.

[0003] Hereinafter, it is worth noting that "decorative pattern" means any substantially two- or three-dimensional material element having esthetic purposes and comprising e.g. a decoration, a colored surface, a body having a particular shape free from technical-functional purposes etc.

[0004] Such buttons, the decorative patterns of which may consist of a particular shape of the aforesaid upper surface and/or of a chromatic decoration either impressed or applied in irreversible manner on such an upper surface have the disadvantage that once fixed to the garment or to the accessory/object to be adorned are very difficult to remove and thus characterize the appearance of the garment or the accessory/object to which they are coupled for an unlimited time.

[0005] So, when the user of such garments or clothing accessories/objects adorned by decorative buttons no longer finds the decoration provided by such buttons agreeable, he or she must necessarily either remove the aforesaid decorative buttons and apply new buttons, which is a laborious operation, or is forced to purchase a new garment or clothing accessory/object.

[0006] Furthermore, if the garment or clothing object provided with the aforesaid decorative buttons is destined to be disused, the user is forced to remove such decorative buttons if he or she intends to apply them to a new garment or clothing accessory/object.

[0007] In order to avoid such drawbacks, decorative caps are known in the prior art which, provided with coupling (restraining) means to pre-existing buttons, can be easily removed and applied to common buttons free from decorations, already fixed to a garment or to a clothing object/accessory.

[0008] In particular, removable caps for buttons are known, comprising an upper portion, usually provided with an exposed surface, from which a substantially annular wall departs, the shape and elasticity of which are such to form the aforesaid coupling means, capable of removably restraining the cap to the button.

[0009] Usually, the cap is made in one piece, e.g. of polymeric material, and is possibly covered by a surface layer, e.g. made of rubber or textile material having a

decorative pattern.

[0010] In such embodiments, the problem of carefully selecting elastic material with which to make the cap arises, because such a material must guarantee a convenient elastic deformability and must also be sufficiently rigid to easily support the aforesaid decorative pattern which may be made graphically directly on the upper portion of such a cap or alternatively may be made on the aforesaid surface covering layer constrained to such an upper portion of the cap.

[0011] Furthermore, if a surface covering layer made of a textile material or other flexible material is used, the problem of constraining such a textile material to the cap in one piece arises, because the use of permanent constraining processes, such as gluing or welding, may lead to unsatisfactory esthetic results.

[0012] United States Patent US 3,500,507, by Malhenzie et al., teaches, among other things, to make a removable cap for substantially cylindrical buttons in which springs, made by means of a metallic wire appropriately shaped to embrace the button for which the cap is intended, are embedded in a sufficiently rigid polymeric body.

[0013] Although allowing to place an ornamental pattern easily on the upper portion of the removable cap, such a solution appears complex and costly to make and does not solve the problem of effectively constraining a possible surface layer having a decorative pattern to the cap itself.

[0014] It is also known that US 3,500,507 describes only the possibility of gluing a layer of textile material (fabric) onto the upper portion of the removable cap.

[0015] It is thus the object of the present invention to make a replaceable cap for substantially cylindrical buttons which does not display the drawbacks of the prior art.

[0016] Another object of the present invention is to make a removable covering cap for substantially cylindrical buttons which is simple to make and allows at the same time to easily couple any decorative pattern, even if made on a surface covering layer, to its upper portion.

[0017] A further object of the present invention is to provide a replaceable covering cap for substantially cylindrical buttons which allows the simple use of a decorative pattern created on a surface covering layer made of textile material or other similar flexible material without requiring complex, and sometimes esthetically inadequate, processes to constrain such a surface layer to the covering cap, e.g. by gluing.

[0018] It is yet another object of the present invention to provide a kit or assembly consisting of a substantially cylindrical button and a respective removable covering cap which is simple to make and to use in addition to being extremely versatile.

[0019] These and other objects are reached by the removable covering cap for substantially cylindrical buttons according to the first independent claim and the subsequent dependent claims and by the kit formed by the substantially cylindrical button and a respective remov-

able covering cap according to the thirteenth independent claim and the subsequent claims dependent therefrom.

[0020] The removable covering cap for a substantially cylindrical button, according to the present invention, comprises an upper portion, adapted to cover the upper face of the button, and coupling means for removably constraining the covering cap to the button, wherein such coupling means comprise at least one annular-shaped side wall jutting from the aforesaid upper portion and shaped so as to engage at least partially at least part of the outer, e.g. side, surface of the button. With this regard, such an annular-shaped side wall is at least partially elastically deformable side between a narrow shape for being retaining in engagement with the button and a widened shape for the at least partial insertion of the button into such an annular-shaped side wall. The removable covering cap according to the present invention is characterized in that it comprises at least one substantially laminar rigid body which is coupled on the outside to the aforesaid upper portion, or forms at least part thereof, which has at least part of an ornamental pattern on its outer surface.

[0021] The presence of a laminar rigid body, i.e. of limited thickness with respect to the other two dimensions, having at least in part a decorative pattern and overlapped at least on the upper portion of the removable covering cap, the remaining components of which may be made in an elastic material, e.g. an elastic polymer, allows the designer of the covering cap a wide range of freedom of choice regarding the materials to be used at least for the annular side wall, without needing to being limited in the choice of the decorative pattern to be placed on the outer surface of the removable covering cap itself.

[0022] It is worth noting that the words "substantially cylindrical button" means a button of generically cylindrical shape, i.e. substantially provided with two bases, not necessarily identical, joined by a side surface and provided with one or more seats in which to insert and couple a retaining thread, in which such one or more seats may also be jutting from a base of the button.

[0023] Furthermore, the terms "narrow shape" and "widened shape" mean that the elastic portion of the substantially annular-shaped side wall of the cap may elastically assume a first (narrow) gripping shape, in which the elastic return force of the substantially annular-shaped first wall induces it to anchor to an outer surface of the button, and a second (widened) disengaging shape, in which the forces external to the substantially annular-shaped side wall overcome the aforesaid elastic return force and induce it to allow the extemporary passage of at least part of the side surface of the button.

[0024] According to a preferred aspect of present invention, the aforesaid substantially laminar rigid body is coupled on the outside to part of said annular-shaped side wall of the removable covering cap, and in particular may be stably constrained to at least part of the annular-shaped side wall by interference of parts, especially of

complementary parts.

[0025] In other words, the shape of the laminar rigid body and that of the annular-shaped side wall of the removable covering cap may be such to define a snap-fit, i.e. a coupling by interference of preferably complementary parts, which defines a stabile fastening constraint between the aforesaid laminar rigid body and the annular side wall which constitutes the coupling means of the cap to the button.

[0026] Such a conformation facilitates the making of the removable cap according to the present invention and also allows, according to a further preferred aspect of the invention, to easily constrain at least one covering layer having a decorative pattern to at least part of the substantially laminar rigid body if such a covering layer is made of a textile material or another similar flexible material.

[0027] In particular, such a covering layer made of textile material or similar flexible material may be constrained to the removable covering cap by interposing it between at least one end portion of the substantially laminar rigid body and at least part of the annular-shaped side wall coupled to the substantially laminar rigid body.

[0028] In practice, if the decorative pattern is made or constituted by a piece of fabric, this may be arranged so as to totally or nearly totally cover the aforesaid substantially laminar rigid body, which, in turn, may be applied to the annular shaped side wall of the covering cap and snap fit thereto so that such a piece of fabric is withheld between the laminar rigid body and the side wall of the covering cap itself.

[0029] In a particular embodiment of the covering cap according to the present invention, the aforesaid substantially laminar rigid body may comprise one or more through holes, which fluidically join the environment outside the substantially laminar rigid body with the interior environment, defined by the annular-shaped side wall, so as to allow the possible passage of scents from a perfumed source, e.g. placed at the region inside the aforesaid annular-shaped side wall towards the outside environment or possibly towards a textile covering layer of the cap.

[0030] Another aspect of the present invention claimed here relates to a kit comprising a button and a respective removable covering cap, wherein such a button is substantially cylindrical and the respective covering cap comprises at least one upper portion and coupling means for removably constraining it to the button. Such coupling means comprise at least one annular-shaped side wall jutting from the aforesaid at least one upper portion, which is shaped so as to engage at least partially at least part of the outer surface of the button, by virtue of the fact that such an annular-shaped side wall is at least in part elastically deformable between a narrow shape for being retained in engagement with the button and a widened shape for the at least partial insertion of the button into the annular-shaped side wall itself. Advantageously, the removable covering cap comprises at least one sub-

stantially laminar rigid body coupled on the outside of at least the aforesaid upper portion of the covering which has at least part of an ornamental pattern on its outer surface.

[0031] In a particular embodiment of the invention, the button comprises at least one housing portion for at least part of the aforesaid annular-shaped side wall of the covering cap, which is at least in part elastically deformable between a narrow shape for being retained in engagement with the housing portion of the side surface of the button and a widened shape for the partial insertion of the side surface of the button into the annular-shaped side wall itself.

[0032] Preferably, the aforesaid housing portion of the side surface of the button is at least partially concave towards the central axis of the button, and even more preferably such a housing portion of the side surface of the button extends substantially for the entire side surface of the button and is concave towards the central axis of the latter.

[0033] Some preferred embodiments of the present invention will now be described by way of example only and without any limiting purpose with reference to the accompanying figures, wherein:

figure 1 is a side view in section of a removable covering cap applied to a respective cylindrical button, according to a preferred embodiment of the present invention;

figure 2 is a perspective view of the kit consisting of a removable covering cap and of the button in figure 1, wherein the cap is separated from the respective button;

figure 3 is a side section view of the removable covering cap in figures 1 and 2;

figure 4 is a bottom view of the covering cap in figures 1-3;

figure 5 is a perspective view of a laminar rigid body of the covering cap according to a particular embodiment of the present invention;

figure 6 is a side view in section of a removable covering cap applied to a respective cylindrical button, according to a further embodiment of the present invention.

[0034] With reference to figures from 1 to 4, the removable covering cap 1 for substantially cylindrical buttons 2, according to a preferred aspect of the present invention, comprises an upper portion 10, provided to substantially cover the outer upper surface 21 of a button 2, and coupling means for removably constraining the covering cap 1 to the button 2 comprising at least one annular-shaped side wall 12 jutting from the upper portion 10 and which is shaped to at least partially engage part of the outer surface of the button 2, and more specifically, in the embodiment shown here, with the side surface 20 of the latter.

[0035] It is worth noting that, although a removable

covering cap 1 provided with coupling means capable of engaging the side surface of a substantially cylindrical button 2 are shown here, any only coupling means which engage e.g. the lower base surface of the button 2, thus partially enveloping the latter, may be equally used without because of this departing from the scope of protection here requested.

[0036] In the embodiment shown here, the annular-shaped side wall 12 of the covering 1 is at least in part elastically deformable between a "narrow" shape, which either constitutes or is close to its substantially non-deformed shape, in which it may retain the button 2 in engagement therewith, and a "widened" shape, which constitutes an elastically deformed shape such that the button 2 itself can be at least partially inserted into or disengaged from such an annular-shaped side wall 12.

[0037] It is worth noting that the word "upper" is used here to indicate the portion of the cap 1 or of the button 2 which is more distant from the garment or the clothing accessory/object to which the button 2 is fixed, and is thus in visible, frontal position with respect to an observer who is not wearing the aforesaid garment or clothing accessory/object. Naturally, the word "lower" here and hereinafter indicates a portion of the cap or of the button which is closest to the garment or clothing accessory/object to which the button 2 is fixed.

[0038] In the particular embodiment of the cap 1 illustrated here, the annular-shaped side wall 12 of the cap 1 is shaped in one piece to form a single, at least partially elastic body, with an upper wall 16, bulging in this case, provided with a central hole 15, preferably of the circular type. Such a side wall 12, as shown in figure 3, further comprises a plurality of elastic portions or elastic fingers 12a, 12b, 12c, 12d, 12e, mutually separate from one another, at a lower edge thereof.

[0039] The independent flexion of such elastic portions 12a, 12b, 12c, 12d, 12e allows the covering cap 1 to be coupled to a respective cylindrical button 2, and preferably to the side wall 20 of the latter, and thus to be constrained in stable yet reversible manner to such a button 2.

[0040] In particular, in the embodiment shown here, the outward flexion, i.e. away from the central axis of the covering cap 1, of such elastic fingers 12a, 12b, 12c, 12d, 12e allows the side surface 20 of the button 2 to be inserted within such fingers 12a, 12b, 12c, 12d, 12e, while the subsequent elastic return of the fingers 12a, 12b, 12c, 12d, 12e towards their non-deformed starting position allows the covering cap 1 to elastically retain the side surface 20 of the button 2 (in a sort of snap-fit closing) between such fingers 12a, 12b, 12c, 12d, 12e.

[0041] The area subtended by the lower free end edge of the fingers 12a, 12b, 12c, 12d, 12e, in its non-deformed shape, i.e. before the insertion of the button 2, may preferably be substantially smaller than the maximum area subtended by the side surface 20 of the button 2, so that the fingers 12a, 12b, 12c, 12d, 12e can snap close on such a side surface 20 after having been elastically wid-

ened for inserting the button 2 itself.

[0042] In a preferred embodiment of the present invention, the shape of the lower end edge of the elastic fingers 12a, 12b, 12c, 12d, 12e may be curved towards the inside of the covering cap 1 (see figures 1 and 3), so that the elastic engagement of such fingers 12a, 12b, 12c, 12d, 12e with parts of the surface of the button 2, and in particular with parts of the side surface 20 of the latter, is achieved by means of a substantially two-dimensional surface, which implies the application of a higher pressure by part of the cap 1 on the side surface 20 of the button 2, and thus a better hold by the cap 1 itself.

[0043] Alternatively, in an embodiment not shown here, the elastic annular side wall 12 of the cap 1, starting from the engagement region with the upper surface 10 of the cap 1 itself from which it is jetting, may be either curved or simply tapered towards the central axis of the cap 1 (i.e. towards the inside of the latter), so as to have in any case, in a first non-deformed configuration thereof, and before its coupling with button 2, a region, preferably the free end edge thereof, having diameter (area) smaller than the maximum diameter (area) of the side surface 20 of the button 2 for which the covering cap 1 is intended.

[0044] Furthermore, according to a further particular aspect of the present invention, the annular-shaped side wall 12, jetting from the upper portion 10 of the cap 1, is shaped to overlap in engagement with the side surface 20 of the button 2 only for the part of the length of such a side surface 20 of the button 2, thus without enveloping also parts of the lower base of the latter. This facilitates the engagement and the disengagement of the cap 1 with the button 2, and above all, as explained below, when such a cap 1 is coupled to a button 2 having the side surface thereof 20 particularly shaped to have a housing portion for part of the aforesaid annular-shaped side wall 12.

[0045] Advantageously, according to a preferred aspect of the present invention, the cap 1 illustrated here also comprises a substantially laminar rigid body 11, i.e. having two dimensions which are much greater than the third dimension (thickness), which is coupled in stable manner externally to the elastic body of the cap 1, constituted by the upper wall 16 and by the substantially annular-shaped side wall 12, and which either directly or indirectly supports a decorative motive 14.

[0046] It is worth noting that the words "rigid body" herein mean that the elasticity of lamellar body 11 is generally lower (i.e. modulus of elasticity or Young modulus is generally higher) than that of the elastic body constituted, in this case, by the walls 12, 16.

[0047] In the embodiment shown here, the rigid body 11 is externally coupled to the annular-shaped side wall 12 of the cap 1 and, in particular, is constrained to a region of the annular-shaped side wall 12 higher than that of the elastic fingers 12a, 12b, 12c, 12d, 12e by interference of parts.

[0048] In alternative embodiments of the present invention, the substantially laminar rigid body 11 may con-

stitute, at least in part, the aforesaid upper portion 10 of the covering cap 1, as will be explained in greater detail in the embodiment of the present invention illustrated here in figure 6.

[0049] According to a preferred aspect of the present invention, the laminar rigid body 11 may be made of a metallic material, in addition to a rigid polymeric material, e.g. may be made of a steel foil, while the elastic body, or at least the annular-shaped side wall 12, may be made of a shape-memory polymer.

[0050] As discussed, the presence of a laminar rigid body 11 placed outside the elastic body 12, 16 which allows the reversible fastening of the covering cap 1 to a respective substantially cylindrical button 2 allows to have a valid support for any decorative pattern 14, made either directly on the laminar rigid body or on a covering layer, e.g. made of a textile material having the aforesaid decorative pattern 14.

[0051] In the embodiment of the present invention shown here with reference to figures 1-4, the decorative pattern 14 is made on a piece of fabric 13 coupled to the outer face of the aforesaid substantially laminar rigid body 11.

[0052] More in particular, the piece of fabric 13 of the cap 1 in figures 1-4 is constrained to the covering cap 1 by being interposed between the end edge of the substantially laminar rigid body 11 and that of part of the annular-shaped side wall 12 which engages preferably by interference (or snap-fitting) at least such an end edge of the laminar rigid body 11.

[0053] It is worth noting that in case of decorative pattern made of a covering layer distinct from the aforesaid laminar rigid body 11, any other flexible material, preferably physically similar to the piece of fabric 13 which can be coupled at least onto the outer upper face of the laminar rigid body 11, may be alternatively used as covering layer 13 for supporting the aforesaid decorative pattern 14.

[0054] Furthermore, any other known technique, even less effective, may be alternatively used for stably coupling the possible covering layer to the cap 1, e.g. by gluing or welding, without because of this departing from the scope of protection requested for the present invention.

[0055] According to a preferred aspect of the present invention, with reference also to figure 5, the substantially laminar rigid body 11, which in this case may be made of a metallic material, may comprise one or more through holes 16, which allow the fluidic communication between the environment outside the laminar rigid body 11 (upper region) and the environment inside the laminar rigid body 11 (lower region), as defined by the annular-shaped side wall 12.

[0056] In other words, the laminar rigid body 11, preferably metallic, may have a plurality of through holes 16 to allow the passage of fluid from the region intended to face the button 2 to the outer region of the cap 1, and vice versa, so that possible sources of perfumes may be

arranged within the cap 1 itself, preferably between the upper surface 10 and the lower surface 21 of the button 2, and for example in the circular hole 15 of the upper wall 16 of the cap 1 itself, to diffuse the fragrances thereof towards the outside environment.

[0057] According to another aspect of the present invention, the removable covering cap 1 may be associated, in a respective kit, with a button 2, appropriately shaped to promote the engagement and the disengagement of the cap 1 itself with the button 2.

[0058] Figures from 1 to 4 show, according to a preferred embodiment of the present invention, a kit consisting of a substantially cylindrical button 2 and the respective removable covering cap 1, in which the latter, as described above, in particular includes coupling means comprising an at least partially elastic annular-shaped side wall 12, which juts from an upper portion 10 of the cap and which is shaped to constrain the cap 1 to the side surface 20 of the button 2, in addition to a laminar rigid body 11 which is externally coupled to, or constitutes at least in part of, the aforesaid upper portion 10 of the cap 1, and which directly or indirectly has at least part of a decorative pattern 14 on the outer surface thereof.

[0059] The cap 1, as illustrated and described above, includes in detail that the annular-shaped side wall 12 is at least in part elastically deformable between a "narrow" shape for retaining with engagement a side wall 20 of the button 2 and a "widened" shape for the at least partial insertion of the side surface 20 of the button 2 within the volume defined by the annular-shaped side wall 12.

[0060] According to an advantageous aspect of the present invention, the kit of cap 1 and button 2 shown here requires the side surface 20 of the button 2 to comprise at least one housing portion 22, preferably constituted by a partially concave region of such a surface 20 towards the central axis of the button 2 itself, for the outer edge of the side edge of the annular-shaped side wall 12 of the respective cap 1.

[0061] Such a concave housing portion 22, which may extend - as shown in figures 1 and 2 - substantially for the entire length of the side surface 20 of the button 2, is thus shaped to promote the engagement and retention of the button 2 by the cap 1, which may have its end edge, or better the end edge of the elastic annular wall 12 and, if present, of the aforesaid elastic fingers 12a, 12b, 12c, 12d, 12e, curved towards the inside of the cap 1, so that the cap 1 engages in substantially linear manner (i.e. along a substantially two-dimensional line) the aforesaid concave housing portion 22.

[0062] It is worth noting that, in the particular embodiment of the invention shown here, the concave housing portion 22 of the side surface 20 of the button 2 is adapted to engage the free region of the end edge of the substantially elastic annular side wall 12 of the cap 1, and however any other portion of the annular side wall 12 of the cap 1 may be equally shaped to engage the housing portion 22, without because of this departing from the scope of protection here requested.

[0063] It is also worth noting that, alternatively to the shape curved towards the central axis of the covering cap 1, the elastic annular side wall 12 of the latter may be simply tapered towards such a central axis of the cap 1, so as to have at least one portion with diameter smaller than the diameter of the side surface 20 of the button 2 in a non-deformed configuration thereof, i.e. before its coupling to the button 2.

[0064] As mentioned, according to a further particular aspect of the present invention, the annular-shaped side wall 12, jetting from the upper portion 10 of the cap 1, is shaped to overlap in engagement with the side surface 20 of the button 2 only for the part of the length of such a side surface 20 of the button 2, without thus enveloping also parts of the lower base of the latter. This allows the annular-shaped side wall 12 of the cap 1, in particular when it is curved or tapered towards the inside of the cap 1 itself (i.e. towards its central axis), to easily but stably engage the side surface 20 of the button 2, thus defining a coupling between cap 1 and button 2 which is removable and effective at the same time.

[0065] Figure 6 shows a further embodiment of the removable covering cap 101 for a substantially cylindrical button 2 according to the present invention.

[0066] Such a cap 101 comprises a first elastic body consisting of an upper wall 116, substantially concave towards the inside of the cap 101 itself (i.e. bulging outwards), and of a substantially annular-shaped side wall 112, which is made in one piece with such an upper wall 116 and juts from the bottom thereof.

[0067] The annular-shaped side wall 112, similarly to that of the cap 1 in figures 1-4, is at least partially deformable so as to have a curved or at most tapered shape at the free end edge thereof towards the inside of the cap 101 itself.

[0068] In particular, such an annular-shaped side wall 112 is at least in part elastically deformable between a "narrow" shape for retaining in engagement with the side surface 20 of the button 2 and a "widened" shape for the at least partial insertion of such a side surface 20 into such an annular-shaped side wall 112.

[0069] In this embodiment of the present invention, the upper wall 116 of the cap 1 is shaped to couple, e.g. by union following co-molding or gluing or welding, with a substantially laminar rigid body 111 which defines the upper portion 110 of the cap 101 itself.

[0070] Such a laminar rigid body 111, e.g. consisting of a disc made of metal or rigid plastic material - i.e. less elastic than the body constituted by the upper walls 116 and the annular side wall 112 - has a decorative pattern 114 on the outer face thereof, i.e. "in sight", directly impressed, according to an aspect of the present invention, on such an outer face of the laminar rigid body 111 itself.

[0071] The application of the removable covering cap to a respective button, according to a particular aspect of the present invention, with reference for the sake of simplicity to the cap and to the button in figures 1-4, substantially requires the cap 1, with the non-deformed an-

nular-shaped side wall 12, to be snap-fitted onto the button 2, by forcing the insertion of the latter in the annular-shaped wall 12 of the cap 1 and causing the elastic deformation thereof responsible for such a snap-fitting.

[0072] More in detail, for the application of the cap 1 to the button 2, in the case in which the cap 1 is shaped to be coupled to the side surface 20 of the button 2, the elastically deformable portion of the annular-shaped side wall 12 of the cap 1 (constituted in the example illustrated here by the aforesaid elastic fingers 12a, 12b, 12c, 12d, 12e) is deformed from an initial non-deformed configuration, in which such a portion is developed along a substantially circular edge having perimeter slightly smaller than that subtended by the side surface 20 of the cylindrical button 2, to a widened configuration, in which it elastically bends radially towards the outside of the cap 1 itself, i.e. without breakages or deformations, when the button 2 is inserted by force into the annular-shaped side wall 12.

[0073] Thus, once the insertion of the button 2 in the cap 1 is completed, e.g. because the upper surface 21 of the button 2 itself abuts on the upper wall 16 of the cap 1, such an elastically deformable portion of the annular-shaped side wall 12 of the cap 1, is no longer biased towards a "widened" shape, tends to return exclusively to its initial position, in a "narrow" retaining configuration of the button 1, by virtue of the elastic return forces which push this elastically deformable portion to engage the side surface 20 of the button 2, so as to retain the latter stably coupled to the cap 1.

[0074] It is worth noting that, as apparent to a person skilled in the art, if the side surface 20 of the cylindrical button 2 has a concave housing portion, e.g. the free edge of the annular-shaped wall 12 of the cap 1, it is sufficient for such a free end edge of the annular side wall 12 of the cap 1 to have a non-deformed configuration such that the diameter subtended by the perimeter of such an end edge is smaller than the greater diameter assumed by the side surface 20 of the button 2 in its development from base to base, to guarantee an effective snap-fitting between the cap 1 and the button 2, because in this case the zone with greater diameter of the side surface 20 of the button 2 also acts as stop element which contrasts the possible non-forced pulling out of the cap 1 from the button 2.

Claims

1. Removable covering cap (1, 101) for a substantially cylindrical button (2), of the type comprising an upper portion (10; 110) and coupling means to removably constrain said covering cap (1) to the button (2), said coupling means comprising at least one annular-shaped side wall (12; 112) jutting from said upper portion (10; 110) and shaped so as to engage at least partially with at least part of the outer surface of said button (2), said annular-shaped side wall (12; 112)

being at least in part elastically deformable between a narrow shape for being retained in engagement with said button (2) and a widened shape for the at least partial insertion of said button (2) into said annular-shaped side wall (12; 112), **characterized by** comprising at least one substantially laminar rigid body (11; 111) coupled on the outside of at least said upper portion (10; 110) or forming at least part thereof, said substantially laminar rigid body (11; 111) having at least part of an ornamental pattern (14; 114) on its outer surface.

2. Removable covering cap according to claim 1, **characterized in that** said substantially laminar rigid body (11; 111) is coupled on the outside of at least part of said annular-shaped side wall (12; 112).

3. Removable covering cap according to claim 1 or 2, **characterized in that** said substantially laminar rigid body (11; 111) is constrained to at least part of said annular-shaped side wall (12; 112) by interference of parts.

4. Removable covering cap according to any one of the preceding claims, **characterized in that** said substantially laminar rigid body (11; 111) has a modulus of elasticity (Young's modulus) higher than that of said at least one annular-shaped side wall (12; 112).

5. Removable covering cap according to any one of the preceding claims, **characterized in that** said substantially laminar rigid body (11; 111) is made of a metal material or a rigid polymeric material.

6. Removable covering cap according to any one of the preceding claims, **characterized in that** said substantially laminar rigid body (11) comprises one or more through-holes (16).

7. Removable covering cap according to claim 6, **characterized in that** said through-holes (16) allow the fluidic communication between the upper region with respect to said substantially laminar rigid body (11) and the lower region with respect to said substantially laminar rigid body, said lower region being comprised inside at least said annular-shaped side wall (12).

8. Removable covering cap according to any one of the preceding claims, **characterized by** comprising at least one coating layer (13) coupled with at least part of said substantially laminar rigid body (11) and having said ornamental pattern (14).

9. Removable covering cap according to claim 8, **characterized in that** said at least one coating layer (13) is made of a textile material, or other flexible material.

10. Removable covering cap according to claim 2 and 9, **characterized in that** said coating layer (13) made of textile material, or other flexible material, is constrained to said covering cap (1) by its interposition between at least one ending portion of said substantially laminar rigid body (11) and at least part of said annular-shaped side wall (12) coupled to said substantially laminar rigid body (11). 5
11. Removable covering cap according to any one of the preceding claims, **characterized in that** said annular-shaped side wall (12) comprises, at least in correspondence to its end constraining to the button, a plurality of elastic portions (12a, 12b, 12c, 12d, 12e) separated one from another. 10
12. Removable covering cap according to any one of the preceding claims, **characterized in that** at least said annular-shaped side wall (12) is made of a polymeric shape-memory material. 20
13. Kit comprising a button (2) and a respective removable covering cap (1; 101), wherein said button (2) is substantially cylindrical and said covering cap (1; 101) comprises at least one upper portion (10; 110) and coupling means to removably constrain said covering cap (1; 101) to at least the side surface (20) of the button (2), said coupling means comprising at least one annular-shaped side wall (12; 112) jutting from said at least one upper portion (10; 110) and shaped so as to engage at least partially with at least part of the outer surface of said button (2), said annular-shaped side wall (12; 112) being at least in part elastically deformable between a narrow shape for being retained in engagement with said button (2) and a widened shape for the at least partial insertion of said button (2) into said annular-shaped side wall (12; 112), **characterized in that** said removable covering cap (1; 101) comprises at least one substantially laminar rigid body (11; 111) coupled on the outside of at least said upper portion (10; 110) or forming at least part thereof, said substantially laminar rigid body (11; 111) having at least part of an ornamental pattern (14; 114) on its outer surface. 25 30 35 40 45
14. Kit according to claim 13, **characterized in that** said side surface (20) of said button (2) comprises at least one housing portion (22) for at least part of said at least one annular-shaped side wall (12; 112) of the covering cap (1), said part of said at least one annular-shaped side wall (12; 112) adapted to engage with said at least one housing portion (22) being at least in part elastically deformable between a narrow shape for being retained in engagement with the housing portion (22) of said side surface (20) of the button (2) and a widened shape for the partial insertion of the side surface (20) of said button (2) into said annular-shaped side wall (12; 112). 50 55
15. Kit according to claim 13 or 14, **characterized in that** said at least one housing portion (22) of the side surface (20) of the button (2) is at least partially concave with respect to the central axis of said substantially cylindrical button (2).
16. Kit according to claim 15, **characterized in that** said at least one housing portion (22) of the side surface (20) of the button (2) extends for the whole side surface (20) and it is concave with respect to the central axis of said substantially cylindrical button (2).
17. Kit according to claim 13, 14, 15 or 16, **characterized in that** said part of said at least one annular-shaped side wall (12; 112) of said covering cap (1; 101), adapted to engage in said at least one housing portion (22) of the side surface (20) of the button (2), coincides with the region of free end of said at least one annular-shaped side wall (12; 112).
18. Kit according to claim 17, **characterized in that** said part of said annular-shaped side wall (12; 112) of said cap (1; 101), adapted to engage in said at least one housing portion (22) of the side surface (20) of the button (2), is tapered and/or curved inwards.
19. Kit according to any one of claims 13 to 18, **characterized in that** said annular-shaped side wall (12; 112), jutting from said upper portion (10; 110) of said cap (1), is shaped so as to overlap in engagement with said side surface (20) of the button (2) only for the length part of such a side surface (20) of the button (2).

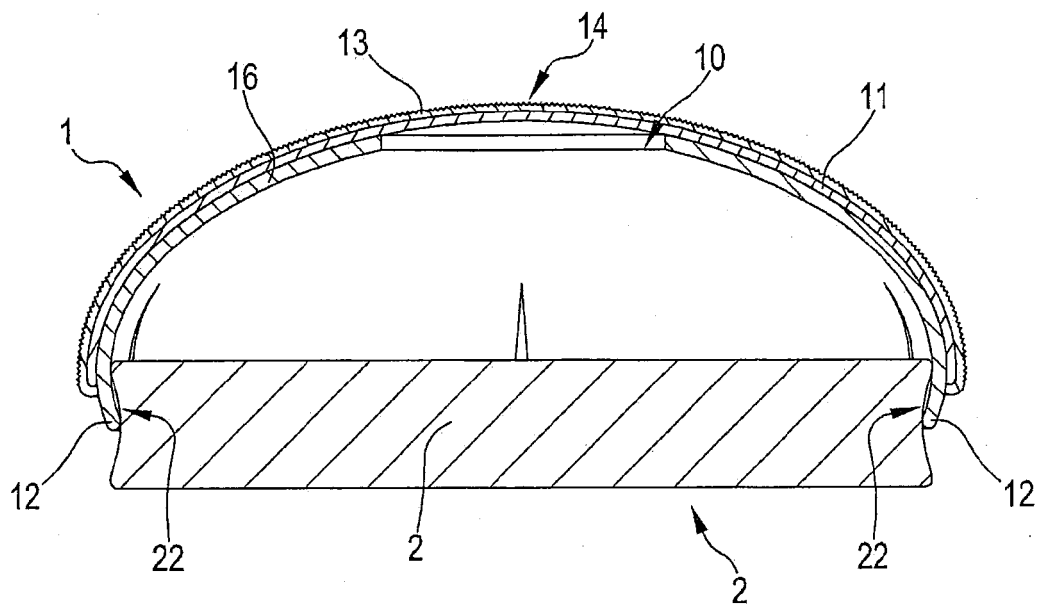


Fig. 1

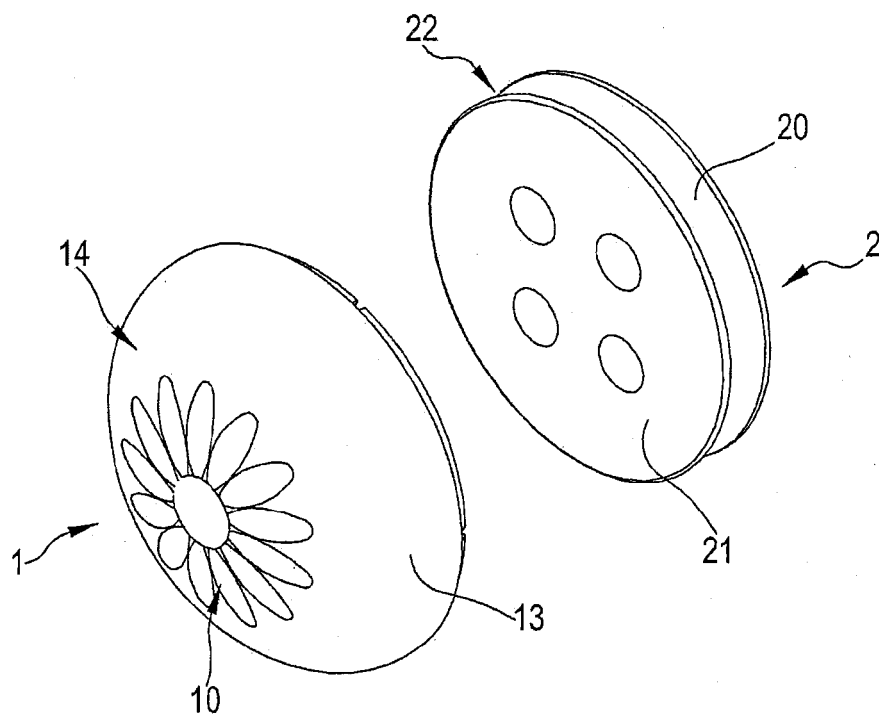


Fig. 2

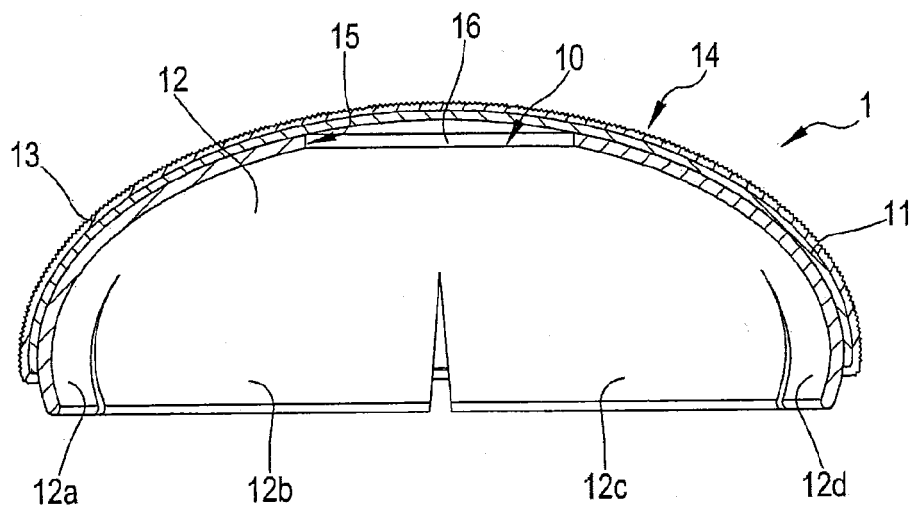


Fig. 3

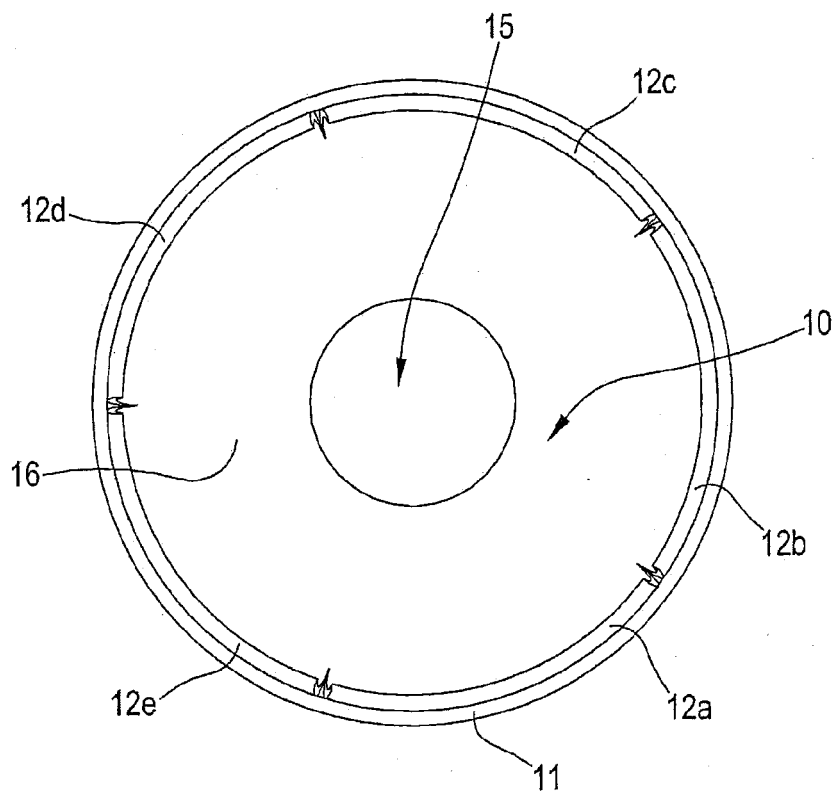


Fig. 4

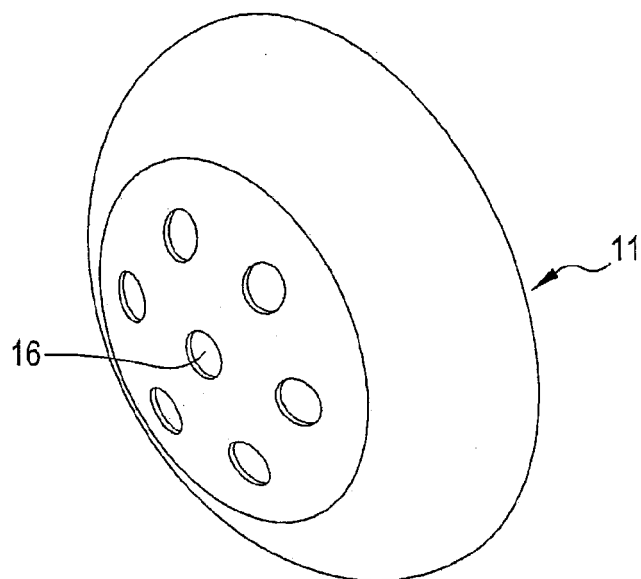


Fig. 5

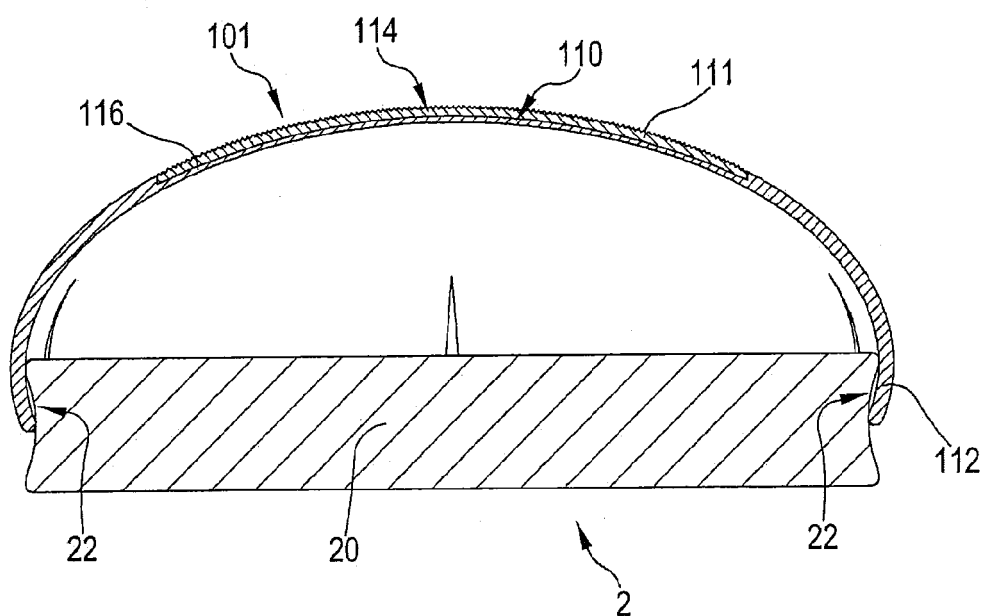


Fig. 6

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 3500507 A, Malhenzie [0012] [0014]