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## EUROPEAN PATENT APPLICATION

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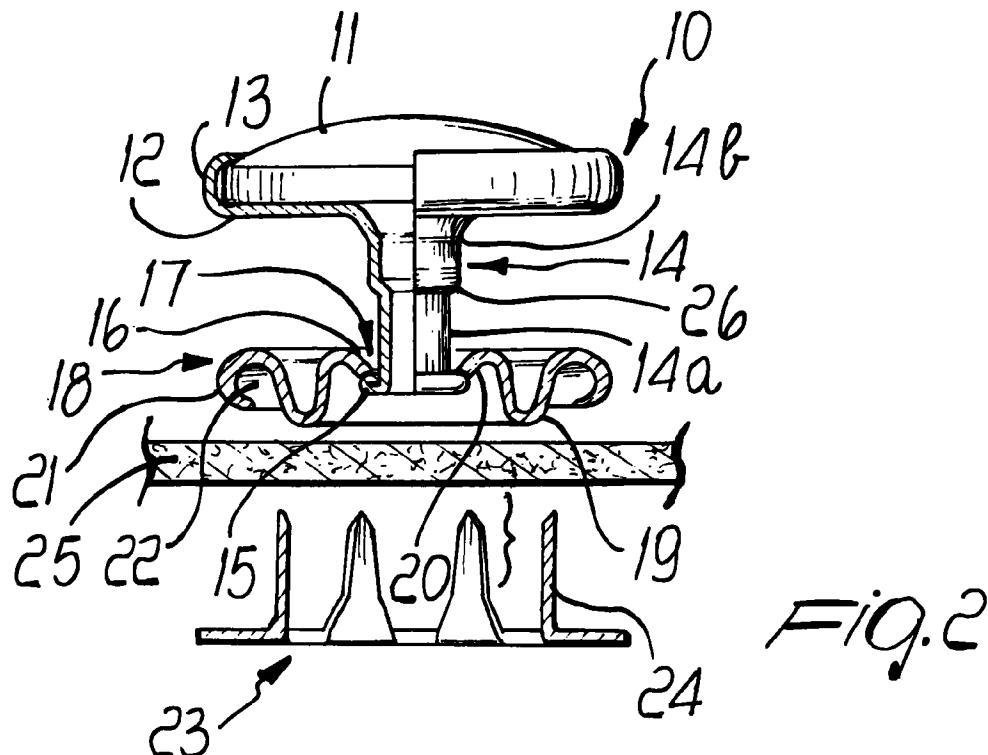
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### (54) Improved pivoted button particularly for items of clothing

(57) A pivoted button including a head (10) with an axial tubular stem (14) ending with an annular edge (15) that is folded outward and is retained by the edge (16) of a hole (17) provided on a disk-shaped base (18) cooperating with a clawed ring (23) for fixing to the fabric (25). The fabric (25) is arranged between the disk-shaped base (18) and the clawed ring (23) and the claws (24) penetrate the fabric (25) and clinch them-

selves in a recess (22) of the base (18) by compression. The button is characterized in that the region (14a) of the tubular stem (14) that is retained by the edge (16) of the hole (17) of the base (18) is limited not only by the folded edge (15) but also by a portion (14b) of the stem (14) that is raised with respect to the rest.



## Description

The present invention relates to an improved pivoted button particularly for items of clothing.

A currently commercially available button for items of clothing is provided with a pivoted head that can be extracted from an appropriate setting base and can be inserted in and removed more easily from the conventional connecting buttonhole cooperating therewith.

Such a button is disclosed and claimed in the Italian patent No. 1.225.010 granted on October 31, 1990 in the name of the company COBRA di P. Candotti & C. s.n.c.

The button comprises a head with an axial tubular stem ending with an annular edge that is folded outward and is retained by the edge of a hole present on a disk-like base, which cooperates with a clawed ring for fixing to the fabric, which is arranged between said ring and said base; said claws penetrate the fabric and, by compression, they penetrate in a recess of the base and clinch themselves therein.

Although it is particularly commercially appreciated, this button entails drawbacks, the main one being due to the fact that the stem, in order to perform pivoting motions, must also be slideable with respect to the base, particularly with respect to the edge of the hole that retains it.

The current sliding possibility is substantially determined by the distance between the folded annular edge of the stem and the head of the button, said stem having no discontinuities.

The negative effect resides in the fact that the button, with use, tends to be compressed against the underlying fabric with the folded annular edge of the stem, and this can cause, directly or indirectly, tears in the regions through which the claws pass.

A principal aim of the present invention is therefore to eliminate the above described drawback in said pivoted button.

Within the scope of this aim, a consequent primary object is to provide a button that is in any case capable of a wide pivoting motion.

Another object is to provide a button that does not have particular production difficulties with respect to conventional types.

Another object is to provide an improved button with improvements that do not entail particular cost increases.

This aim, these objects, and others which will become apparent hereinafter are achieved by an improved pivoted button, particularly for items of clothing, of the type comprising a head with an axial tubular stem that ends with an annular edge that is folded outward and is retained by the edge of a hole provided on a disk-shaped base cooperating with a clawed ring for fixing to the fabric, which is arranged between said base and said ring, said claws penetrating the fabric and entering a recess of said base, clinching themselves thereto, by compression, said button being character-

ized in that the region of said tubular stem that is retained by the edge of the hole of said base is limited not only by said folded edge but also by a portion of said stem that is raised with respect to the rest.

Further characteristics and advantages of the invention will become apparent from the following detailed description of an embodiment thereof, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

figure 1 is a perspective view of the button, fixed to the fabric of an item of clothing;

figure 2 is a partially sectional exploded view of the button;

figures 3 and 4 are partially sectional views of the button, assembled to the fabric, in two possible positions that it can assume;

figure 5 is a partially sectional view of the button, assembled to the fabric, showing its pivoting possibilities.

With reference to the above figures, an improved pivoted button comprises a head 10 composed, in this case, of two elements: a first tablet-shaped element 11 is made of a possibly valuable material and is retained at its perimeter by the second element 12, which is made of metal plate and has a disk-like shape with edges 13 folded upward to close said element 11.

An axial tubular stem 14 extends downwardly in the disk-like element 12 and ends with an annular edge 15, which is folded outwardly and is retained by the edge 16 of a hole 17 provided on a disk-like shaped base 18 also made of metal plate.

More particularly, said base 18 is composed of an U-shaped annular portion 19 from which, a first folded flap 20 ending with the hole 17 and a second flap 21 forming a toroidal recess 22, in a downward region, extend, respectively internally and externally.

Said base 18 cooperates with a ring 23 provided with claws 24, also made of metal plate, to the fixing to the fabric 25 arranged between said base and said ring.

The claws 24 in fact penetrate the fabric and, by compression, they penetrate and clinch themselves inside the toroidal recess 22 of the base 18, as shown in figures 3, 4, and 5.

The claws 24 are of course arranged so as to be located around the U-shaped annular portion 19 of the base 18.

According to the invention, the region of said tubular stem 14 that is retained by the edge 16 of the hole 17 of said base 18 is limited not only by said folded edge 15 but also by a portion of said stem that is raised with respect to the rest.

In the particular embodiment, this is provided as an abutment step 26 separating a first region 14a that is adjacent to the edge 15 from a second region 14b that is adjacent to the head 10; the cross-section of the first region is smaller than the cross-section of the second region.

In this manner, the axial stroke that the stem 14 can perform is limited, limiting the pressure that the edge 15 can apply to the portion of fabric 25 lying between the claws 24.

The result thereof is to avoid spoiling the fabric 25. 5

In practice, it has been observed that the intended aim and objects of the present invention have been achieved.

In practice, the materials employed, so long as they are compatible with the contingent use, as well as the dimensions, may be any according to the requirements. 10

Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs. 15

### Claims

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1. Improved pivoted button, particularly for items of clothing, of the type comprising a head (10) with an axial tubular stem (14) that ends with an annular edge (15) which is folded outward and is retained by the edge (16) of a hole (17) provided on a disk-shaped base (18) cooperating with a ring (23) having claws (24) for fixing to the fabric (25), which is arranged between said base (18) and said ring (23), said claws (24) penetrating the fabric (25) and entering a recess (22) of said base (18), clinching themselves thereto, by compression, said button being characterized in that the region (14a) of said tubular stem that is retained by the edge (16) of the hole (17) of said base (18) is limited not only by said folded edge (15) but also by a portion (14b) of said stem (14) that is raised with respect to the rest. 25

2. Button according to claim 1, characterized in that said raised portion comprises an abutment step (26) that constitutes a discontinuity in the cross-section of said stem (14). 40

3. Button according to one or more of the preceding claims, characterized in that said abutment step (26) divides the first portion (14a) of said stem (14) that is adjacent to said folded annular edge (15) from the second portion (14b) of said stem (14) that is adjacent to said head (10), said first portion (14a) having a smaller cross-section than the second portion (14b). 45 50

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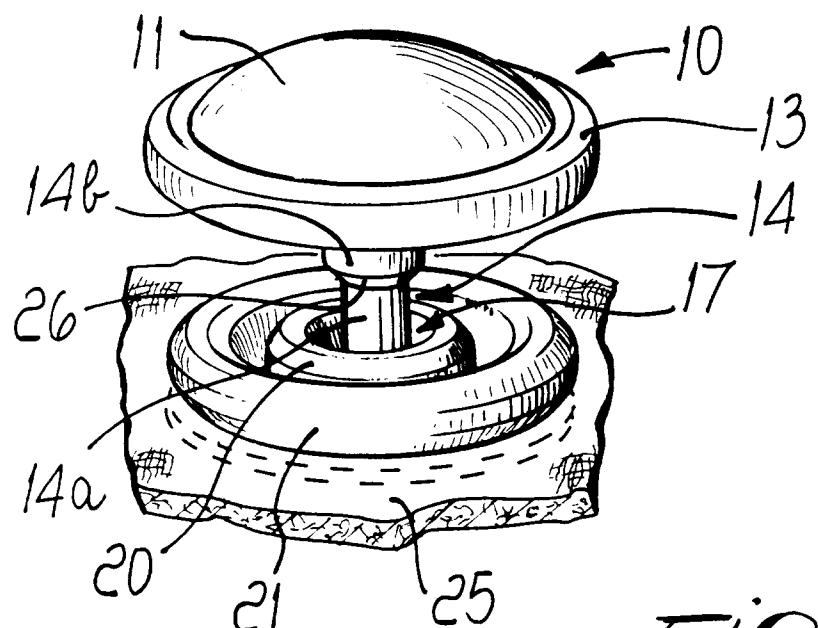


FIG. 1

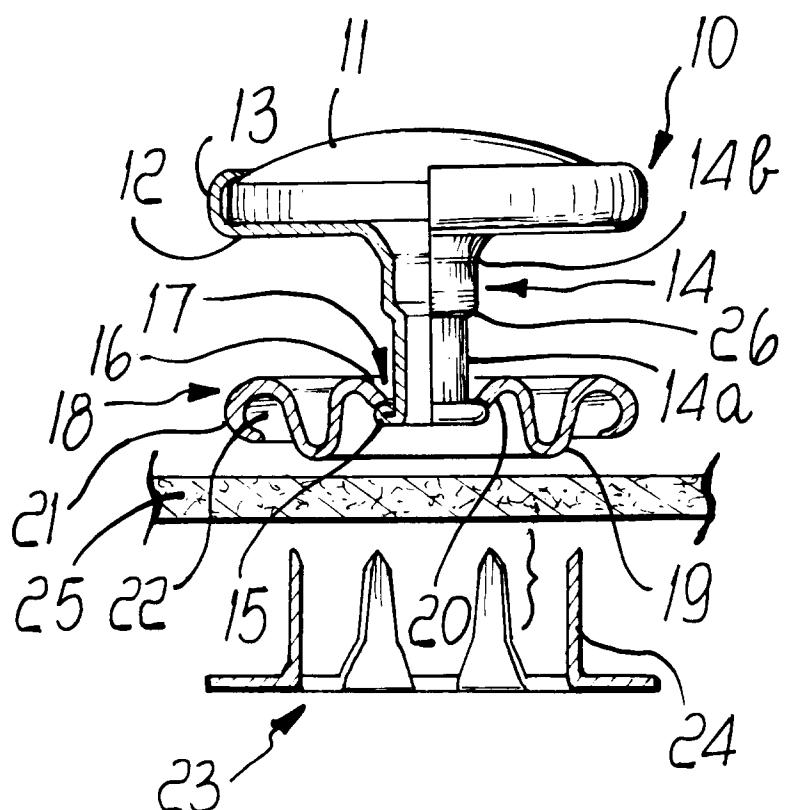


FIG. 2

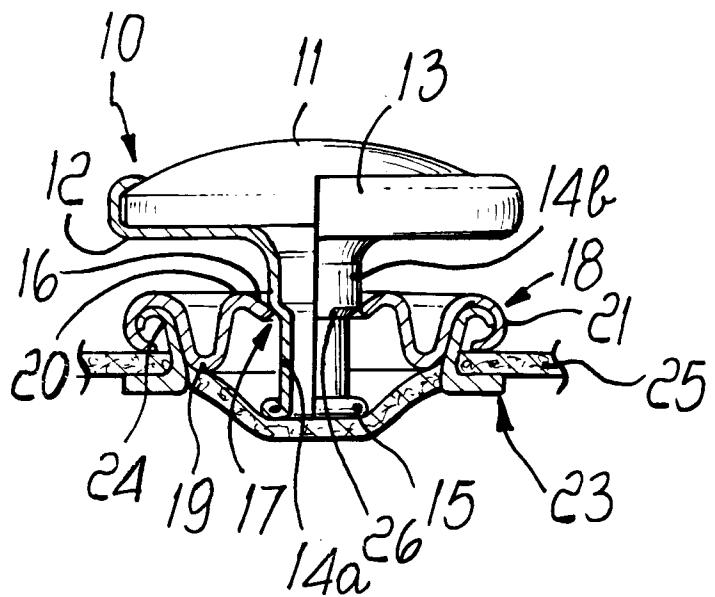


FIG. 3

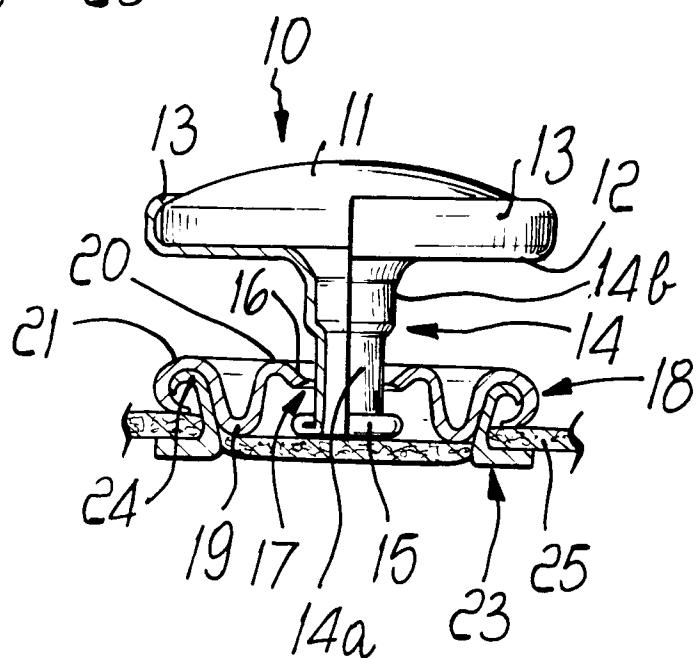


FIG. 4

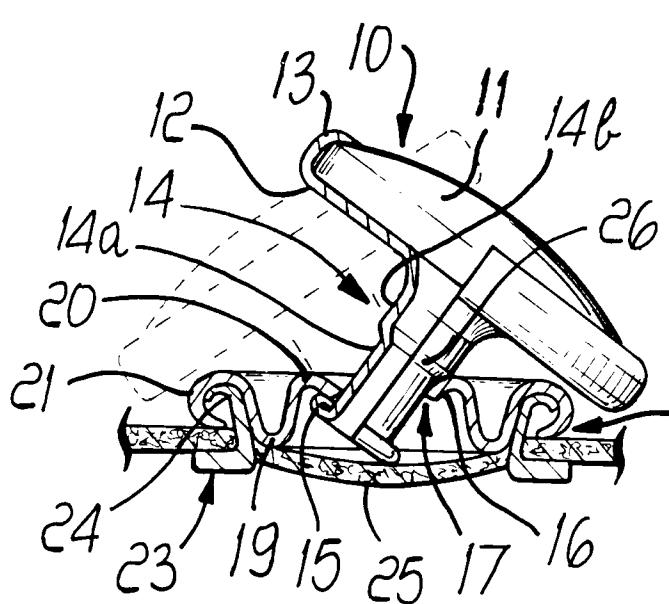


FIG. 5



## EUROPEAN SEARCH REPORT

Application Number  
EP 96 10 4242

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	US-A-4 137 607 (SCHAEFFER-HOMBERG GMBH) * column 5, line 42 - line 53; figure 3 * -----	1-3	A44B1/08
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			A44B
<p>The present search report has been drawn up for all claims</p>			
Place of search	Date of completion of the search		Examiner
THE HAGUE	5 July 1996		Garnier, F
CATEGORY OF CITED DOCUMENTS		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	
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			