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[54] **BUTTON RETAINER**

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Related U.S. Application Data

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[52] **U.S. Cl.** ..... **24/90 PR;** 24/90 TS; 24/103

[51] **Int. Cl.**[2] **A44B 1/26**

[58] **Field of Search** ..... 24/90 F, 90 TA, 90 PR, 24/90 W, 90 G, 90 HA, 90 TS, 103, 101 R, 101 FS, 102 A

[56] **References Cited**

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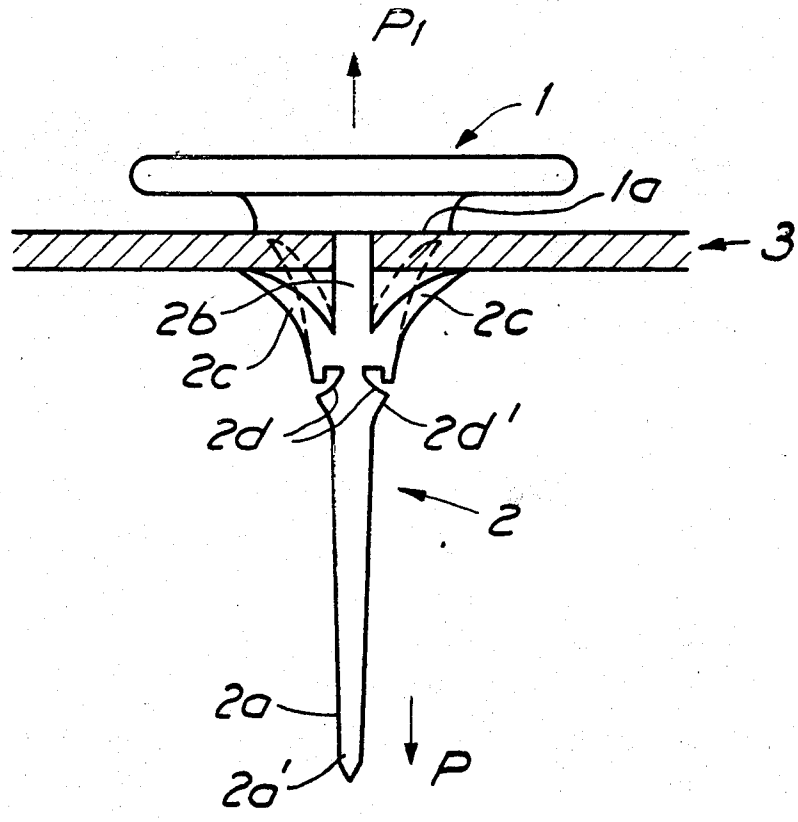
[57] **ABSTRACT**

This is a button holder or retainer comprising a narrow elongated band with a hardened point portion at one end and a head at the other and further having a steam in order to facilitate insertion through the cloth of a garment or the like whereby the stem is pulled in order to extend a flexible portion having barbs to pass through the cloth whereupon the stem is broken off and discarded, such breaking off being facilitated by local weakening of the stem adjacent said barbs.

1 Claim, 2 Drawing Figures



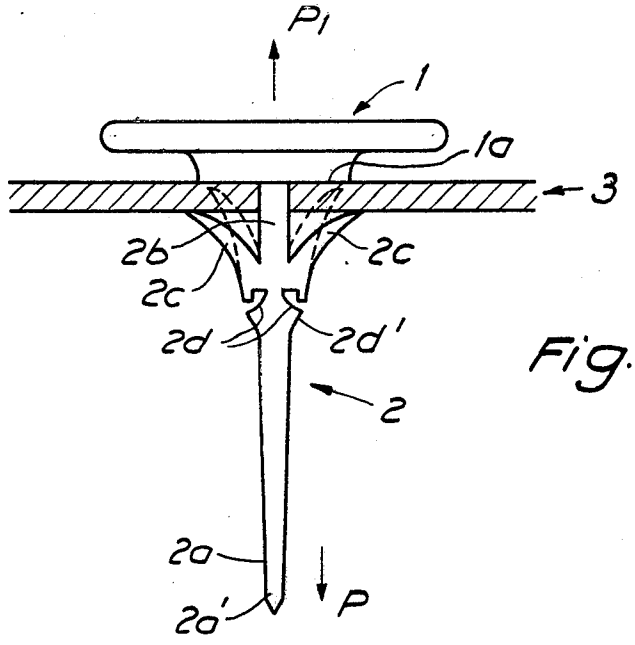


Fig. 1

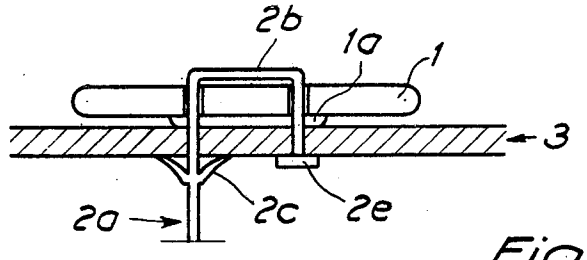


Fig. 2

BUTTON RETAINER

This is a continuation of application Ser. No. 375,473, filed July 2, 1973.

FIELD OF THE INVENTION.

The present invention relates to fasteners and specifically to a button holder or retainer.

OBJECTS OF THE INVENTION.

The primary object of this invention is to provide a button retainer for use with common buttons and which is applied manually, without tools of any kind and the retainer having a penetrating point which is easily detached and discarded after use. The invention may also be used in specially designated buttons.

A further object of the invention is to provide a self-locking fastener and which will not become loose or disconnected, even under rough usage because the force produced by the pulled flexible portion.

Still another object of the present invention is to provide a button retainer or a button designated with a retainer which is low in cost to manufacture and which may be temporary used or permanently used in making garments or the like.

BRIEF DESCRIPTION OF THE DRAWINGS.

FIG. 1 is a plan view partly in section showing button having retaining means according to the present invention,

FIG. 2 is a separate button retaining means used by a common button.

In FIG. 1 shows in side view a specially designed button having retaining means. The button portion has the reference number 1 and the retaining means has the reference number 2. This retaining means 2 is intended to be pressed through cloth 3 of a garment or the like. The retaining means and the button are integrally formed.

Similar characters of reference are used to indicate similar or identical elements and portions throughout the specification.

The retaining means 2 comprises an elongated band portion or circular portion. The stem or portion 2*a* extending from the button 1 via a portion 2*b* is formed as a point 2*a'* and the hole portion or at least the point 2*a'* is hardened. The part or portion 2*b* arranged closed to the button 1 is elastic. The means 2 has barbs 2*c* arranged between the portion 2*a* and the portion 2*b*. The barbs are in FIG. 1 illustrated as two but the number may be increased to three, four or more.

At least one fraction of the portion 2*b* is so designed and has such elasticity that the barbs 2*c* may be pulled completely through the cloth 3 and completion of after the pulling operation the barbs 2*c* are pressed against the cloth 3 and the button 2.

The retaining means from the portion 2*b* to the point 2*a'* may be progressively hardened whereby point 2*a'* is stiffer than the point of connection adjacent portion 2*d'*.

Because of the fact that the barbs 2*c* are pressed towards the button 2 said button has a supporting surface 1*a*. The cloth 3 will be pressed between the surface 1*a* and the free ends of the barbs 2*c*.

The means 2 has two recesses 2*a* close to the barbs 2*c* in order to facilitate the discarded of the portion 2*a*. The stem 2*a* is broken off and such breaking off is facilitated by local weakening of the stem adjacent said barbs.

It is suggested that the breaking surface is caused to occur within the barbs 2*a* as illustrated in FIG. 1.

A button as shown in FIG. 1 is used as follows. The point 2*a'* is forced through the appropriate portion at the material 3 (cloth) from the outside. By the extending portions 2*d'* the cloth will be guided over the barbs 2*c*. A force is applied to the stem 2*a* in the direction illustrated by an arrow P and a counter-force is applied to the button 1 illustrated by an arrow P1. These forces will cause an extension of the elastic or flexible part 2*b* and the barbs 2*c* are passing through the material. After the barbs 2*c* have passed through the material 3 the forces are taken away and the barbs 2*c* are pressing the material 3 towards the button and its surface 1*a*. The portion 2*a* is than broken away.

In FIG. 2 shows a fastening means or a separate button retainer. The button is here of conventional type. The portion 2*b* is at its free end formed as a stop 2*e* which is intended to rest towards inside surface of the material 3. It is obvious that the stop 2*e* may be a separate device. It is possible to extend the stop portion 2*e* and use it as a stop for the barbs 2*c*.

It is obvious that the main difference between the shown embodiments are the length of the portion 2*b*. It is possible to shorter the length of portion 2*b* in FIG. 2 and use two means 2 for one button.

It is understood that variations from the shown embodiments may be made without departure from the spirit and scope of the invention and that the specification and drawings are to be considered as mereby illustrative rather than limiting.

I claim:

1. A button assembly adapted to secure a button to a fabric material comprising:

a. a button member for abutting one side of the fabric;

b. a fabric piercing member integrally formed with the button member and extending from said button member;

c. said fabric piercing member comprising:

i. a relatively rigid portion having a free and pointed end for piercing the fabric;

ii. a relatively resilient portion between the button member and said rigid portion;

iii. said rigid portion being recessed to form a frangible web connecting with said resilient portion to facilitate the breaking off of the rigid portion upon completion of the fabric piercing operation;

iv. a plurality of flexible barbs extending obliquely from said relatively resilient postion towards said button member, the free ends of said flexible barbs which face the button member being a spaced distance from the button member which is less than the thickness of the fabric, said barbs being adapted to flex towards each other during the fabric piercing operation and to flex away from each other to abut against the opposite side of the fabric when the resilient portion is seated in the fabric to thereby anchor the button in the fabric;

d. said button member comprising a widened head portion and a narrow shank portion resting against the fabric and spacing the head from the fabric, said shank portion being dimensioned to form a

backing surface for fabric being pressed thereagainst by the barbs;

e. the rigidity of said rigid portion increasing progressively in stiffness from its point of connection to said web toward its point.

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