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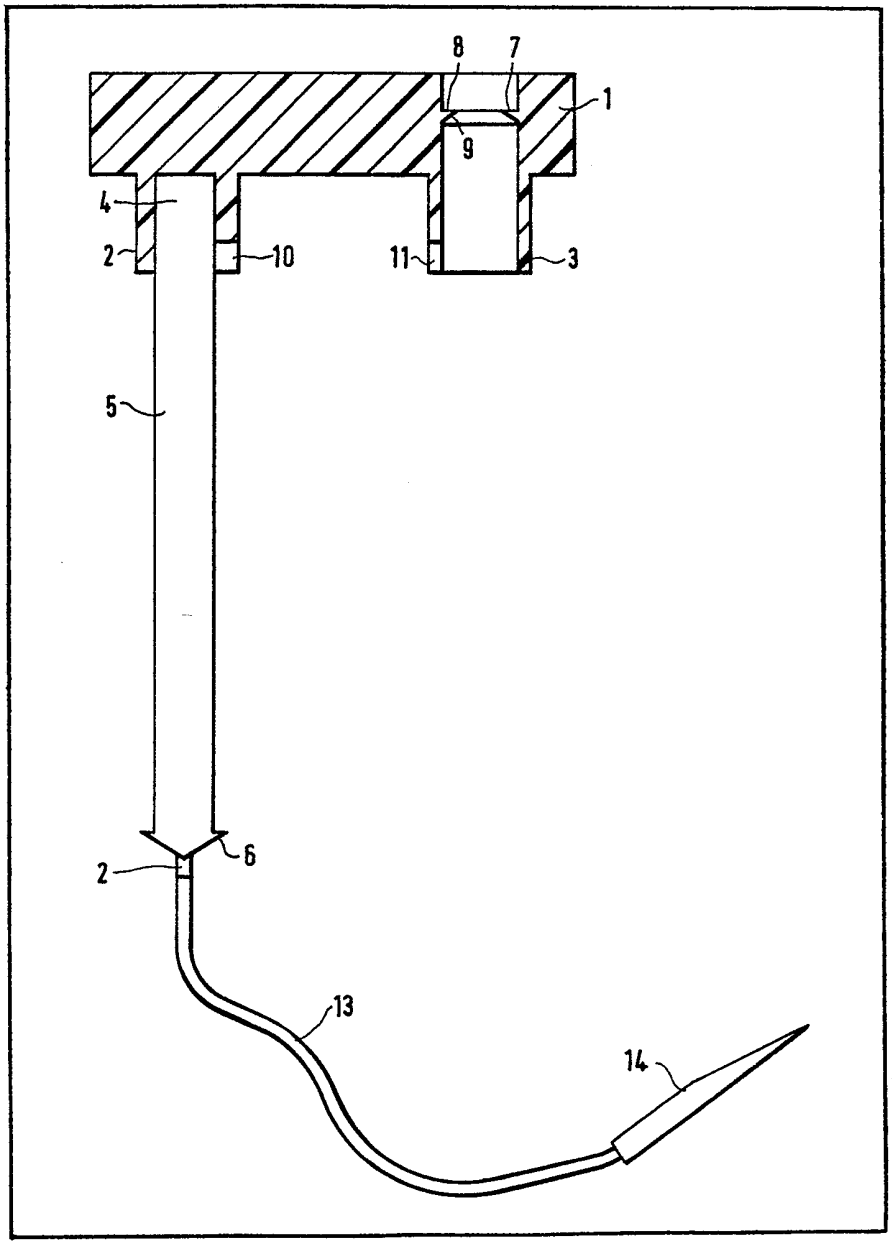
(54) Buttons and Button Binders

(57) A button of unitary construction for attachment to a fabric without the use of a separate needle and thread comprises a button member 1 having a pair of legs 2, 3 from the bottom of one of which extends a binder filament 5 joined by an area of weakness 12 to a lead 13 which terminates in a needle 14. The button is provided with a hole through the leg 3 containing locking formations 9 adapted to co-operate with an arrow head 6 on the lead. The button is attached to fabric by drawing the needle lead and binder member into and out of the fabric, passing the needle through the hole in leg 3 to pull the head of the binder member through the hole to engage with locking formations 9. A sharp tug then separates the needle and lead from the head leaving the button attached to the fabric.



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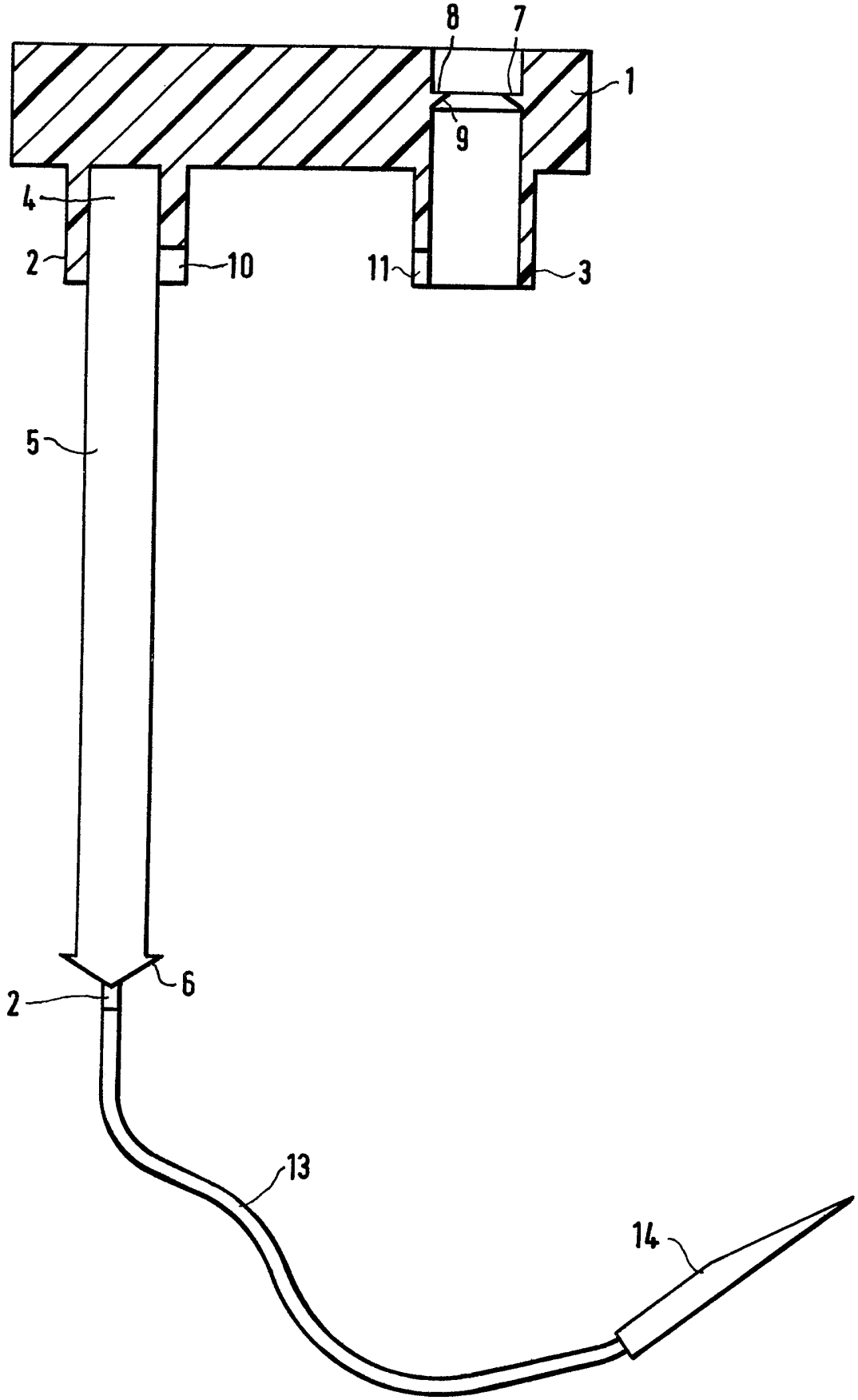
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SPECIFICATION

Buttons and Button Binders

The present invention relates to a binder for binding a button to a fabric and to buttons provided with binders.

The present invention provides a button provided with an elongate flexible binder which is attached to or is integral with the button and is provided with a lead for drawing one end of the member through a fabric to which the button is to be attached and into a hole in the button, means being provided to retain the member in the hole.

Although the invention is primarily directed to buttons of the conventional type, i.e. for forming closures for garments and other fabric articles or for use as decoration, the present invention is equally applicable to use on button-like articles.

In a button according to the invention, it is preferable that the lead terminates in a needle. This may be moulded in one piece with and may be of the same material as the lead itself, but should preferably be of a relatively hard material so as to ease the passing of the needle through a fabric to which the button is to be attached.

Preferably, the attachment between the head of the binder member and the lead is an area of weakness such that a sharp tug on the lead causes the lead to break off selectively at this weak area. The area of weakness may be constituted by a tail portion of the lead made from a material weaker than that of the remainder of the lead. Alternatively, the area of weakness may be constituted by a thinned or partially cut through portion of the lead at its tail end.

The means for retaining the member in the hole may be no more than a tight fit between the member and the hole but, preferably, the head of the binder member and/or the hole is provided with locking formations which serve to trap the head in the hole when the button is in use. A suitable shape for the head of the binder member is an arrow head shape. Complimentary formations may be provided on the interior surface of the hole to form a lock with the formations on the head of the binder member. However, the head of the member may, in use, pass through the hole and be retained against being drawn back through the hole by locking formations engaging the surface of the button.

Preferably, the button is provided with one or more legs on its underside to space the button in use from a fabric material to which it is attached. Preferably, the button has at least a pair of legs, the binder member extending from one leg, and the through hole for the binder member being formed in the other leg of the pair.

The binder member may be separate from the button, the button being provided with at least two through holes through a first of which the binder member may pass means being provided for preventing the binder member from passing completely out of the hole and through a second of which the head of the binder member may pass means being provided for retaining the binder member in the hole.

The button according to the invention may therefore be a button of conventional construction provided with a separate binder member which can be passed through two holes in the button so that the binder member is retained at each of its ends by the holes in the button. It is preferred however that the tail of the binder member be fixedly attached, e.g. by adhesive, in the button.

Most preferably, the button and the binder member and lead are moulded in one piece from plastics material. The plastics materials used to form the button, binder member and lead in such a one-piece moulding will however generally be different. The button is preferably formed of a relatively hard plastics material, preferably such as buttons are conventionally made from. The binder member is preferably formed from a flexible tough plastics material, preferably such as to confer a service life upon the binding which is substantially equal to or greater than the usual life of a garment for which the button is suitable. Preferably, the binder lead is made of a flexible plastics material and the break point between the binder lead and the head of the binder member is constituted by a portion of soft plastics material which is softer than that used in the lead. Preferably, the lead is provided with a needle integrally moulded in plastics material sufficiently sharp and strong to make it possible to pierce the fabrics to which the button is suitable for attachment.

Whilst the present invention provides in its preferred embodiments a button in combination with a binder, the invention extends to a button binder for a button having a pair of spaced through holes, the binder comprising an elongate flexible means having a head adapted to pass through one hole in the button having means for retaining engagement with the hole, and a tail shape so as to be retained by the other hole, the head of the filament bearing a lead for drawing the head through a fabric and through the said hole in the button.

The invention will be illustratsd by a description of a specific embodiment with reference to the attached drawing in which the figure is a cross-sectional view through a button according to the invention.

The figure shows a button 1 having a pair of legs 2, 3 on its underside and extending perpendicularly therefrom. Each leg 2, 3 has a hole extending axially therein that in leg 3 being a through hole and that in leg 2 stopping at the top of the leg. The hole in leg 2 is completely occupied by the tail 4 of a binder member which is a filament 5. The binder filament 5 is of sufficient length to be able to reach and pass up into the hole in leg 3 and terminates at its free end in an arrow head portion 6. The hole in leg 3 contains towards its upper end an annular wedge shaped protrusion 7 having a flat top face 8 and an upwardly sloping bottom face 9. There are oppositely facing cutaways 10, 11 through the inner portion of the walls surrounding the holes in

legs 2 and 3 at their lower ends.

Attached to the head 6 of the binder filament 7 is a short length of relatively soft plastics material constituting a weak point 12 and attached to the end of the weak point 12 remote from the head 6 is a lead 13 which terminates at its other end in a needle 14.

The button 1 is formed of a hard plastics material. The binder filament 5 is formed of a flexible tough plastics material integrally moulded with the button 1. The lead 13 is formed of a flexible plastics material integrally moulded with weak point 12 and filament 5. The needle is also formed from plastics material and is integrally moulded with the remainder of the button assembly and is of a hard plastics material. The needle has a sharp point.

In use, the button is attached to a fabric by passing the needle 14 through the fabric and pulling the filament 5 through the fabric behind the needle so that the button 1 lies against the face of the fabric, passing the needle 14 back through the fabric and through the bore in leg 3, and pulling on the needle to pull the filament 5 up into the bore in leg 3, the filament being accommodated in recesses 10 and 11 in the legs 2 and 3 and the arrow head 6 snapping through the annular wedge 8 to a position from which it cannot retreat. A sharp tug is then given to lead 13 causing it to snap from the head at the break point 12 leaving the button firmly attached to the fabric by the binder filament 5.

It will be observed that the attachment to a garment of the button specifically described with reference to the drawing does not involve the use of a separate needle and thread and requires only one passage of the needle and thread provided on the button into and out of the fabric to achieve a strong and lasting attachment of the button to the fabric.

The button described above may be used to affect a rapid and convenient repair to a conventional garment or may be used in the manufacture of the garment to provide buttons which will not normally require to be replaced during the service life of the garment. Similarly, a price tag or other label may be constructed in the same manner as is described with reference to the figure and may be rapidly attached to a garment in a secure manner.

Claims

1. A button provided with an elongate, flexible binder member, which is attached to or integral with the button and provided with a lead for drawing one end of the member through a fabric to which the button is to be attached and into a hole in the button, means being provided to retain the member in the hole.

2. A button as claimed in claim 1 wherein the lead terminates in a needle.

3. A button as claimed in claim 1 or claim 2 wherein the attachment between the head of the binder member and the lead is an area of weakness such that a sharp tug on the lead causes the lead to break off selectively at the said area of weakness.

4. A button as claimed in claim 3 wherein the area of weakness is constituted by a tail portion of the lead made of a material weaker than that of the remainder of the lead.

5. A button as claimed in any preceding claim wherein the binder member is provided with locking formations which serve to trap the member in the hole.

6. A button as claimed in claim 5 wherein the head of a binder member is shaped as an arrow head.

7. A button as claimed in any preceding claim provided with one or more legs on its underside to space the button in use from a fabric to which it is to be attached.

8. A button as claimed in claim 7 wherein the binder member extends from a first leg of the button and the said hole is formed in another leg of the button.

9. A button as claimed in any preceding claim wherein the binder member is separate from the button, and the button is provided with a least two through holes, through a first of which the binder member may pass, means being provided for preventing the binder member from passing completely out of the hole and through a second of which the head of the binder may pass, means being provided for retaining the binder member in the said second hole.

10. A button as claimed in any one of claims 1 to 8 wherein the button, binder member and lead are moulded in one piece from plastics material.

11. A button as claimed in any preceding claim wherein the button is formed from a hard plastics material, the binder member from a flexible tough plastics material.

12. A button substantially as hereinbefore described with reference to and as illustrated in the accompanying drawing.

13. A button binder for a button having a pair of spaced through holes, the binder comprising an elongate flexible means having a head adapted to pass through one hole in the button and having means for retaining engagement with the hole and a tail shaped so as to be retained by the other hole, the head of the filament bearing a lead for drawing the head through a fabric and through the said hole in the button.

14. A fabric article bearing one or more buttons as claimed in any one of claims 1 to 12.

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