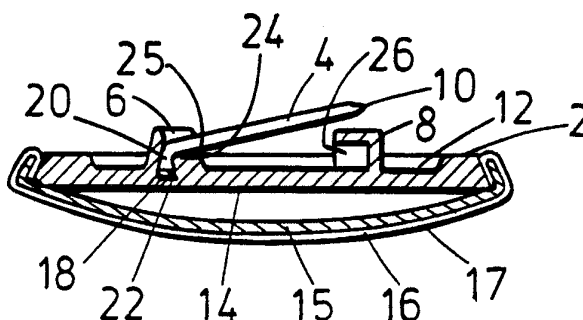




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(54) Title: BADGE



(57) Abstract

The present invention relates to a pin badge (1), said badge comprising a badge plate (2) and a pin (4). The badge plate (2) has an image mounting side (14) and spaced apart pin mounting and pin engagement portions (6, 8) on the reverse side (12) thereof. The pin mounting portion (6) is formed and arranged for anchoring a first end (20) of said pin (4) with the main body of said pin (4) extending across said reverse side (12) towards said engagement portion (8) for releasable engagement of a second, generally pointed, end (10) of the pin (4) with the engagement portion (8). The mounting portion (6) has an extended length passage means (18) having a first end portion from which the main body of the pin (4) with said pointed end (10) projects, and a second end, the first end of the passage means (18) having a diameter not substantially greater than that of the first end (20) of the pin (4) for receiving the first end (20) through said passage means (18).

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BADGE

The present invention relates to button or pin badges.

Button badges have been known since the turn of the century and have changed very little in that period. A button badge generally comprises a shell or cup to which
5 a print or other image bearing element, usually laminated with a protective covering, is bonded and a pin fixture or a shell backing plate with a pin fixture, for fixing the badge to a garment.

Modern pin badges mostly use moulded plastics backing
10 plates having a safety pin, of generally known type, for fixing the badge to a garment. A typical example of a badge made by the presently accepted method of button badge 1 construction is shown in Figs. 1 and 2. A laminated print A is crimped (fixed) between a shell
15 (usually metal) B and a backing plate C (usually plastic) by lateral pressure applied by the press used in badge assembly. The safety pin D used to fasten the badge to a garment is sandwiched between the shell B
20 backing plate C and cannot be removed without destroying the badge. The safety pin D has a relatively high component cost.

It is an object of the present invention to avoid or minimise one or more of the above disadvantages.

The present invention provides a pin badge, said badge
25 comprising a badge plate and a pin, said badge plate having an image mounting side and spaced apart pin mounting and pin engagement portions on the reverse side thereof, said pin mounting portion being formed and arranged for anchoring a first end portion of said pin
30 with the main body of said pin extending across said reverse side of the badge plate generally towards said

engagement portion for releasable engagement of a second, generally pointed, end portion of said pin with the engagement portion in use of the badge on a garment, said mounting portion having an extended length passage means having a first end portion from which the main body of the pin with said pointed end portion projects, and a second end portion, said first end portion of the passage means having a diameter not substantially greater than that of said first end portion of the pin for receiving said first pin end portion through said passage means, said passage means and said pin being formed and arranged for interengagement upon introduction of the first pin end portion into said passage means, so as to retain captively said pin against axial withdrawal of the pin from the passage means in a direction towards the pointed pin end portion, and substantially securely support said pin during engagement and disengagement of the pointed end portion thereof with the engagement portion in use of the badge.

In another aspect the present invention provides a pin badge, said badge comprising a badge plate and a pin, said badge plate having an image mounting side and spaced apart pin mounting and pin engagement portions on the reverse side thereof, said pin mounting portion being formed and arranged for fixedly anchoring a first end portion of said pin with the main body of said pin extending across said reverse side of the badge plate generally towards said engagement portion for releasable engagement of a second, pointed, end portion of said pin with the engagement portion in use of the badge on a garment, said mounting portion having an extended passage means of reduced diameter less than that of said first end portion of the pin and formed and arranged for receiving said first pin end portion with a push-fit therein and substantially rigidly supporting said pin

during engagement and disengagement of the pointed end portion thereof with the engagement portion in use of the badge.

The pin badge of the invention may thus be manufactured in a particularly simple and economic manner using only a simple plain pin such as a so-called dressmaker's pin, and a badge plate which can be very simply assembled together, the first end portion of the pin being simply forcibly inserted in the badge plate mounting portion and the pin bent to shape if required. Desirably there is used a pin of spring steel or the like and/or which has been heat-treated so as to be resiliently bendable between an open position on which the pin projects outwardly of the engagement portion for engagement with a garment or the like, and a closed position in which it is resiliently urged and held against part of the engagement portion.

Various forms of badge plate may be used in accordance with the present invention including conventional types such as that described above which have a backing plate, usually of plastics, and an image support plate, usually of metal, with e.g. a laminated print image supported thereon, or alternatively painted or otherwise applied directly thereto. Alternatively there may be used one-piece badge plates as further described hereinbelow.

Conveniently the badge plate (or backing plate thereof) is a one-piece plastics moulding, said pin mounting and engagement portions being formed integrally therewith.

Advantageously said first end portion of said pin has an enlarged head portion, whereby said enlarged head portion may not be pulled through said extended passage means.

Preferably said extended passage means extends from said image mounting side through to the reverse side of the badge plate and desirably a boss projecting proud of said reverse side. Desirably the entrance to the
5 passage means at the image mounting side is countersunk whereby said enlarged head portion does not stand proud of the image mounting side when fully inserted.

It will be appreciated that said extended passage means may include passage means extending through the mounting
10 portion on the reverse side of the badge plate only, the axis of such a passage means being generally parallel to the reverse side of the badge plate, desirably at an angle of not more than 20° to the reverse side, e.g. from 10° to 20° .

15 Alternatively said extended passage means is at least partly open-sided along its length in said mounting portion, said slot desirably having a reduced width less than that of said pin diameter so that said pin may be push-fitted therein and substantially rigidly supported
20 thereby. Advantageously the entrance to the passage means is in the form of a pin badge according to claim 9 wherein the entrance to the passage means is in the form of an elongate slot having a width along at least part of its length substantially less than the diameter of
25 the main pin body and is formed and arranged so as to allow snap-fit introduction of the first pin end portion into the passage means through said elongate slot.

Preferably said pin is initially straight and once inserted into the badge plate mounting portion may be
30 bent into the desired shape if required to bring the pin body into a disposition extending generally towards the engagement portion. If desired though the pin may have

a partially or completely preformed shape.

Conveniently the reverse side of said badge plate is provided with guide means adjacent said pin mounting portion, said guide means being formed and arranged to
5 direct said pointed end of said pin in the general direction of said pin engagement means so as to facilitate engagement therewith.

Advantageously said guide means includes an abutment adjacent said extended passage means formed and arranged
10 for bending said pin therearound thereby to project said pin's pointed end substantially outwardly of the engagement portion of said plate so that said pointed end may be easily passed through a garment and so that when said pin's pointed end is engaged in said
15 engagement portion said abutment maintains said pin in a substantially resiliently biased condition thereby maintaining said pointed end of said pin in secure engagement within said engagement portion.

Preferably said engagement portion is provided with a
20 cover or shield portion formed and arranged to permit said pointed end of said pin to engage therein and to prevent accidental injury to a user of said badge by said pointed end of said pin engaged therein.

Advantageously the reverse side of the badge plate is
25 provided with an image element retaining means in the form of a generally circumferentially extending recess means and a generally ring-form retaining member, said circumferential recess and retaining member being formed and arranged so that when, in use, the peripheral
30 portion of an image element oversize with respect to the badge plate is folded back over the outer edge of the plate at least partly across said recess, said retaining

member may be pressed at least partly into said recess together with at least part of said image element peripheral portion and captively gripped by said recess.

5 Conveniently said recess has at least partly undercut side walls whereby said retaining member is secured, in use, in said recess by the overhanging portions of said side walls.

10 In another respect the present invention provides a pin badge, said badge comprising a badge plate having an image support side and a pin means on the reverse side thereof said reverse side having an image element retaining means in the form of a generally circumferentially extending recess means and a generally ring-form retaining member, said circumferential recess and retaining member being formed and arranged so that 15 when, in use, the peripheral portion of an image element oversize with respect to the badge plate is folded back over the outer edge of the plate at least partly across said recess, said retaining member may be pressed at 20 least partly into said recess together with at least part of said image element peripheral portion and captively gripped by said recess.

The present invention also provides a method of assembling a badge of the invention which method 25 comprises a method of assembling a badge according to claim 1 which method comprises the steps of providing a badge plate and pin according to the invention; and bringing the first end portion of said pin into said extended passage means so as to be retained captively 30 therein.

In yet another respect the present invention provides a method of assembling a badge of the invention which

method comprises the steps of providing a badge plate and pin according to the invention; inserting the second, pointed end of said pin into the extended passage means in the pin mounting portion on the image
5 side of said badge plate and pushing it through so as to bring the first end portion of said pin into said extended passage means so as to be gripped securely thereby. In the case where said passage means extends in a direction generally normally of the badge plate,
10 the method includes the further step of bending said pin over to extend generally towards the engagement portion of the badge plate.

Further preferred features and advantages of the present invention will appear from the following detailed
15 description given by way of example of some preferred embodiments illustrated with reference to the accompanying drawings in which:-
Fig. 1 is an underside plan view of a conventional badge;
Fig. 2 is a cross section of the badge in Fig. 1 along
20 line II-II;
Fig. 3 is an underside plan view of a first embodiment of the invention;
Fig. 4 is a cross section of the badge shown in fig. 1 along line IV-IV;
25 Fig. 5 is an underside plan view of a second embodiment of the invention;
Fig. 6 is a cross section of the badge in Fig. 5 along line VI-VI;
Fig. 7 is view corresponding to that of Fig. 6 of a
30 third embodiment of the invention;
Fig. 8 is a detail plan view of the mounting portion of the badge plate of Fig. 7;
Fig. 9 is a detail view of part of Fig. 7 on an enlarged scale; and
Fig. 10 is a detailed perspective view of the pin

mounting and pin engagement portions of the embodiments in Figs. 3, and 5.

Fig. 3 shows a first embodiment of a badge 1 of the invention which is generally similar to the conventional badge in Fig. 1. The badge 1 comprises a badge plate 2 and a pin 4. The badge plate 2 has a pin mounting portion 6 and a pin engagement portion 8 for engaging the pointed end 10 of the pin 4.

In more detail and with reference to Fig. 4 the pin mounting 6 and engagement portions 8 are spaced apart on the back 12 of the badge plate 2. The front 14 of the plate 2 has crimped thereonto a badge shell 15 which bears a printed image 16 usually in the form of a laminated print 17, however it will be understood that the print image 16 may be in the form of a shaped plastics moulding conveying an image or indeed a painted image applied directly to the front 14 of the badge plate 2.

The pin 4, generally in the form of a dressmakers or drapers pin, is inserted into an extended passage means in the form of a hole 18 in the pin mounting portion 6 of the plate 2 which hole extends right through the plate 2. The diameter of the hole 18 is made to be smaller than the diameter of that portion 20 of the pin adjacent the pin head 22 so that when the pin 4 is forced thereinto, the pin 4 is held tightly therein. The entrance to the hole 18 on the front 14 of the plate 2 is countersunk 18a so that the pin head 22 does not stand proud of the front 14 of the plate 2 and interfere with any print or other image element mounted thereon. Once the pin 4 has been fully inserted into the hole 18 it is bent over across an abutment 24 adjacent the hole 18 which abutment 24 has a pin support surface 25

inclined slightly away from the back 12 of the badge plate 2 so as to hold the pin body generally towards but above the engagement portion 8 whereby in order to engage the pointed end 10 of the pin 4 with the engagement portion 8 the pin 4 has to urge downwardly against a resilient biasing force. The engagement portion 8 is provided with an integrally formed shield 26 to cover over the pointed end 10 of the pin 4 and prevent accidental injury to a user by the pointed end 10 of the pin 4.

Figs. 5 and 6 show a second embodiment of the invention similar to the embodiment in Figs. 3 and 4 and will be described with like reference numbers indicating like parts. The back 12 of the plate is provided with a circumferentially extending recess 28 for retaining the laminated print mounted on the front 14 of the plate 2. The recess is provided with a ring-form engagement element 32 which fixedly crimps the laminated print 17 into the recess 28. The engagement element 32 is a tight fit in the recess 28 and when in place provides a flush fit with the back of the badge plate 2.

The enlarged detail of the plate 2 show the outer side wall 27 to be more of less at right angles to the back 12 of the plate 2. The inventor has found that using a right-angled side wall 27 and crimping the laminate 17 on the back of the plate 2 substantially reduces the visible unsightly wrinkling of the laminate 17 found on the side of conventional badges and transfers such wrinkling to the back 12 of the badge 1 where it is out of sight.

Figs. 7 to 9 show a third embodiment generally similar to that of Figs. 5 and 6. In this case the mounting portion 6 has an extended passage means 18 which has a

first end portion 34 having a diameter slightly less than that of the main body of the pin 4, and a second, enlarged diameter end portion 35 which has a diameter slightly less than that of the pin head 22. The passage means 18 is also partly open-sided along its length with an elongate slot 36 having a width substantially less than that of the pin 4 and its head (at respective parts thereof) allowing access to a pin 4 by forcing it laterally through the slot 36 into the passage means 18 to be held captively therein in snap-fit manner.

Fig. 10 shows in more detail the pin mounting 6 and engagement 8 portions mentioned supra.

It will be appreciated that various modifications may be made to the above described embodiments without departing from the scope of the present invention. Thus for example said badge plates may be moulded in any desired shape or form e.g. oval or polygonal and the second type of ring-form engagement element 32a may be shaped accordingly. In another form of pin badge of the invention, a laminated or unlaminate print image may be sandwiched between a transparent plastics cover and a badge plate according to the invention.

CLAIMS

1. A pin badge (1), said badge comprising a badge plate (2) and a pin (4), said badge plate (2) having an image mounting side (14) and spaced apart pin mounting and pin engagement portions (6, 8) on the reverse side (12) thereof, said pin mounting portion (6) being formed and arranged for anchoring a first end portion (20) of said pin (4) with the main body of said pin (4) extending across said reverse side (12) of the badge plate (2) generally towards said engagement portion (8) for releasable engagement of a second, generally pointed, end portion (10) of said pin (4) with the engagement portion (8) in use of the badge (1) on a garment, said mounting portion (6) having an extended length passage means (18) having a first end portion (34) from which the main body of the pin (4) with said pointed end portion (10) projects, and a second end portion (35), said first end portion (34) of the passage means (18) having a diameter not substantially greater than that of said first end portion (20) of the pin (4) for receiving said first pin end portion (20) through said passage means (18), said passage means (18) and said pin (4) being formed and arranged for interengagement upon introduction of the first pin end portion (20) into said passage means (18), so as to retain captively said pin (4) against axial withdrawal of the pin (4) from the passage means (18) in a direction towards the pointed pin end portion (10), and substantially securely support said pin (4) during engagement and disengagement of the pointed end portion (10) thereof with the engagement portion (8) in use of the badge (1).

2. A pin badge according to claim 1 wherein said extended length passage means (18) is substantially enclosed.

3. A pin badge according to claim 2 wherein said pin (4) has an enlarged diameter head (22) and said first end portion (34) of the passage means (18) has a diameter substantially less than that of said head (22).
- 5 4. A pin badge according to claim 2 or claim 3 wherein said passage means (18) extends from the image mounting side (14) of the badge plate (2) to the reverse side (12) of the badge plate (2).
- 10 5. A pin badge according to claim 4 wherein the entrance to the passage means (18) at the image mounting side (14) of the badge plate (2) is countersunk (18a).
6. A pin badge according to claim 4 or claim 5 wherein the second end portion (10) of the pin (4) is cranked relative to the first pin end portion (20).
- 15 7. A pin badge according to claim 2 or claim 3 wherein said passage means (18) extends generally parallel to the reverse side (12) of the badge plate (2).
8. A pin badge according to claim 7 wherein said passage means (18) is inclined to the reverse side (12) of the badge plate (2) at an angle of from 10 to 20° relative thereto.
- 20 9. A pin badge according to claim 1 wherein said extended length passage means (18) is at least partly open sided (36) so as to allow introduction of the pin (4) transversely of the longitudinal axis of the pin (4).
- 25 10. A pin badge according to claim 9 wherein the entrance to the passage means (18) is in the form of an elongate slot (36) having a width along at least part of

its length substantially less than the diameter of the main pin body (4) and is formed and arranged so as to allow snap-fit introduction of the first pin end portion (20) into the passage means (18) through said elongate slot (36).

11. A pin badge according to claim 9 or claim 10 wherein said passage means (18) has a diameter slightly less than that of the first pin end portion (20) so that said first pin end portion (20) is a push-fit therein and is positively gripped therein.

12. A pin badge according to any one of claims 9 to 11 wherein said pin (4) has an enlarged diameter head (22) disposable within said second end portion (35) of the passage means (18), said first end portion (34) of the passage means (18) having a diameter substantially less than that of said second end portion (35) and that of said pin head (22).

13. A pin badge according to any one of claims 1 to 12 wherein the reverse side of said badge plate (2) is provided with guide means (24) adjacent said pin mounting portion (6), said guide means (24) being formed and arranged to direct said pointed end (10) of said pin (4) in the general direction of said pin engagement means (8) so as to facilitate engagement therewith.

14. A pin badge according to claim 13 wherein said guide means includes an abutment (24) adjacent said extended passage means (18) formed and arranged for supporting said pin (4) so as to project said pin's pointed end (10) substantially outwardly of the engagement portion (8) of said plate (2) so that said pointed end (10) may be easily passed through a garment and so that when said pin's pointed end (10) is engaged

in said engagement portion (8) said abutment (24) maintains said pin (4) in a substantially resiliently biased condition thereby maintaining said pointed end of said pin (4) in secure engagement within said engagement
5 portion (8).

15. A pin badge according to any one of claims 1 to 14 wherein said engagement portion (8) is provided with a cover or shield portion (26) formed and arranged to permit said pointed end (10) of said pin (4) to engage
10 therein and to prevent accidental injury to a user of said badge by said pointed end (10) of said pin (4) engaged therein.

16. A pin badge according to any one of claims 1 to 15 wherein the reverse side (12) of the badge plate (2) is
15 provided with an image element retaining means in the form of a generally circumferentially extending recess means (28) and a generally ring-form retaining member (32), said circumferential recess (28) and retaining
member (32) being formed and arranged so that when, in
20 use, the peripheral portion of an image element (17) oversized with respect to the badge plate (2) is folded back over the outer edge (27) of the plate at least partly across said recess (28), said retaining member
(32) may be pressed at least partly into said recess
25 (28) together with at least part of said image element peripheral portion and captively gripped in said recess (28).

17. A pin badge according to claim 16 wherein said recess (28) has at least partly undercut side walls
30 whereby said retaining member (32) is secured, in use, in said recess (28) by the overhanging portions of said side walls.

18. A pin badge according to any one of claims 1 to 17 wherein the badge plate comprises a backing plate (2) and an image support plate (15) for receiving an image thereon.
- 5 19. A pin badge according to claim 18 wherein is used a plastics backing plate (2) and a metal image support plate (15).
20. A pin badge according to any one of claims 1 to 19 wherein said badge plate (2) comprises a one-piece
10 plastics moulding, with said pin mounting and engagement portions (6, 8) formed integrally therewith.
21. A pin badge according to any one of claims 1 to 20 wherein said extended length passage means (18) has a length at least 2 times the diameter of said pin (2).
- 15 22. A pin badge according to any one of claims 1 to 21 wherein said pin (4) is of heat treated spring steel.
23. A method of assembling a badge according to claim 1 which method comprises the steps of providing a badge plate (2) and pin (4) according to the invention; and
20 bringing the first end portion (20) of said pin (4) into said extended passage means (18) so as to be retained captively therein.
24. A method according to claim 23 wherein is used a badge plate (2) according to claim 4, which method
25 includes the step of inserting the second, pointed end of said pin (4) into the extended passage means (18) in the pin mounting portion (6) on the image mounting side (14) of said badge plate (2) and pushing it through bringing the first end portion (20) of said pin (4) into
30 said extended passage means (18) so as to be retained

captively therein.

25. A method according to claim (24) wherein, where said passage means (18) extends in a direction generally normally of the badge plate (2), the method includes the
5 further step of bending said pin (4) over to extend generally towards the engagement portion (8) of the badge plate (2).

26. A pin badge (1), said badge comprising a badge
10 plate (2) and a pin (4), said badge plate (2) having an image mounting side (14) and spaced apart pin mounting and pin engagement portions (6, 8) on the reverse side (12) thereof, said pin mounting portion (6) being formed and arranged for fixedly anchoring a first end portion (20) of said pin (4) with the main body of said pin (4)
15 extending across said reverse side (12) of the badge plate (2) generally towards said engagement portion (8) for releasable engagement of a second, pointed, end portion (10) of said pin (4) with the engagement portion (8) in use of the badge (1) on a garment, said mounting
20 portion (6) having an extended passage means (18) of reduced diameter less than that of said first end portion (20) of the pin (4) and formed and arranged for receiving said first pin end portion (20) with a push-fit therein and substantially rigidly supporting
25 said pin (4) during engagement and disengagement of the pointed end portion (10) thereof with the engagement portion (8) in use of the badge (1).

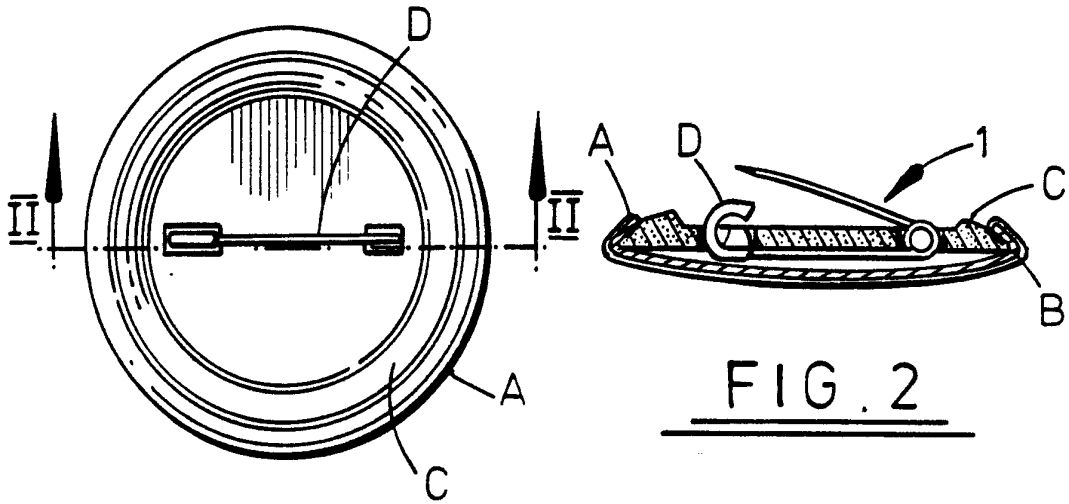


FIG. 1

FIG. 2

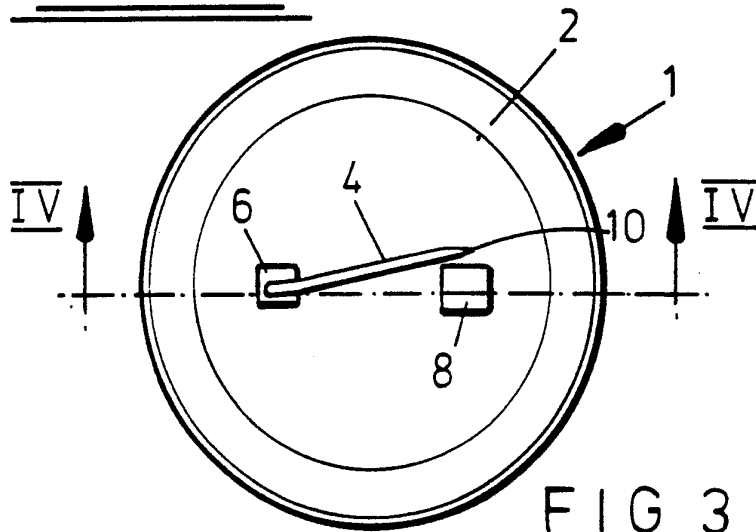


FIG. 3

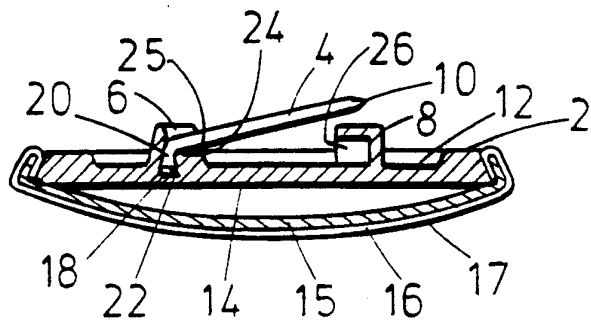


FIG. 4

