

(19)



(11)

EP 2 060 678 A2

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
20.05.2009 Bulletin 2009/21

(51) Int Cl.:
E01F 9/012^(2006.01) E01F 9/013^(2006.01)

(21) Application number: **08253707.7**

(22) Date of filing: **13.11.2008**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR
Designated Extension States:
AL BA MK RS

(72) Inventor: **Whiteley, Christopher Barn 2 Finmere, Buckinghamshire MK18 4AJ (GB)**

(74) Representative: **Bailey, Richard Alan Marks & Clerk LLP 27 Imperial Square Cheltenham Gloucestershire GL50 1RQ (GB)**

(30) Priority: **14.11.2007 GB 0722307**

(71) Applicant: **Oxford Plastic Systems Limited Enstone Oxfordshire OX7 4NP (GB)**

(54) **Sign**

(57) A sign comprises a base 10 and a sign component 12 arranged to be supported, in use, by the base

10, and a lock arrangement 30 operable to secure the sign component 12 to the base 10.

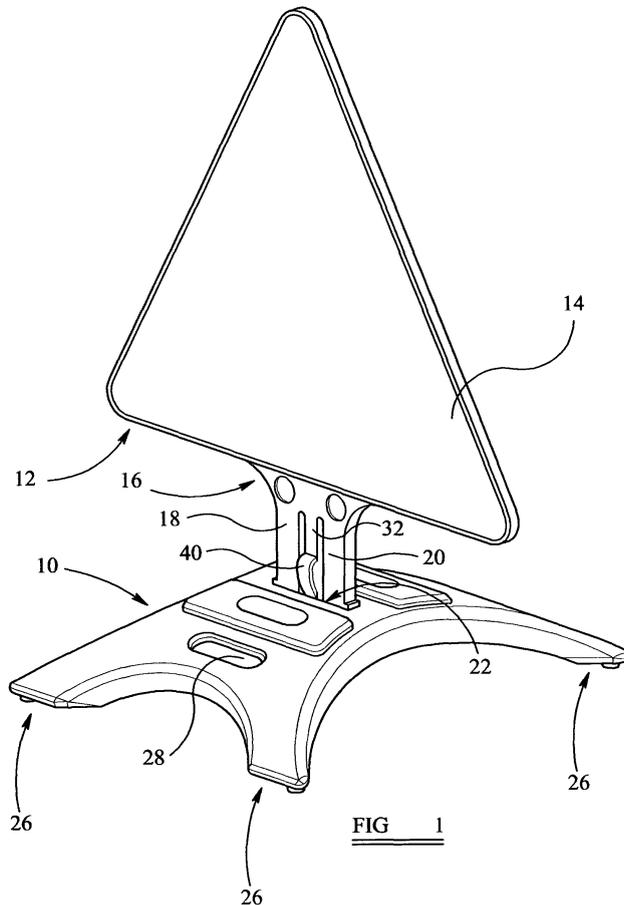


FIG 1

EP 2 060 678 A2

Description

[0001] This invention relates to a sign, and in particular to a sign which can be erected, for example temporarily, to display information or provide warnings to passers by, for example to passing pedestrians.

[0002] Warning signs of this nature have typically been of one piece, metal or plastics material construction. One-piece signs are advantageous in that they tend to be robust and cannot be dismantled. However, they tend to be expensive to manufacture, in part because the entire sign has to be manufactured from good quality material, and they are also difficult to store and transport efficiently as they occupy a relatively large amount of space. Two part arrangements have been developed which overcome some of the disadvantages associated with one-piece signs. However, they usually take the form of a base and an upright that simply slots into the base. This construction, although being less costly to make and simpler to store and transport, can easily be dismantled by passers-by. Consequently, adequate warning may no longer be provided.

[0003] According to the present invention there is provided a sign comprising a base and a sign component arranged to be supported, in use, by the base, and a lock arrangement operable to secure the sign component to the base.

[0004] It will be appreciated that many of the aforementioned benefits of a two-piece sign construction can be achieved with such an arrangement whilst the risk of disassembly of the sign is reduced.

[0005] The lock arrangement conveniently comprises a snap-fit lock arrangement. Preferably the lock arrangement includes a flexible tongue associated with the sign component and adapted to engage the base in a snap-fit manner. The tongue preferably includes a bearing portion arranged such that depression thereof deflects the tongue. The bearing portion preferably comprises a projection provided on the tongue and located above the base when the sign component is secured to the base. The projection is preferably of convex form.

[0006] The lock arrangement is conveniently such that it is not obvious to a passer-by thus casual or unauthorised dismantling of the sign is reduced.

[0007] The base may be of moulded form, moulded from a recycled plastics material. The sign component may be of moulded form, moulded from a virgin or higher grade plastics material. The sign component may comprise a support upon which a separate display panel can be carried.

[0008] The invention will further be described, by way of example, with reference to the accompanying drawings, in which:

Figure 1 is a perspective view illustrating a sign in accordance with an embodiment of the invention;

Figure 2 is a perspective view showing the underside

of the sign;

Figure 3 is an exploded view; and

Figures 4 to 7 illustrate some modifications.

[0009] Referring to the accompanying drawings there is illustrated a sign of moulded plastics construction and of two-piece of form. The sign comprises a base 10 and a sign component 12, the sign component 12 being supported and secured to the base 10, in use. As illustrated, the sign component 12 comprises a display portion 14 which in the illustrated embodiment is of generally triangular shape, but it will be appreciated that the display portion 14 could be of a range of other shapes. The display portion 14, in use, carries a message or illustrations to be displayed to passers-by. The display portion 14 is integrally formed with a leg 16. The leg 16 is of bifurcated form, defining first and second leg regions 18, 20 which extend parallel to one another and are spaced apart from one another. The regions 18, 20 of the leg 16 are receivable, in use, within an opening 22 formed in the base 10, the opening 22 and regions 18, 20, being shaped such that, in use, the sign component 12 is firmly supported by the base 10 in an upright configuration. As best illustrated in Figure 3, the regions 18, 20 are each formed with an outwardly projecting flange 24 which, in use, sits upon the upper surface of the base 10 adjacent the opening 22, thereby limiting the distance by which the regions 18, 20 can be introduced into the opening 22.

[0010] Although the display portion 14 and leg 16 are integral with one another, they may be formed as separate components, for example as shown in Figure 4. In the Figure 4 arrangement, the display portion 14 and leg 16 are secured to one another by projections 14a formed on the display portion 14 passing through openings 16a formed on the leg 16, and by means of other features 14b formed on the display portion, but it will be appreciated that other techniques may be used. The formation of the sign component 12 in two part form in this manner allows different materials to be used for these parts. For example, the leg 16 can be of a material of increased strength. If desired, the display portion 14 may be manufactured using recycled materials. Further, manufacture may be simplified by being able to manufacture a standard leg 16 to fit a range of different shapes and/or sizes of display portion 14.

[0011] As illustrated, the base 10 is shaped to define four feet 26 which are spaced apart from one another by a relatively large distance, thus enhancing the stability of the sign. The base 10 is further provided with openings 28 to assist a user in moving the base 10. The base 10 is of domed form and thus is able to accommodate bumps or unevenness in the surface upon which the sign is to be erected.

[0012] The sign is provided with a lock arrangement 30 whereby the sign component 12 can be secured to the base 10. The lock arrangement 30 comprises a

tongue 32 integrally formed with the leg 16 and located between the regions 18, 20. The tongue 32 is capable of deflecting relative to the regions 18, 20 and is shaped, adjacent its lower end, define a ramped surface 34 which terminates at a generally horizontal surface 36. The shaping of the tongue 32 is such upon introduction of the regions 18, 20 into the opening 22, the tongue 32 is deflected by the engagement of the ramped surface 34 with the edge of the opening 22. Such deflection of the tongue 32 will continue until the sign component 12 is fully introduced into the opening 22 at which point the flanges 24 engage the upper surface of the base 10. Once this position is reached, the inherent resilience of the tongue 32 will result in the tongue 32 returning to its initial, rest position in which, as illustrated in Figure 2, the tongue 32 co-operates with an abutment surface 38 provided on the underside of the base 10 thereby securing the sign component 12 to the base 10 in a snap-fit type manner. As illustrated in Figure 1, it is not obvious to passers-by viewing the sign how the sign component 12 is secured to the base 10, thus the risk of unauthorised or casual removal of the sign component 12 from the base 10 is reduced.

[0013] To release the sign component 12 from the base 10, the tongue 32 is deflected by applying an appropriate force or loading to a projecting bearing portion 40 of the tongue 32, located above the base 10. Such deflection of the tongue 32 releases the engagement between the surface 36 and the abutment surface 38 whereon lifting of the sign component 12 away from the base is permitted. The loading applied to the bearing surface 40 is conveniently applied by the user using his foot, however, this need not always be the case.

[0014] Figure 5 illustrates a modification in which the base 10 is formed with openings 50 arranged to receive anchorage pegs 52 to allow the base 10 to be secured in position. Each opening 50 is conveniently designed so as to hold or accommodate the associated in an angled configuration, further enhancing the securing of the base 10 against movement. The peg 52 is conveniently of moulded plastics form, but it will be appreciated that this need not be the case.

[0015] Figure 6 is a view of part of the underside of the base 10 of a modification. In the arrangement shown in Figure 6, the strengthening ribs 60 provided on the base are positioned to as to allow ballast blocks 62 (also shown in Figure 7) to be secured beneath the base 10, reducing the risk on undesired movement of the base 10, whilst avoiding the use of sandbags or the like. The provision of such ballast blocks 62 is advantageous in that it permits the base 10 itself to be of relatively lightweight form, by being of relatively thin walled construction. It is envisaged that the base 10 will be of wall thickness approximately 10mm, and of weight approximately 3kg. Relatively high quality materials can be used, and moulding can be quick and economic. The ballast blocks 62 are conveniently of low cost material, for example making use of recycled materials, and can be permanently secured in position,

if desired, although other mounting techniques may be used. Preferably, the ballast blocks 62 still permit compact stacking of the bases 10 for storage or transportation.

[0016] It will be appreciated that the sign of the present invention has a number of advantages compared to typical arrangements. Firstly, as the sign is of two-part construction, the base 10 and sign component 12 when disassembled occupy a relatively small amount of space, thus storage and transportation of the sign is simplified. Further, the sign component 12 and the base 10 can be constructed from different materials. It is envisaged that the base 10 be moulded from a re-cycled plastics material whilst the sign component 12 can be manufactured from a higher grade material which may be coloured or may be suitable for having the warning message to be displayed printed thereon. Additionally, as mentioned hereinbefore, the risk of casual or unauthorised dismantling of the sign is reduced.

[0017] It will be appreciated that a wide range of modifications and alterations may be made to the arrangement described hereinbefore without departing from the scope of the invention.

Claims

1. A sign comprising a base (10) and a sign component (12) arranged to be supported, in use, by the base (10), and a lock arrangement (30) operable to secure the sign component (12) to the base (10).
2. A sign according to Claim 1, wherein the lock arrangement (30) comprises a snap-fit lock arrangement.
3. A sign according to Claim 2, wherein the lock arrangement (30) includes a flexible tongue (32) associated with the sign component (12) and adapted to engage the base (10) in a snap-fit manner.
4. A sign according to Claim 3, wherein the tongue (32) includes a bearing portion (40) arranged such that depression thereof deflects the tongue (32).
5. A sign according to Claim 4, wherein the bearing portion (40) is located above the base (10) when the sign is assembled, in use.
6. A sign according to any of the preceding claims, wherein the lock arrangement (30) is arranged such that it is not obvious to a passer-by how to release the sign component from the base.
7. A sign according to any of the preceding claims, wherein the sign component (12) includes an integral display portion (14).

8. A sign according to any of Claims 1 to 6, wherein the sign component (12) carries a separate display portion (14).
9. A sign according to any of the preceding claims, wherein the base (10) is of moulded form, moulded from a recycled plastics material.
10. A sign according to any of the preceding claims, wherein the sign component (12) is of moulded form, moulded from a virgin or higher grade plastics material.

15

20

25

30

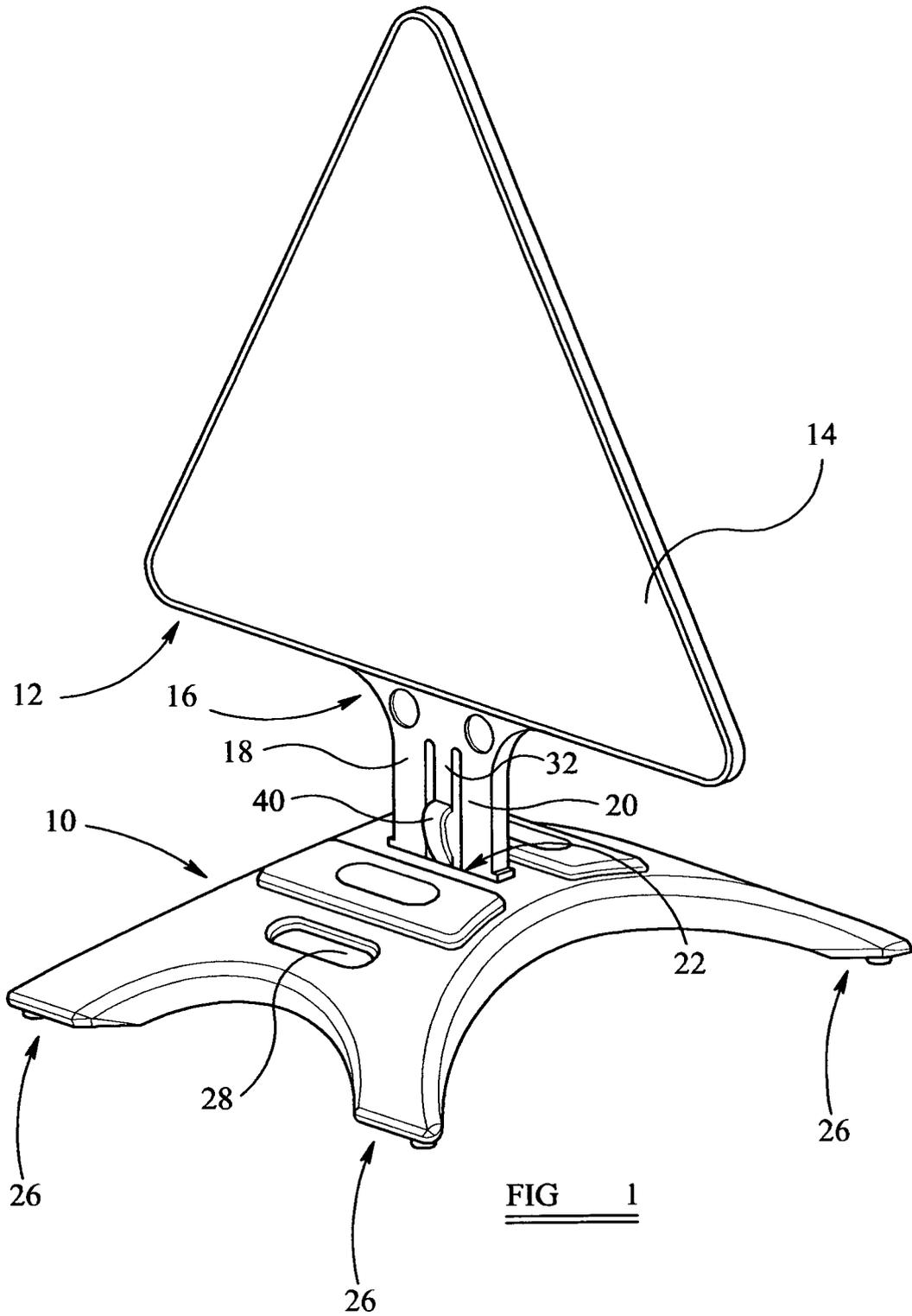
35

40

45

50

55



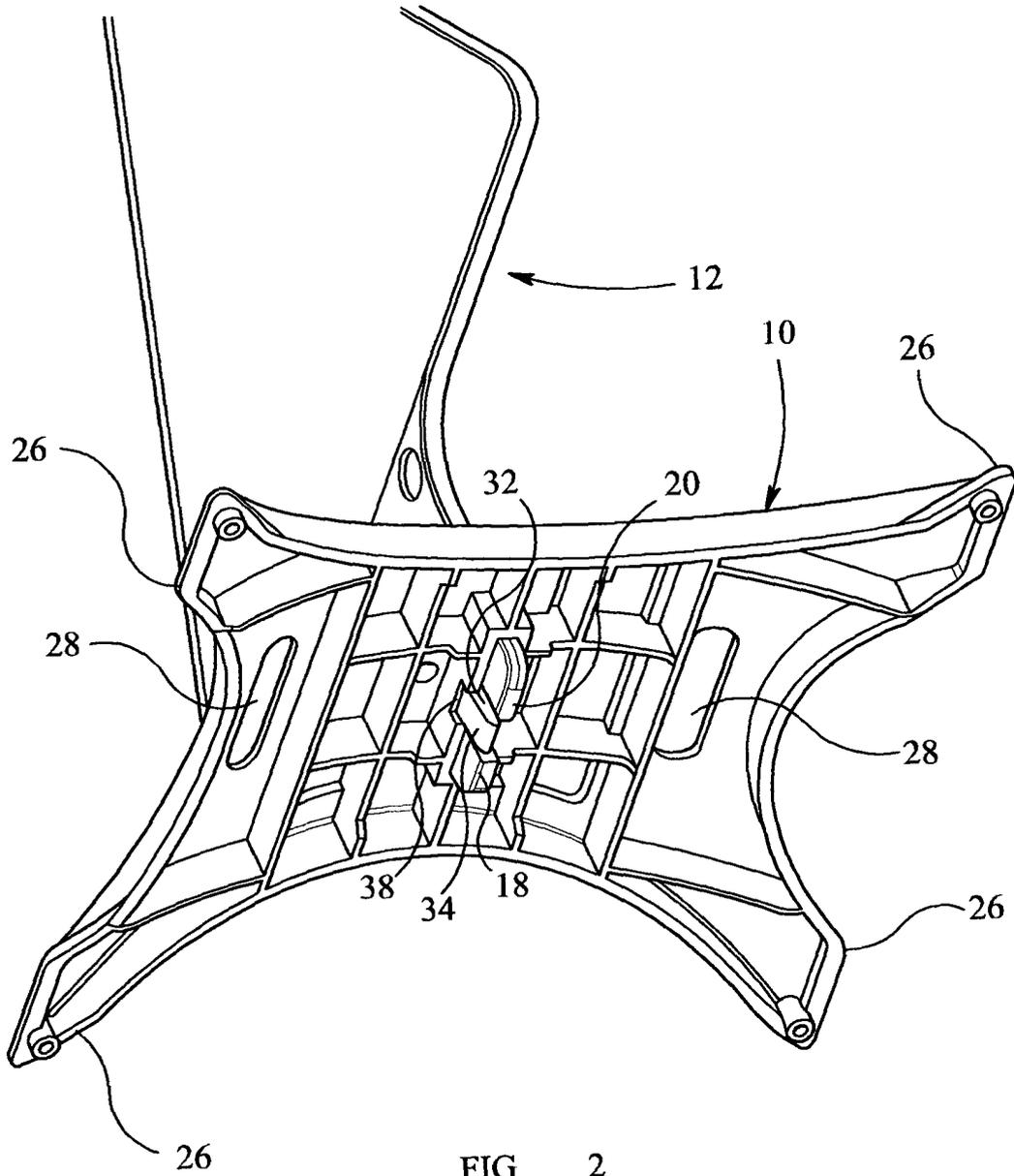


FIG 2

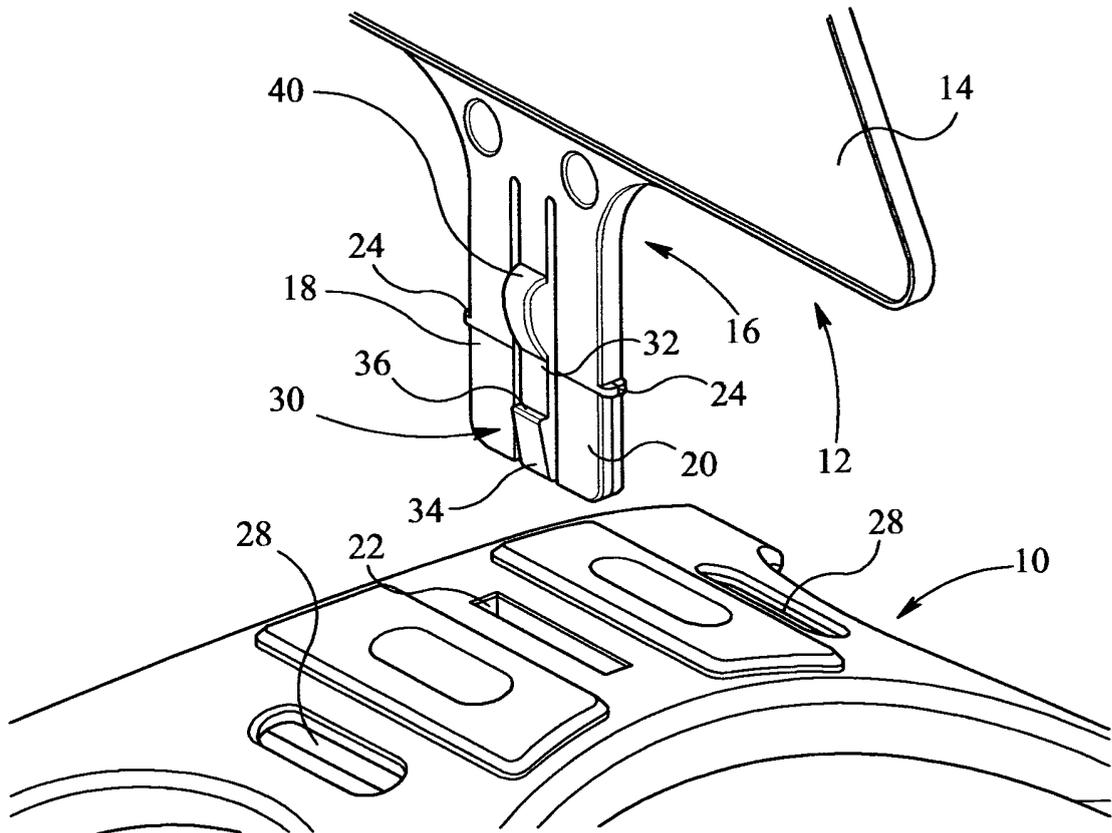
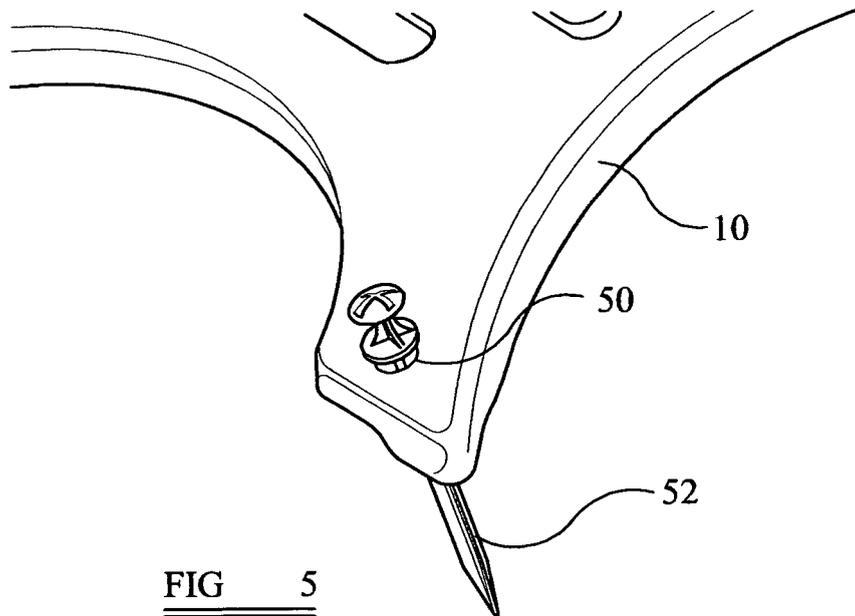
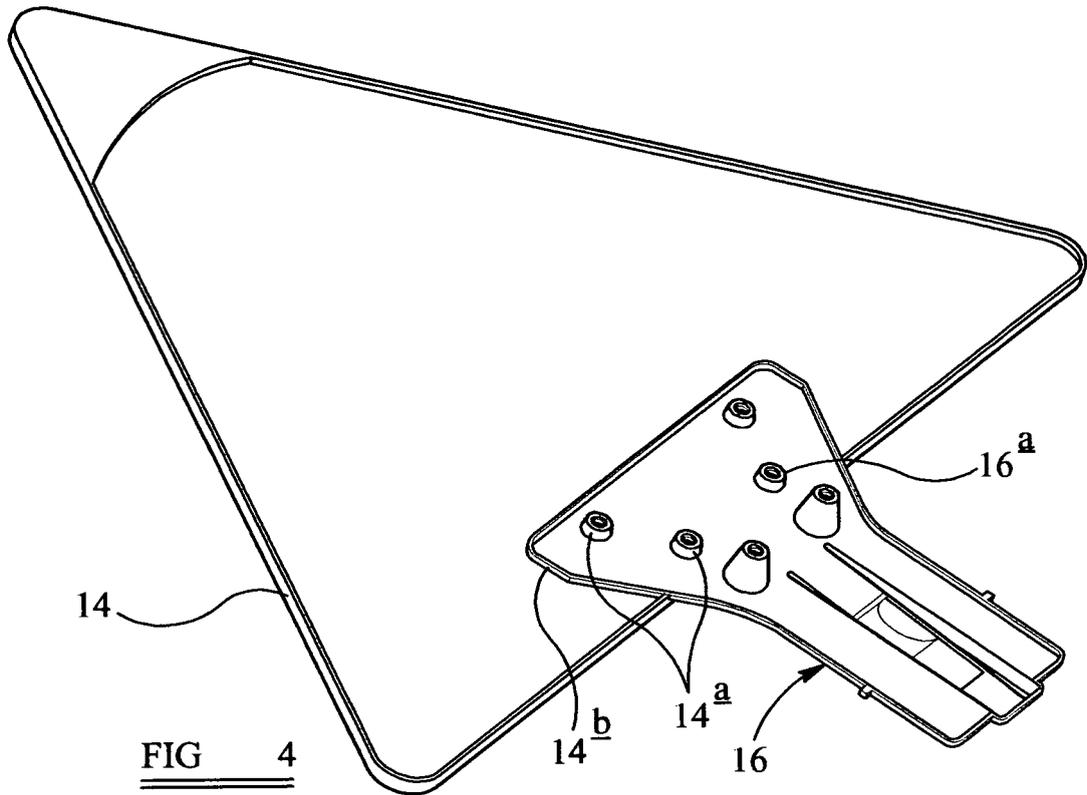


FIG 3



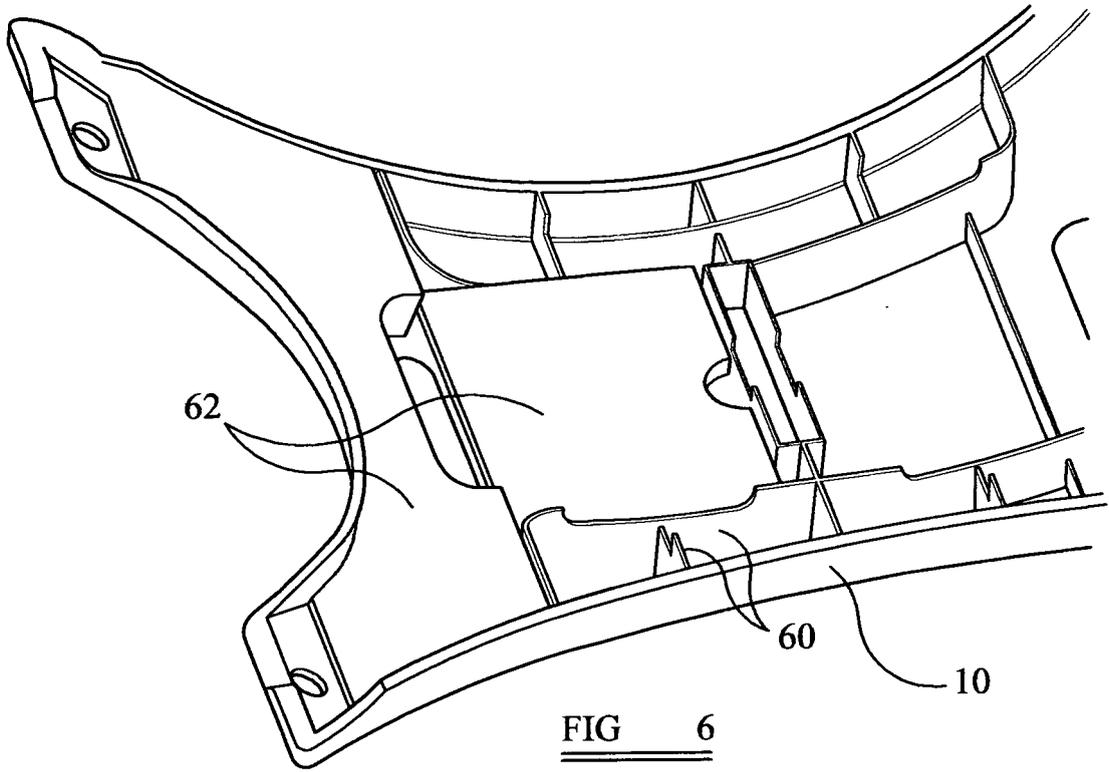


FIG 6

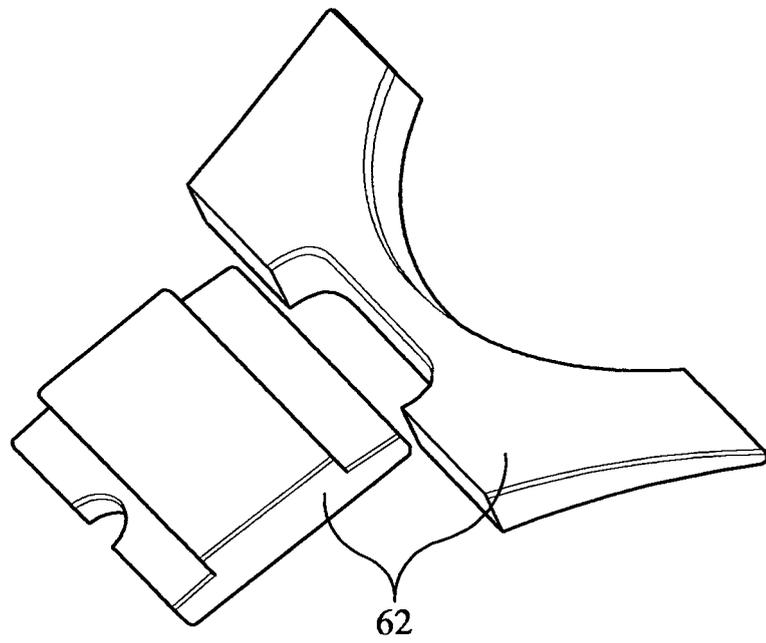


FIG 7