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(54) Sign stand

(57) A sign stand comprising

a base unit; and

a sign-supporting frame member adapted, in use, to substantially surround at least part of the perimeter of a display panel or the like supported thereby,

characterised in that said base unit and said frame member are initially disparate units adapted to be assemblable into said sign stand, and in that the arrangement is such that, when so assembled, said base unit is located substantially within the perimeter of said frame member.

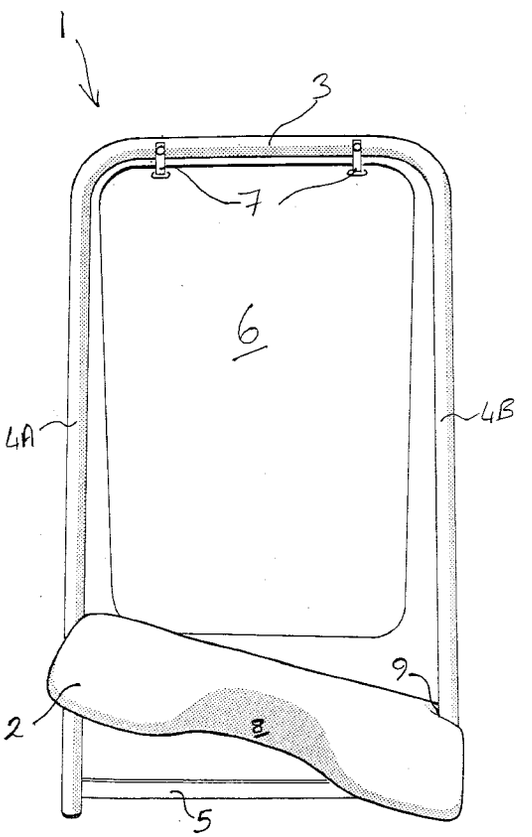

FIGURE 3

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Description

Field of the Invention

This invention relates to the field of sign stands of the kind used to display advertisements, notices and the like particularly, but not exclusively, for outdoor use.

Background to the Invention

Portable sign stands such as those described above are commonly subjected to a variety of harsh conditions, for example extremes of weather (wind, rain etc) and vandalism.

A number of known sign stands seek to reduce the effect of these conditions thus prolonging the life of the sign stand but these are often necessarily complex in construction and/or heavy and bulky.

A sign stand of relatively simple construction is described in UK patent application number 89 061192.3 and subsequent International Patent application number PCT/GB90/00399 (A C EDWARDS PLC).

That document describes a display stand comprising a sheet metal display panel having its lower edge faces fitted into a central slot in a base having a cambered top surface. The design aims at providing stability out-of-doors in a high wind.

This sign stand suffers from a number of disadvantages. Portable sign stands of this type often need to be carried to a new location (for example in and out of a shop) but are relatively difficult to transport owing to the sheet metal display panel (which is thin and possibly has sharp edges) and the heavy base.

In order to transport the sign stand, one needs either to dismantle it (time consuming, especially if the sign stand has a number of fixings associated therewith) or to pick it up by the sheet metal display panel which may have sharp edges and which may not support the weight of the base. If the sign stand is transported in its assembled state, the heavy base is prone to bang against the carrier's legs.

The display-panel-receiving slot may also retain liquid, for example rain water, which runs into the slot from the surface of the display panel.

Furthermore the cambered base unit is liable to theft since, on removal of the display panel, the base makes a convenient skateboard ramp!

It is thus an object of the present invention to provide a sign stand which seeks to alleviate these problems.

Summary of the Invention

According to the present invention, in its broadest aspect, there is provided a sign stand comprising

abase unit; and

a sign-supporting frame member adapted, in use, to substantially surround at least part of the perimeter of a display panel or the like supported thereby,

characterised in that said base unit and said frame member are initially disparate units adapted to be assemble into said sign stand, and in that the arrangement is such that, when so assembled, said base unit is located substantially within the perimeter of said frame member.

Preferably, said base unit and said frame member are assemble into said sign stand without the need for either tools to aid and/or effect the assembly or fixings (for example screws) in order to fix said sign stand in its assembled form.

Ideally, said sign-supporting frame member is provided with a cross-member and the ground-engaging surface of said base unit is provided with a channel suitable for receiving said cross-member.

In a preferred form, said cross-member is continuous so as to join opposing limbs of said frame member. Alternatively, said cross-member is discontinuous.

Advantageously, the cross-sectional shape of said frame member is selected so as to provide a comfortable carrying means for the assembled sign stand. Preferably, said frame member is of circular cross-section.

Ideally, said base unit is shaped so as to facilitate carriage of said assembled sign stand. Preferably, this is achieved by the provision of a waisted plan form, having no sharp corners.

In a further preferred form, said base unit is provided with one or more frame-member-gripping recesses which, in use, grip said frame-member in the vicinity of each limb-cross-member junction. Ideally, each frame-member-gripping recess is provided with a number of ridges or protrusions which improve the gripping action.

Preferably, said sign stand is supplied in a so-called "flat pack" form, ready for assembly. Preferably, each of said base unit and said sign-supporting frame member can be supplied independently from one another.

It will be understood that the invention includes within its scope a base unit, sign-supporting frame member and assembled sign stand substantially as described herein with reference to and as illustrated by any appropriate combination of the accompanying drawings.

Brief Description of the Drawings

In the accompanying drawings:

Figure 1 is a front view of a sign stand embodying the present invention (not assembled);

Figure 2 is an end view of the sign stand of Figure 1;

Figure 3 is a front view of the sign stand, indicating the method of assembly;

Figure 4 is a perspective view of the assembled sign stand;

Figure 5 is an end view of the assembled sign stand;

Figure 6 is a top view of the assembled sign stand;

Figure 7 is a plan view, partly in section, of the base unit;

Figure 8 shows the base unit in section on line A-A in Figure 7;

Figure 9A is a view of the base unit in the direction X shown in Figure 7;

Figure 9B shows the base unit in section on line B-B in Figure 7;

Figure 10 is a view of the base unit in the direction Y shown in Figure 8; and

Figure 11 shows the base unit in section on line C-C in Figure 10.

Description of the Preferred Embodiment

Figure 1 shows the sign stand 1 in its unassembled form. The sign stand comprises a moulded PVC base unit 2 and a tubular sign-supporting frame member 3.

Frame member 3 is of a generally inverted U-shape, having two parallel vertical limbs 4A and 4B. The extremities of limbs 4A and 4B are joined by cross-member 5. In alternative embodiment (not shown) cross-member 5 is discontinuous. In that alternative embodiment, discontinuous cross-member 5 comprises two co-axial members (preferably of equal length) projecting inwardly toward one another from each of limbs 4A and 4B.

The parallel limits 4A and 4B, the top member 4C and cross-member 5 define the perimeter of frame member 3.

The tubular metal from which frame member 3 is constructed is of circular cross-section, the diameter of which is selected to provide a convenient and comfortable means by which the frame member 3 can be lifted. Cross-member 5 need not necessarily be of the same cross-sectional area and/or shape.

A sheet metal display panel 6 is supported on frame member 3 by fixings 7. Display panel 6 is supported in such a way that it can swing freely from its fixing points (in windy conditions, for example). In normal circumstances, however, display panel 6 hangs vertically with its perimeter substantially surrounded by frame member 3.

Base unit 2 is moulded from recycled plasticised and unplasticised PVC. It is described below in greater detail with reference to Figures 7-11, however from Figure 1 it can be seen that base unit 2 is of a contoured shape having no sharp corners or edges. Significantly, the base unit 2 has a waisted portion 8 and two frame-member-gripping recesses 9. Base unit 2 may also be embossed or otherwise marked with a logo, for example.

Referring to Figure 2, it can be seen that each of frame-member-gripping recesses 9 is provided with a number of ridges or protrusions 10, integral to the moulding, whose function will be described below.

Figure 3 shows the method by which sign stand 1 is assembled. The sign stand 1 is ideally supplied in a so-called "flat pack" form. In order to assemble the sign stand 1, the customer supports frame member in a generally vertical orientation and drops base unit 2 into position over cross-member 5 in the manner indicated in Figure 3. The ground-engaging surface of base unit 2 is provided with a slot or channel suitable for receiving the cross-member 5 of frame member 3. This cross-member-receiving channel (or slot) is designated by reference numeral 11 in the relevant Figures.

Cross-member 5 is located into cross-member-receiving channel 11 by the application of a downward force on base unit 2. This can be easily provided by the customer's foot. After such a force has been applied, the friction fit between base unit 2 and frame member 3 secures the sign stand 1 in its assembled state.

Once base unit 2 has been correctly located as shown in Figure 4, sign stand 1 is completely self-supporting. The cross-member-receiving channel 11 holds frame member 3 in a substantially vertical position and the shape and mass of base unit 2 ensures that sign stand 1 is stable and unlikely to be blown or knocked over. Frame-member-gripping recesses 9 also support frame member 3 by means of the pressure applied thereto by ridges or protrusions 10. The arrangement of ridges or protrusions 10 also aids the drainage of any liquid (for example rain water) which may run down the limbs 4A, 4B of frame member 3.

Figures 4-6 show the assembled sign stand 1. In particular, Figure 6 shows the waisted portion 8 of base unit 2. This shape is of particular importance when the assembled sign stand 1 needs to be transported from one location to another. The customer simply picks up the assembled sign stand 1 by gripping limbs 4A and 4B at a convenient height. The sign stand 1 can be held conveniently close to the customer's body because of waisted portion 8. A conventionally-shaped base unit (for example substantially circular or rectangular when viewed from above) would be likely to inconveniently bang against the legs of the customer.

This design of sign stand will reduce the likelihood of accidents during transportation since the customer can grip the assembled sign stand at the most convenient height for him/her and can hold the sign stand relatively close to his/her body; both of these factors ensuring that the display panel 6 does not obstruct the customer's vision as he/she transports the sign stand.

Figures 7-11 show base unit 2 in greater detail.

The ground-engaging surface of base unit 2 is provided with a cross-member-receiving channel or slot 11 into which cross-member 5 fits snugly when sign stand 1 is assembled. Base unit 2 is not a completely solid piece of PVC; the quantity of material required is reduced (along with the overall mass) by the provision of a number of hollow chambers 12, separated by reinforcing ribs 13. Reinforcing ribs 13 provide rigidity for base unit 2 and also help to grip the ground on which the base unit 2 is placed.

The ridges or protrusions 10 reduce the tendency of frame member 3 to slide within frame-member-gripping recesses 9.

The particular shape of base unit 2 shown in the Figures is given by way of example only. Other shapes of base unit are envisaged which can be located substantially within the perimeter of the frame member.

The present invention thus provides a hard-wearing and stable sign stand with a number of significant advantages. The sign stand, although preferably supplied in flat-pack form, can be easily assembled by the customer (without the need for any tools or fixings) into a sign stand having no readily apparent means of disassembly. If necessary, the sign stand can be disassembled by the customer by forcibly separating base unit 2 and frame member 3.

This design is thus a deterrent to would-be thieves and the base unit shape is not attractive to would-be skateboarders.

This type of sign stand usually needs to be transported (on a daily basis) in and out of a shop for example, and the sign stand of the present invention facilitates transportation by the waisted portion 8 of base unit 2 as well as the easily-grippable limbs 4A and 4B of frame member 3. The contoured shape of base unit 2 reduces the likelihood of knock injuries.

The construction of this sign stand, with the base unit inboard frame member 3 thus provides an aesthetically-pleasing and stable sign stand which is both hard-wearing and easy to assemble.

Claims

1. A sign stand comprising

   a base unit; and

   a sign-supporting frame member adapted, in use, to substantially surround at least part of the perimeter of a display panel or the like supported thereby,

   characterised in that said base unit and said frame member are initially disparate units adapted to be assemblable into said sign stand, and in that the arrangement is such that. when so assembled, said base unit is located substantially within the perimeter of said frame member.

2. A sign stand as claimed in Claim 1 wherein said base unit and said frame member are assemblable into said sign stand without the need for either tools to aid and/or effect the assembly or fixings (for example screws) in order to fix said sign stand in its assembled form.

3. A sign stand as claimed in Claim 1 or Claim 2 wherein said sign-supporting frame member is provided with a cross-member and the ground-engaging surface of said base unit is provided with a channel suitable for receiving said cross-member.

4. A sign stand as claimed in Claim 3 wherein said cross-member is continuous so as to join opposing limbs of said frame member.

5. A sign stand as claimed in Claim 3 wherein said cross-member is discontinuous.

6. A sign stand as claimed in any of the preceding claims wherein the cross-sectional shape of said frame member is selected so as to provide a comfortable carrying means for the assembled sign stand.

7. A sign stand as claimed in any of the preceding claims wherein said frame member is of circular cross-section.

8. A sign stand as claimed in any of the preceding claims wherein said base unit is shaped so as to facilitate carriage of said assembled sign stand.

9. A sign stand as claimed in Claim 8 wherein said base unit is provided with a waisted plan form, having no sharp corners.

10. A sign stand as claimed in any of Claims 3-9 wherein said base unit is provided with one or more frame-mcmber-gripping recesses which. in use, grip said frame-member in the vicinity of each limb-cross-member junction.

11. A sign stand as claimed in Claim 10 wherein each frame-member-gripping recess is provided with a number of ridges or protrusions which improve the gripping action.

12. A sign stand as claimed in any of the preceding claims wherein said sign stand is supplied in a so-called "flat pack" form ready for assembly.

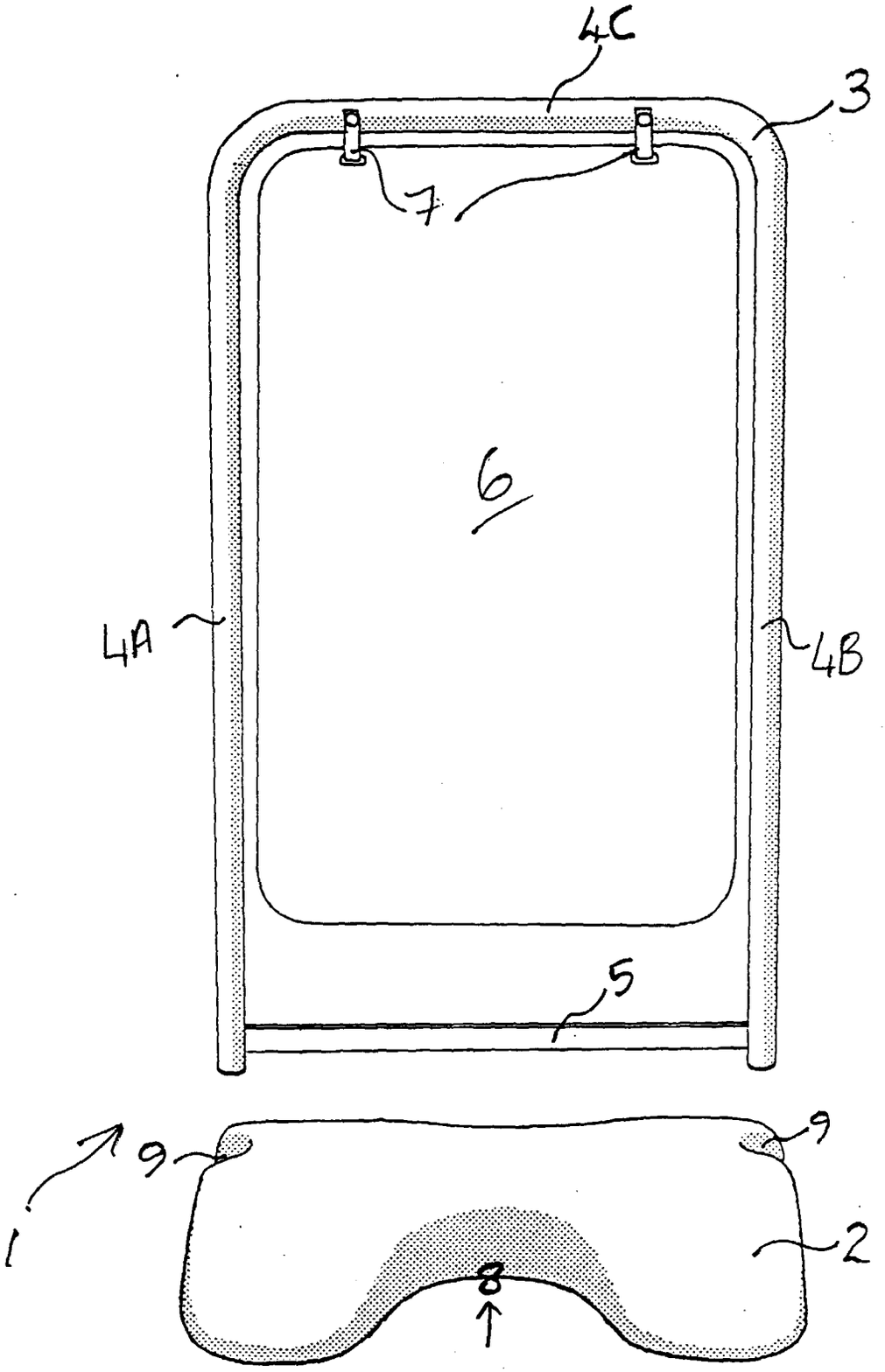

FIGURE 1

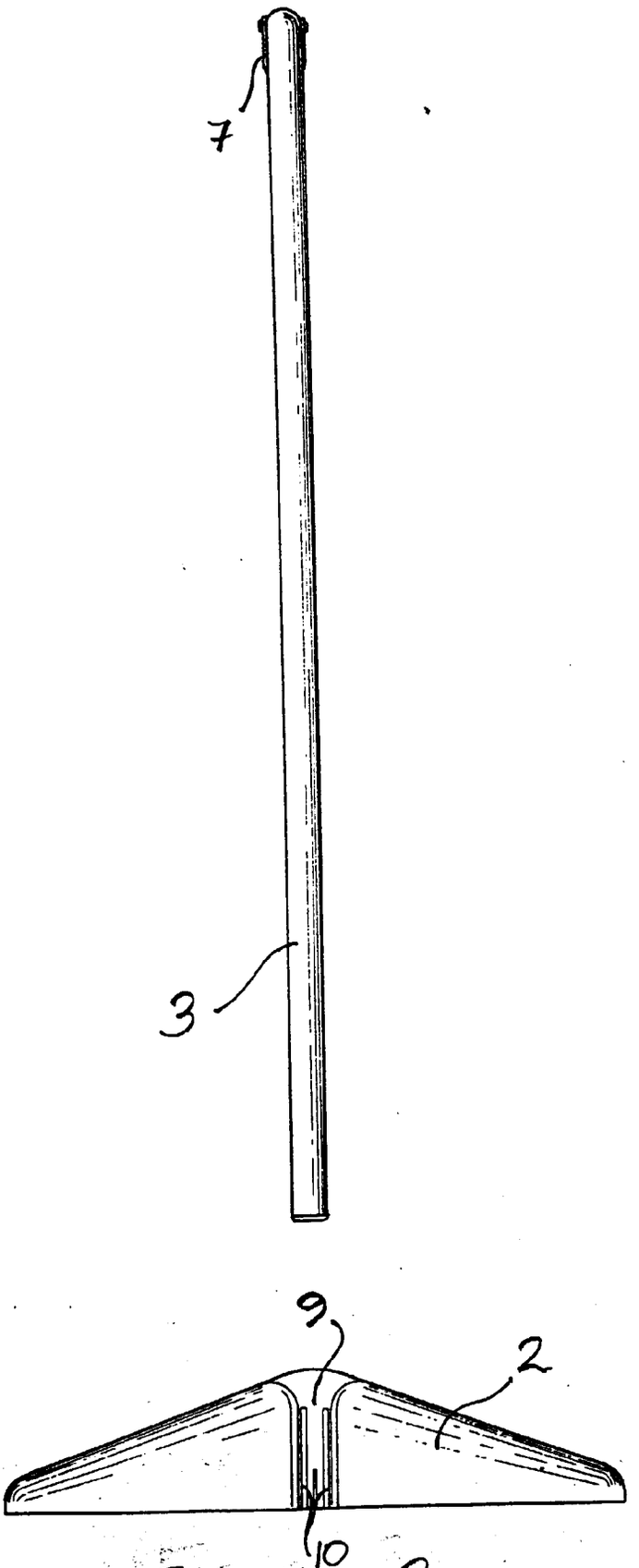

FIGURE 2

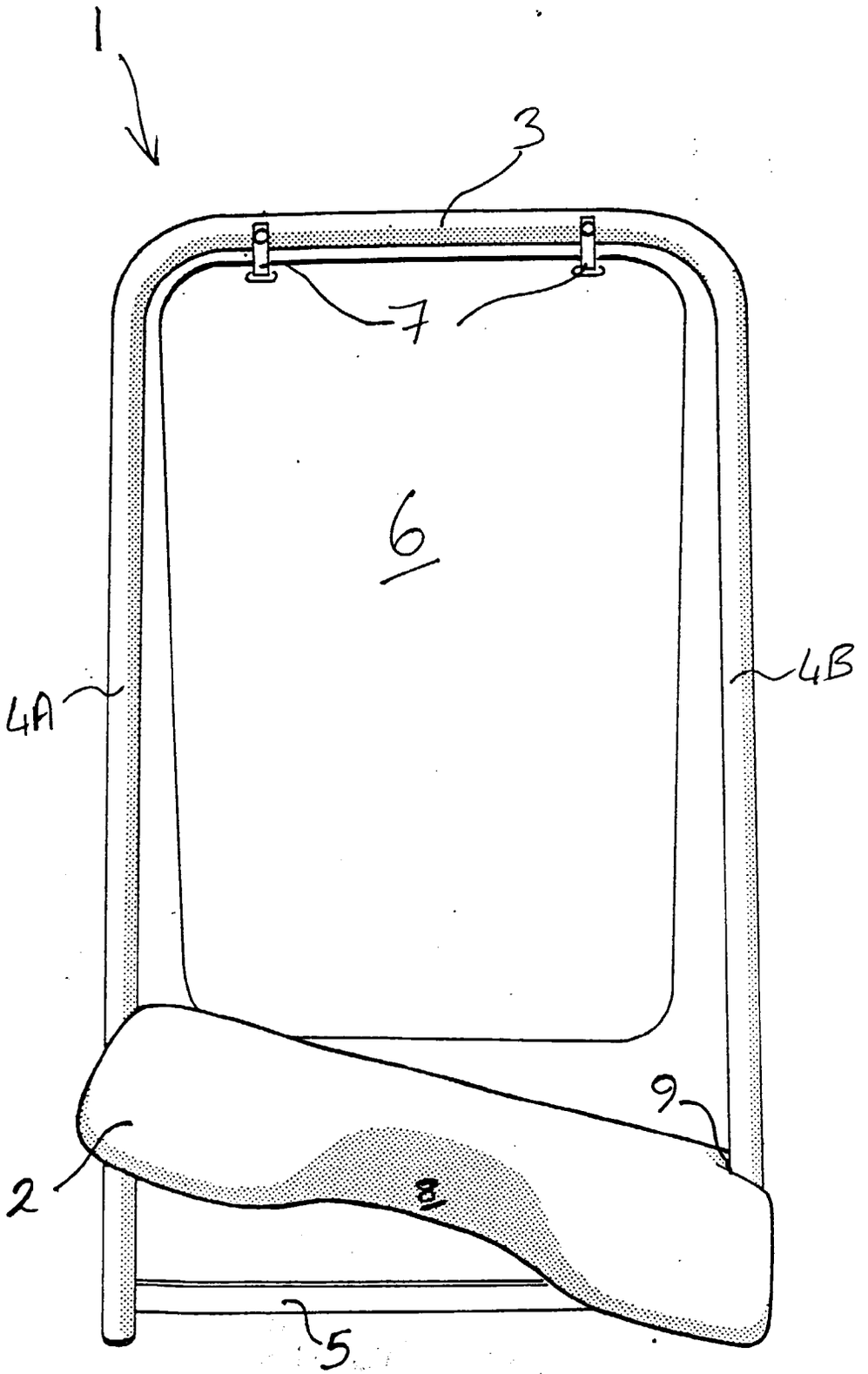

FIGURE 3

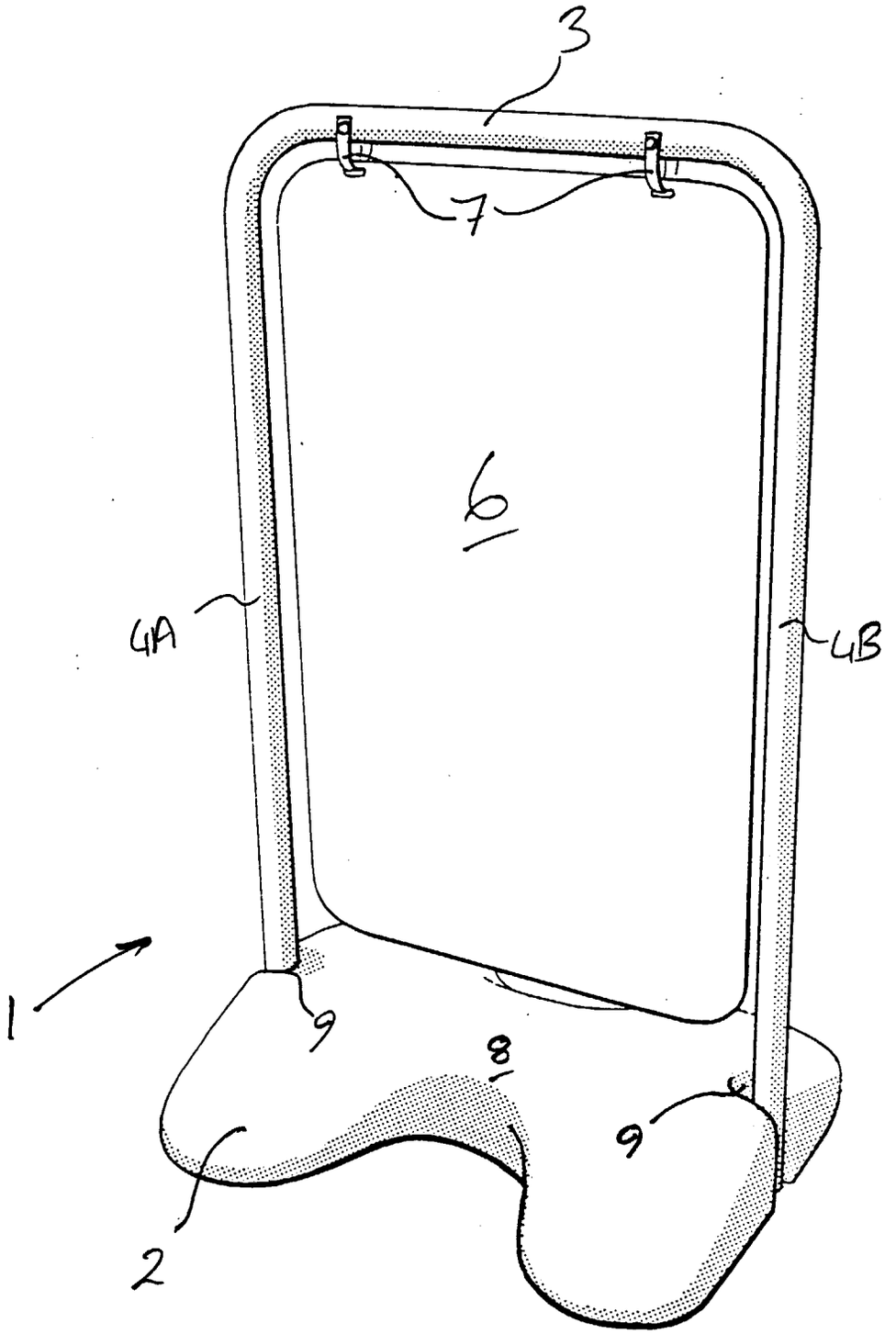

FIGURE 4

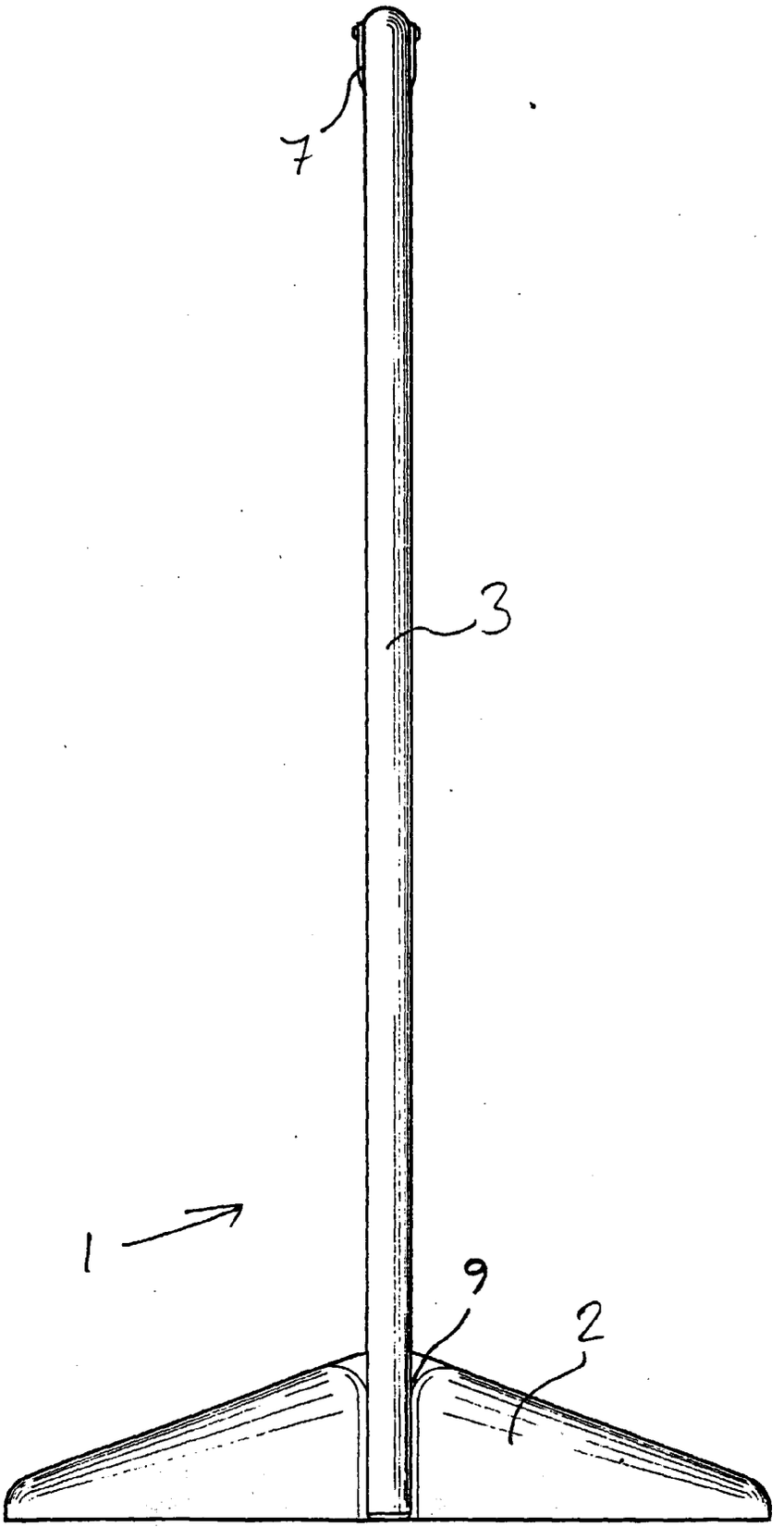

FIGURE 5

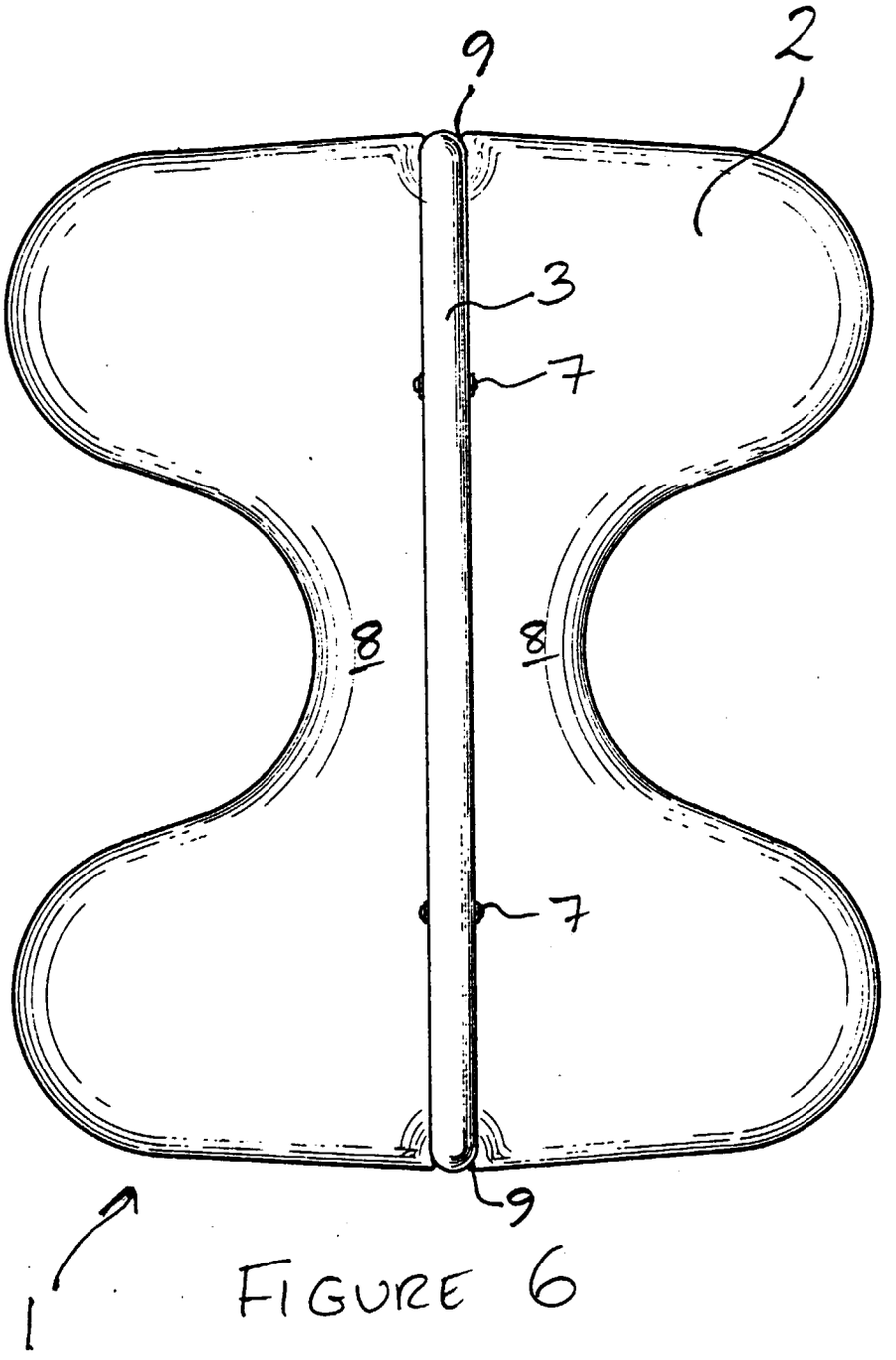

FIGURE 6

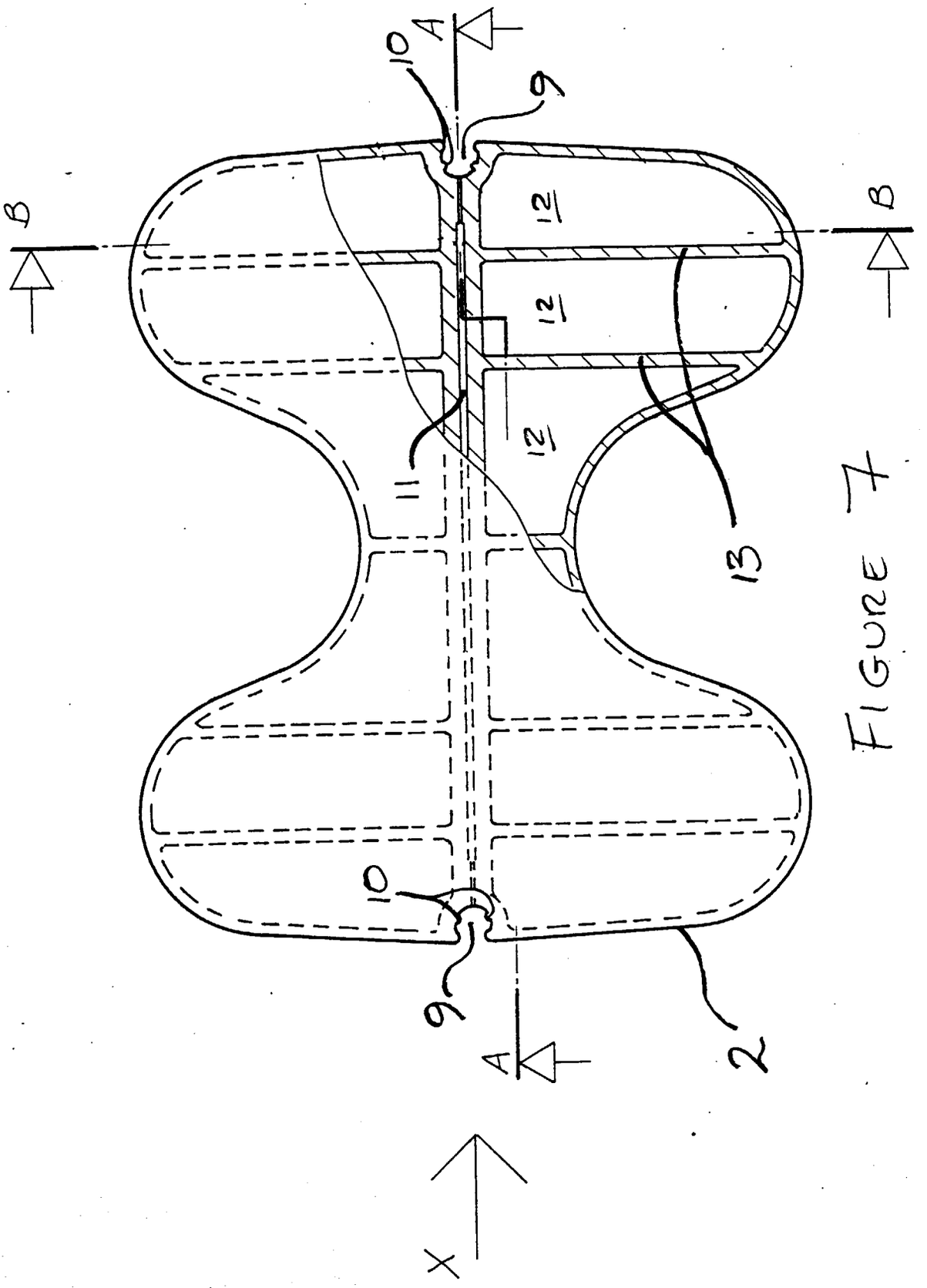

FIGURE 7

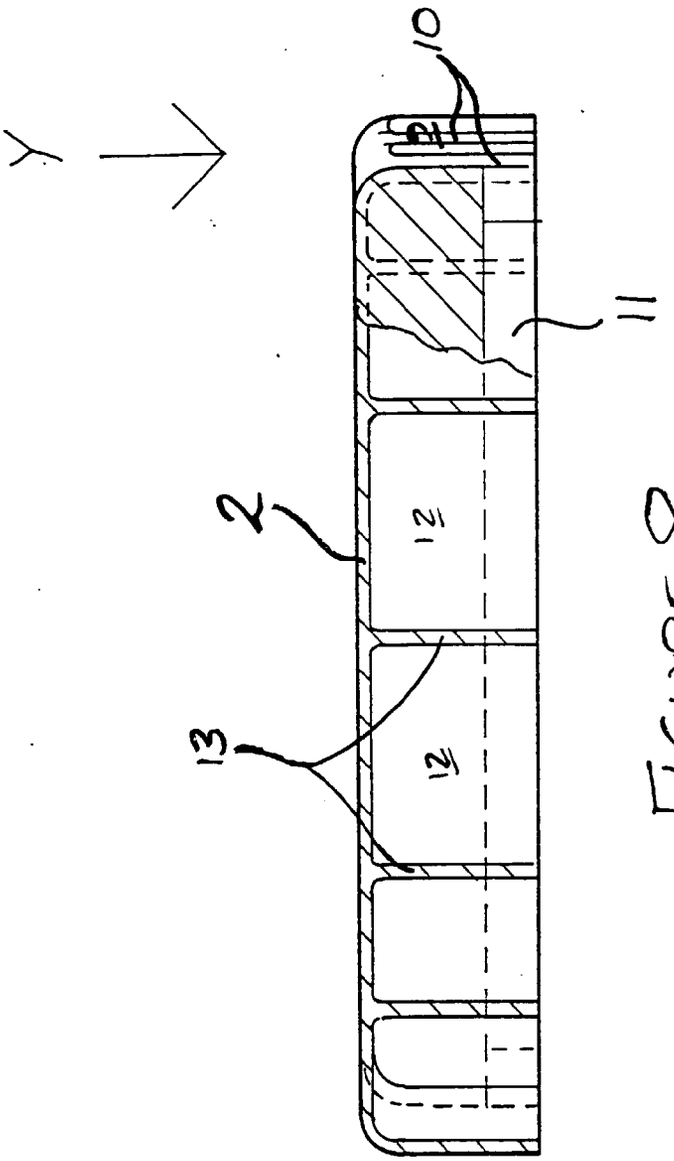

FIGURE 8

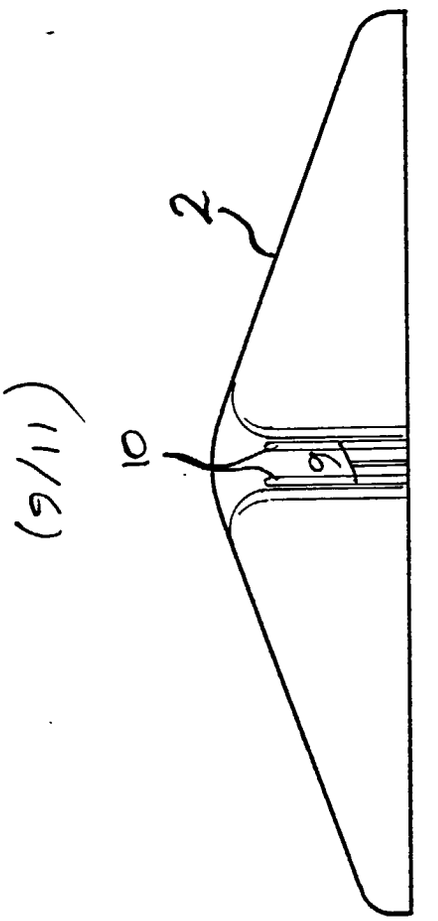

FIGURE 9A

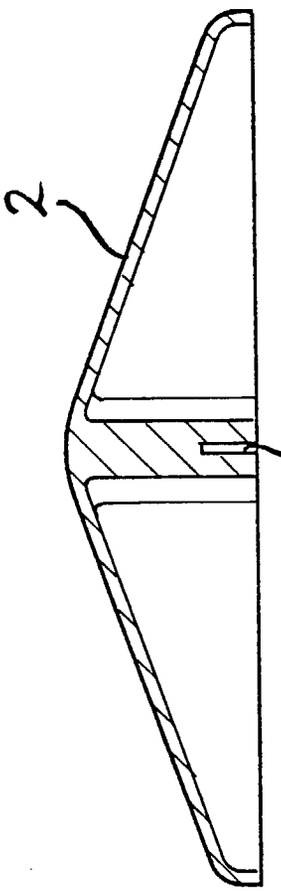

FIGURE 9B

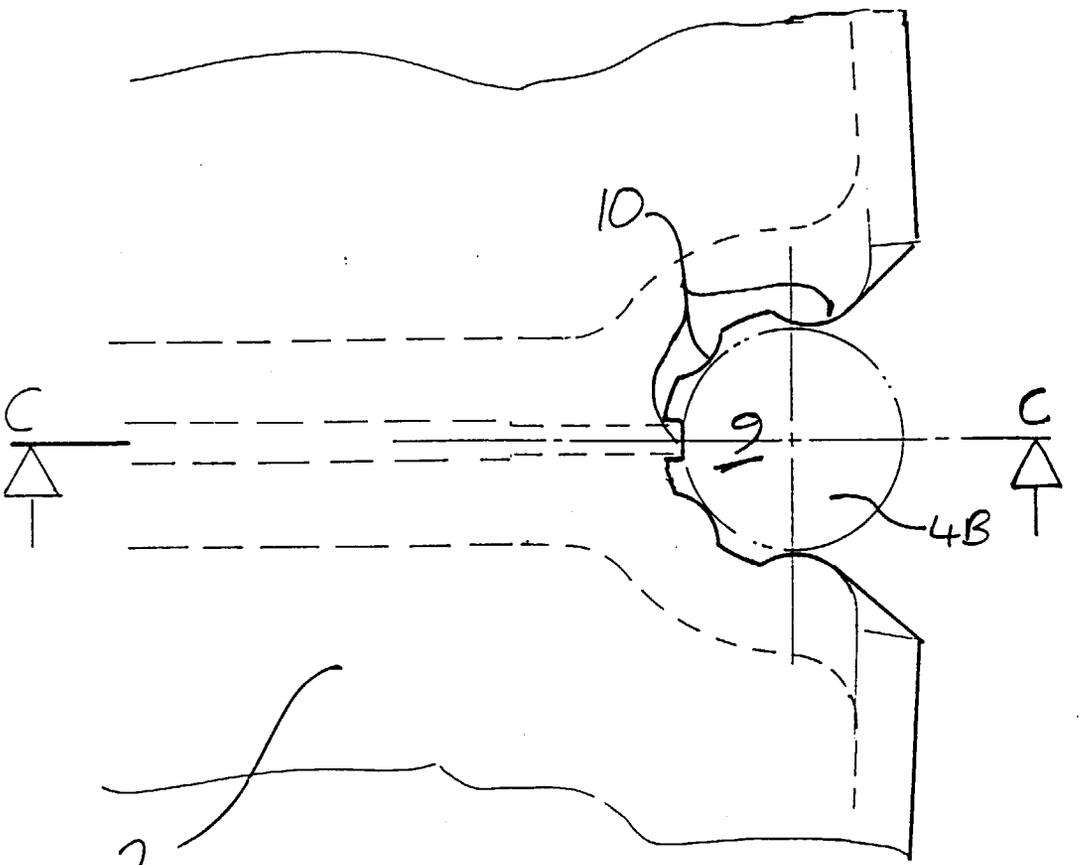

FIGURE 10

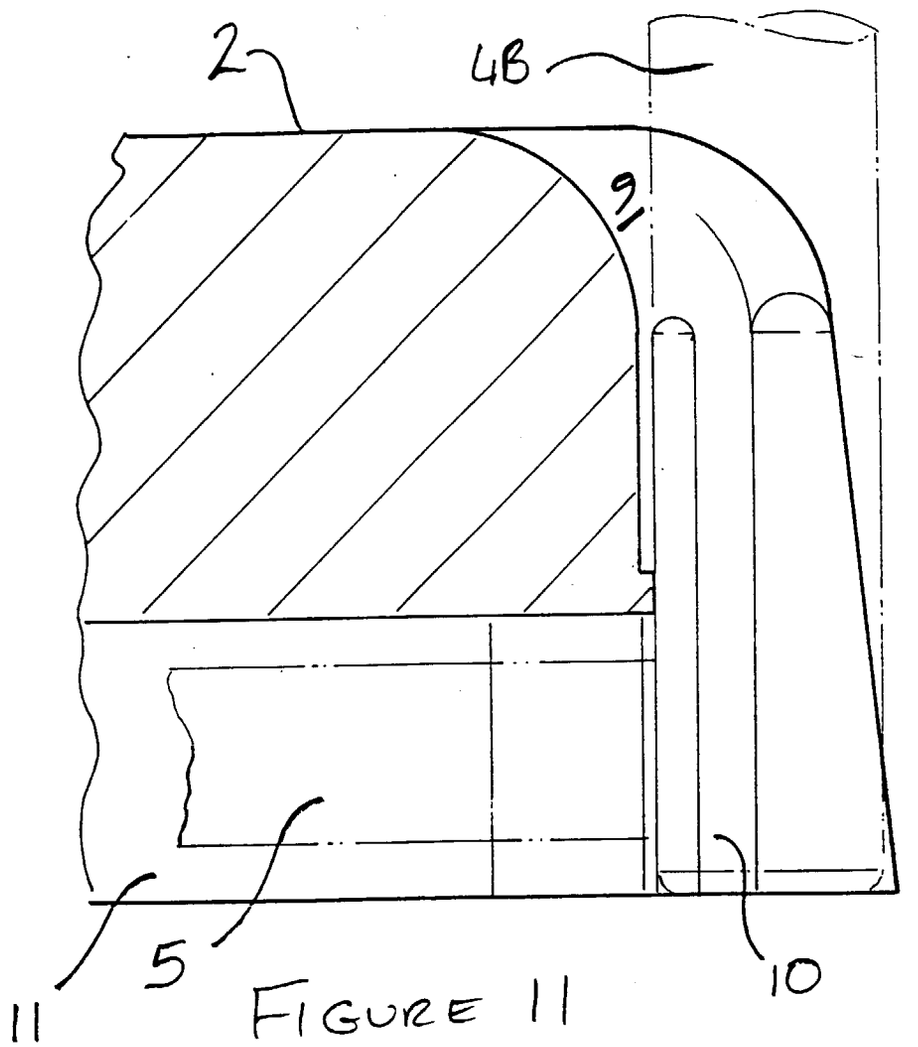

FIGURE 11

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 97 30 3486

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X Y	WO 90 11591 A (EDWARDS PLC) 4 October 1990 * the whole document *	1-4,6 8,9	G09F15/00 E01F9/012
Y	WO 96 11461 A (A. SMINK) 18 April 1996 * the whole document *	8,9	
A	WO 92 09225 A (EGEBERDG REKLAMEBUREAU) 11 June 1992 * the whole document *	1-12	
D,A	WO 90 11590 A (EDWARDS PLC) 4 October 1990 * the whole document *	1-12	

TECHNICAL FIELDS SEARCHED (Int.Cl.6)

G09F
E01F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	30 July 1997	Gallo, G

CATEGORY OF CITED DOCUMENTS

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