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(54) **Sign stand**

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(56) References cited:
WO-A-90/11590 WO-A-90/11591
WO-A-92/09225 WO-A-96/11461

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Description

Field of the Invention

[0001] 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

[0002] 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.

[0003] 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.

[0004] A sign stand of relatively simple construction is described in UK patent application number 89 06194.9 and subsequent International Patent application number PCT/GB90/00399 (A C EDWARDS PLC).

[0005] 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.

[0006] 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.

[0007] 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.

[0008] Furthermore the cambered base unit is liable to theft since, on removal of the display panel, the base makes a convenient skateboard ramp!

[0009] WO 90/11591 describes a display stand as specified in the pre-characterising portion of claim 1.

[0010] It is thus an object of the present invention to provide a sign stand which seeks to alleviate these problems

Summary of the Invention

[0011] According to the present invention, there is provided a sign stand as claimed in claim 1.

[0012] An example of a sign stand comprises:-

(i) a sign supporting frame member (3) adapted in use to support a display panel (6), the frame member (3) being adapted to surround at least part of the perimeter of the display panel (6);

(ii) a base unit (2) incorporating frame gripping recesses (9), wherein said base unit and said frame member are initially disparate units adapted to be assembled into said sign stand and wherein the arrangement is such that, when assembled, the base unit does not substantially protrude outside the profile of said frame member, the profile being seen in a direction normal to the display panel;

characterised in that the frame member gripping recesses incorporate a plurality of protrusions (10) adapted to support said frame member (3) in use and to reduce the tendency of the frame member (3) to slide within the frame member gripping recess (9).

[0013] In an example, 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.

[0014] 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.

[0015] In an example, said cross-member is continuous so as to join opposing limbs of said frame member. Alternatively, said cross-member is discontinuous.

[0016] In another example, 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.

[0017] Ideally, said base unit is shaped so as to facilitate carriage of said assembled sign stand. For example, this is achieved by the provision of a waited plan form, having no sharp corners.

[0018] In another example, 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.

[0019] 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.

[0020] 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

[0021] In the accompanying drawings:

Figure 1 is a front view of a sign stand (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

[0022] 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.

[0023] 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 coaxial members (preferably of equal length) projecting inwardly toward one another from each of limbs 4A and 4B.

[0024] The parallel limbs 4A and 4B, the top member 4C and cross-member 5 define the perimeter of frame member 3.

[0025] 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.

[0026] 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.

[0027] Base unit 2 is moulded from recycled plasti-

cised 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.

[0028] 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.

[0029] 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.

[0030] 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.

[0031] 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.

[0032] 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.

[0033] 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 fac-

tors ensuring that the display panel 6 does not obstruct the customer's vision as he/she transports the sign stand.

[0034] Figures 7-11 show base unit 2 in greater detail.

[0035] 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.

[0036] The ridges or protrusions 10 reduce the tendency of frame member 3 to slide within frame-member-gripping recesses 9.

[0037] 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.

[0038] 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.

[0039] This design is thus a deterrent to would-be thieves and the base unit shape is not attractive to would-be skateboarders.

[0040] 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.

[0041] 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 (1) comprising:-

- (i) a sign supporting frame member (3) adapted in use to support a display panel (6), the frame member (3) being adapted to surround at least part of the perimeter of the display panel (6);
- (ii) a base unit (2) incorporating frame gripping recesses (9), wherein said base unit and said frame member are initially disparate units adapted to be assembled into said sign stand

and wherein the arrangement is such that, when assembled, the base unit does not substantially protrude outside the profile of said frame member, the profile being seen in a direction normal to the display panel;

characterised in that the frame member gripping recesses incorporate a plurality of protrusions (10) adapted to support said frame member (3) in use and to reduce the tendency of the frame member (3) to slide within the frame member gripping recess (9).

2. A sign stand (1) as claimed in Claim 1 wherein said base unit (2) and said frame member (3) 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 (1) in its assembled form.
3. A sign stand as claimed in Claim 1 or Claim 2 wherein said sign-supporting frame member (3) is provided with a cross-member (5) and the ground-engaging surface of said base unit (2) is provided with a channel (11) suitable for receiving said cross-member (5).
4. A sign stand (1) as claimed in Claim 3 wherein said cross-member (5) is continuous so as to join opposing limbs (4A, 4B) of said frame member (3).
5. A sign stand as claimed in Claim 3 wherein said cross-member (5) comprises two members which project toward and are spaced apart from one another.
6. A sign stand as claimed in any of the preceding claims wherein the cross-sectional shape of said frame member (3) is selected so as to provide a comfortable carrying means for the assembled sign stand (1).
7. A sign stand (1) as claimed in any of the preceding claims wherein said frame member (3) is of circular cross-section.
8. A sign stand (1) as claimed in any of the preceding claims wherein said base unit (2) is shaped so as to facilitate carriage of said assembled sign stand.
9. A sign stand (1) as claimed in Claim 8 wherein said base unit (2) is provided with a waisted plan form, having no sharp corners.
10. A sign stand (1) as claimed in any of claims 3-9 wherein said recesses (9) are arranged to hold, in use, the frame-member (3) in the vicinity of each limb-cross-member junction.

11. A sign stand (1) as claimed in any preceding claim wherein said protrusions (10) are in the form of ridges.
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.
13. A sign stand as claimed in any preceding claim wherein said protrusions (10) are arranged so as to aid the drainage of liquid from the frame member (3) in use.

Patentansprüche

1. Schilderstände (1), der folgendes umfaßt:

(i) ein ein Schild tragendes Rahmenelement (3), das dafür geeignet ist, bei Anwendung eine Sichttafel (6) zu tragen, wobei das Rahmenelement (3) dafür geeignet ist, wenigstens einen Teil des Umfangs der Sichttafel (6) zu umschließen,

(ii) eine Basiseinheit (2), in die Rahmen-Einspannaussparungen (9) einbezogen sind, bei dem die Basiseinheit und das Rahmenelement anfangs getrennte Einheiten sind, die dafür geeignet sind, zu dem Schilderstände montiert zu werden, und bei dem die Anordnung so erfolgt, daß die Basiseinheit im montierten Zustand nicht wesentlich über das Profil des Rahmenelements nach außen vorsteht, wobei das Profil in einer Richtung senkrecht zur Sichttafel verläuft,

dadurch gekennzeichnet, daß die Rahmenelement-Einspannaussparungen eine Vielzahl von Vorwölbungen (10) einschließen, die dafür geeignet sind, das Rahmenelement (3) bei Anwendung zu tragen und die Tendenz des Rahmenelements (3) zu verringern, innerhalb der Rahmenelement-Einspannaussparungen (9) zu gleiten.

2. Schilderstände (1) nach Anspruch 1, bei dem die Basiseinheit (2) und das Rahmenelement (3) zu einem Schilderstände montiert werden können, ohne daß irgendwelche Werkzeuge notwendig sind, um die Montage zu unterstützen und/oder auszuführen, oder Befestigungen (beispielsweise Schrauben), um den Schilderstände (1) in seiner montierten Form zu fixieren.
3. Schilderstände (1) nach Anspruch 1 oder Anspruch 2, bei dem das ein Schild tragende Rahmenelement (3) mit einem Querelement (5) versehen ist, und die mit dem Erdboden zusammenwirkende

Oberfläche der Basiseinheit (2) mit einer Nut (11) versehen ist, die das Querelement (5) aufnehmen kann.

4. Schilderstände (1) nach Anspruch 3, bei dem das Querelement (5) durchgängig ist, um so gegenüberliegende Schenkel (4A, 4B) des Rahmenelements (3) zu verbinden.
5. Schilderstände (1) nach Anspruch 3, bei dem das Querelement (5) zwei Elemente aufweist, die gegeneinander vorstehen und mit Zwischenraum zueinander angeordnet sind.
6. Schilderstände nach einem der vorhergehenden Ansprüche, bei dem die Querschnittform des Rahmenelements (3) so gewählt wird, daß sie bequeme Transportmittel für den montierten Schilderstände (1) bereitstellen.
7. Schilderstände (1) nach einem der vorhergehenden Ansprüche, bei dem das Rahmenelement (3) einen runden Querschnitt hat.
8. Schilderstände (1) nach einem der vorhergehenden Ansprüche, bei dem die Basiseinheit (2) so geformt ist, daß sie den Transport des montierten Schilderständers erleichtert.
9. Schilderstände (1) nach Anspruch 8, bei dem die Basiseinheit (2) mit einer eingebuchteten Grundform versehen ist, die keine scharfen Ecken hat.
10. Schilderstände (1) nach einem der Ansprüche 3 bis 9, bei dem die Aussparungen (9) so angeordnet sind, daß sie bei Anwendung das Rahmenelement (3) in der Nähe jeder Verbindungsstelle von Schenkel und Querelement halten.
11. Schilderstände (1) nach einem der vorhergehenden Ansprüche, bei dem die Vorwölbungen (10) die Form von Riefen haben.
12. Schilderstände nach einem der vorhergehenden Ansprüche, bei dem der Schilderstände montagefertig in Form einer sogenannten "Flachpackung" geliefert wird.
13. Schilderstände nach einem der vorhergehenden Ansprüche, bei dem die Vorwölbungen (10) so angeordnet sind, daß sie bei Anwendung die Ableitung von Flüssigkeit aus dem Rahmenelement (3) unterstützen.

Revendications

1. Support pour panneau (1), comprenant:

- (i) un élément de cadre de support du panneau (3) destiné à supporter en service un panneau d'affichage (6), l'élément de cadre (3) étant destiné à entourer au moins une partie du périmètre du panneau d'affichage (6);
- (ii) une unité de base (2) comprenant des évidements de préhension du cadre (9), ladite unité de base et ledit élément de cadre constituant initialement des unités disparates destinées à être assemblées dans ledit support pour panneau, l'agencement étant tel qu'après l'assemblage, l'unité de base ne déborde pas notablement vers l'extérieur du profil dudit élément de cadre, le profil étant vu dans une direction perpendiculaire au panneau d'affichage;
- caractérisé en ce que les évidements de préhension de l'élément de cadre comprennent plusieurs saillies (10), destinées à supporter en service ledit élément de cadre (3) et à réduire la tendance de l'élément de cadre (3) à glisser dans les évidements de préhension de l'élément de cadre (9).
2. Support pour panneau (1) selon la revendication 1, dans lequel ladite unité de base (2) et ledit élément de cadre (3) sont assemblés dans ledit support pour panneau sans exiger l'utilisation d'outils pour faciliter et/ou réaliser l'assemblage ou d'éléments de fixation (par exemple des vis) pour fixer ledit support pour panneau (1) dans sa forme assemblée.
 3. Support pour panneau (1) selon les revendications 1 ou 2, dans lequel ledit élément de cadre de support du panneau (3) comporte une traverse (5), la surface de ladite unité de base (2) venant en contact avec le sol comportant un canal (11) destiné à recevoir ladite traverse (5).
 4. Support pour panneau (1) selon la revendication 3, dans lequel ladite traverse (5) est continue, de sorte à relier les membres opposés (4A, 4B) dudit élément de cadre (3).
 5. Support pour panneau (1) selon la revendication 3, dans lequel ladite traverse (5) comprend deux éléments débordant l'un vers l'autre et espacés l'un de l'autre.
 6. Support pour panneau (1) selon l'une quelconque des revendications précédentes, dans lequel la forme de section transversale dudit élément de cadre (3) est sélectionnée de sorte à fournir un moyen de transport pratique du support pour panneau assemblé (1).
 7. Support pour panneau (1) selon l'une quelconque des revendications précédentes, dans lequel ledit élément de cadre (3) a une section transversale circulaire.
 8. Support pour panneau (1) selon l'une quelconque des revendications précédentes, dans lequel ladite unité de base (2) est formée de sorte à faciliter le transport dudit support pour panneau assemblé.
 9. Support pour panneau (1) selon la revendication 8, dans lequel ladite unité de base (2) comporte une forme plane étranglée, ne comportant pas d'angles aigus.
 10. Support pour panneau (1) selon l'une quelconque des revendications 3 à 9, dans lequel lesdits évidements (9) sont agencés de sorte à retenir en service l'élément de cadre (3) au voisinage de chaque jonction entre un membre et la traverse.
 11. Support pour panneau (1) selon l'une quelconque des revendications précédentes, dans lequel lesdites saillies (10) ont la forme de nervures.
 12. Support pour panneau (1) selon l'une quelconque des revendications précédentes, dans lequel ledit support pour panneau est fourni sous une forme dite en "boîtier plat", prêt à l'assemblage.
 13. Support pour panneau selon l'une quelconque des revendications précédentes, dans lequel lesdites saillies (10) sont agencées de sorte à faciliter en service le drainage de liquide de l'élément de cadre (3).

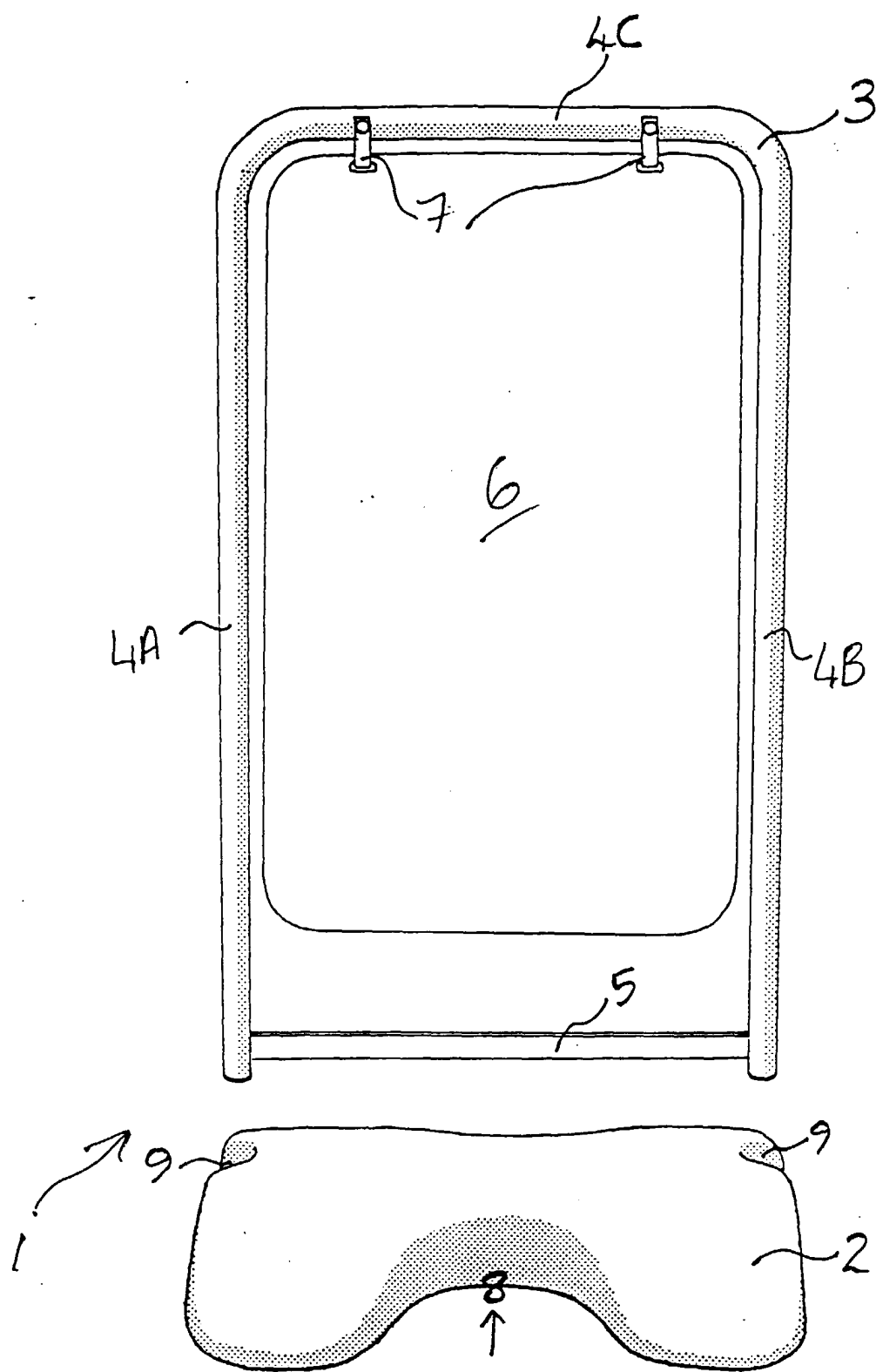
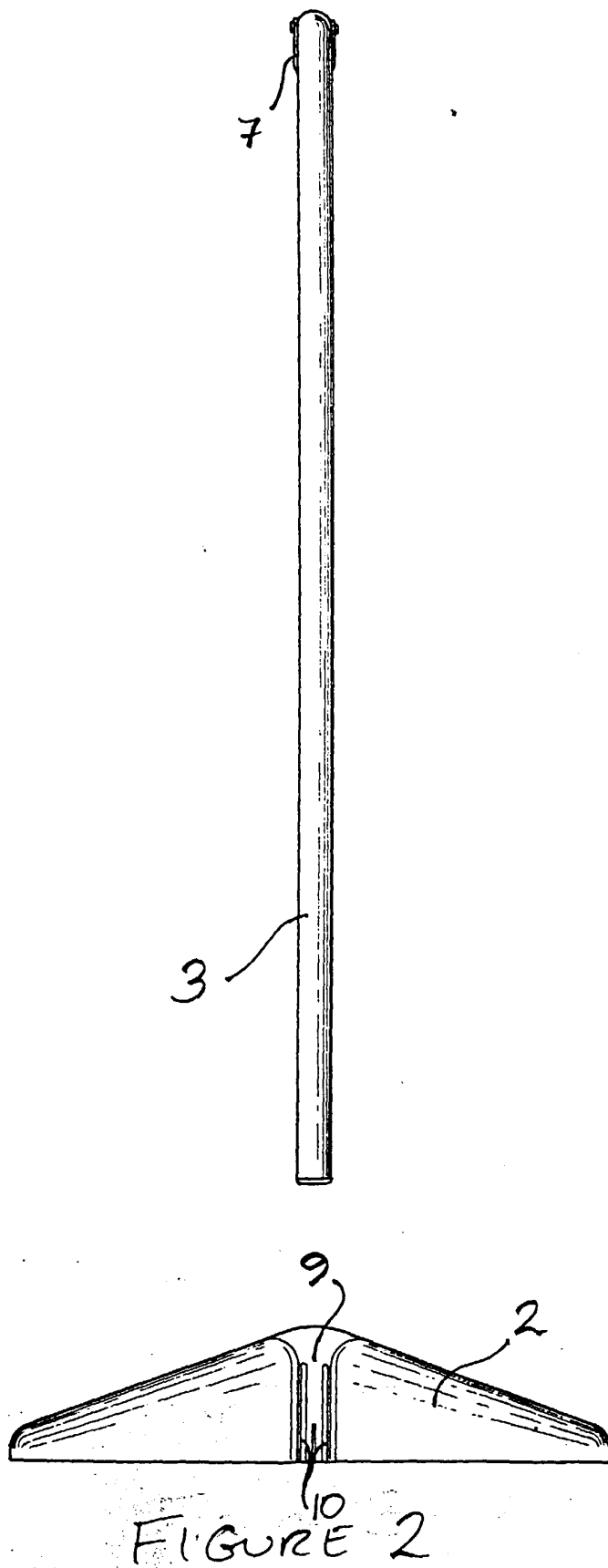


FIGURE 1



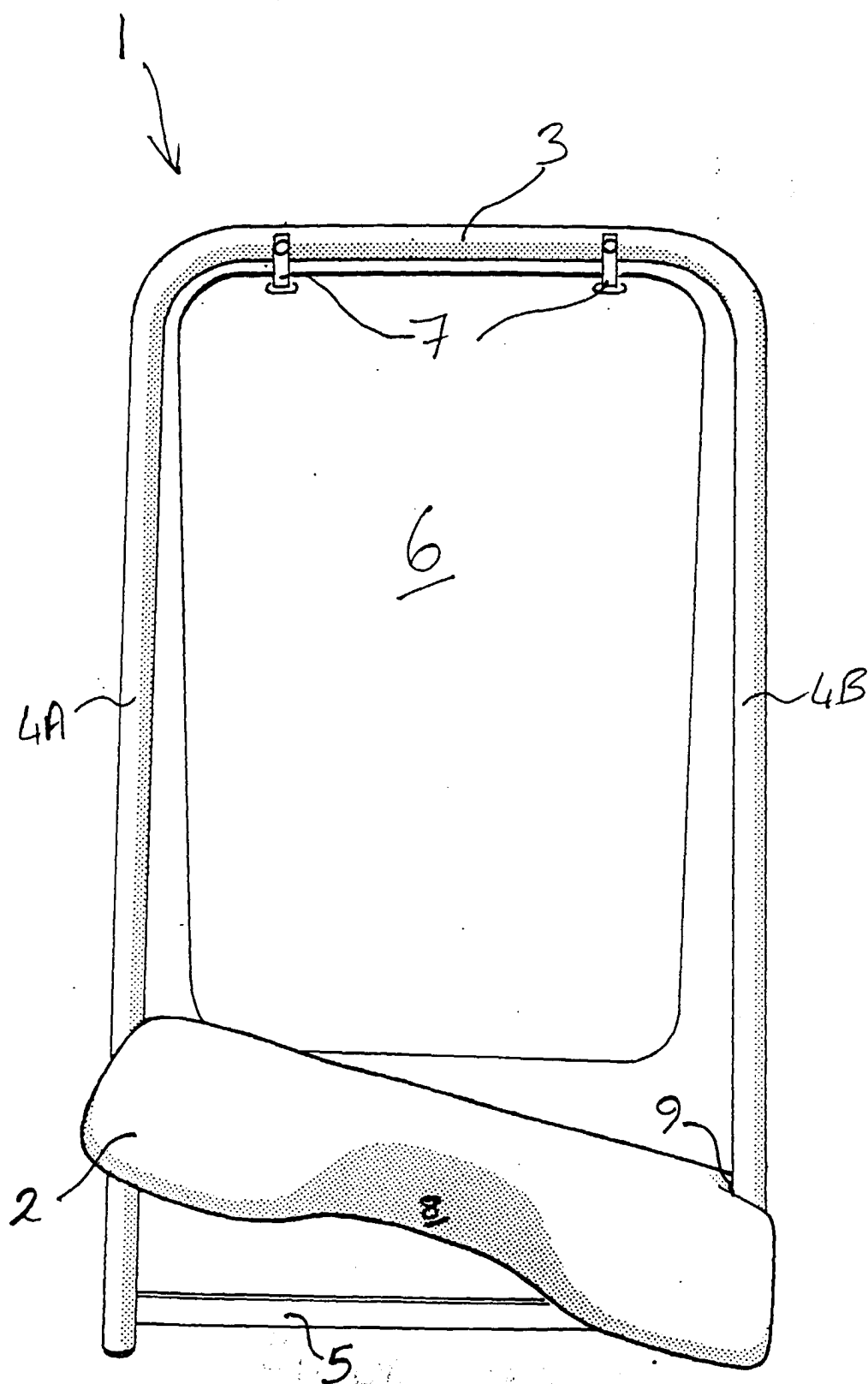


FIGURE 3

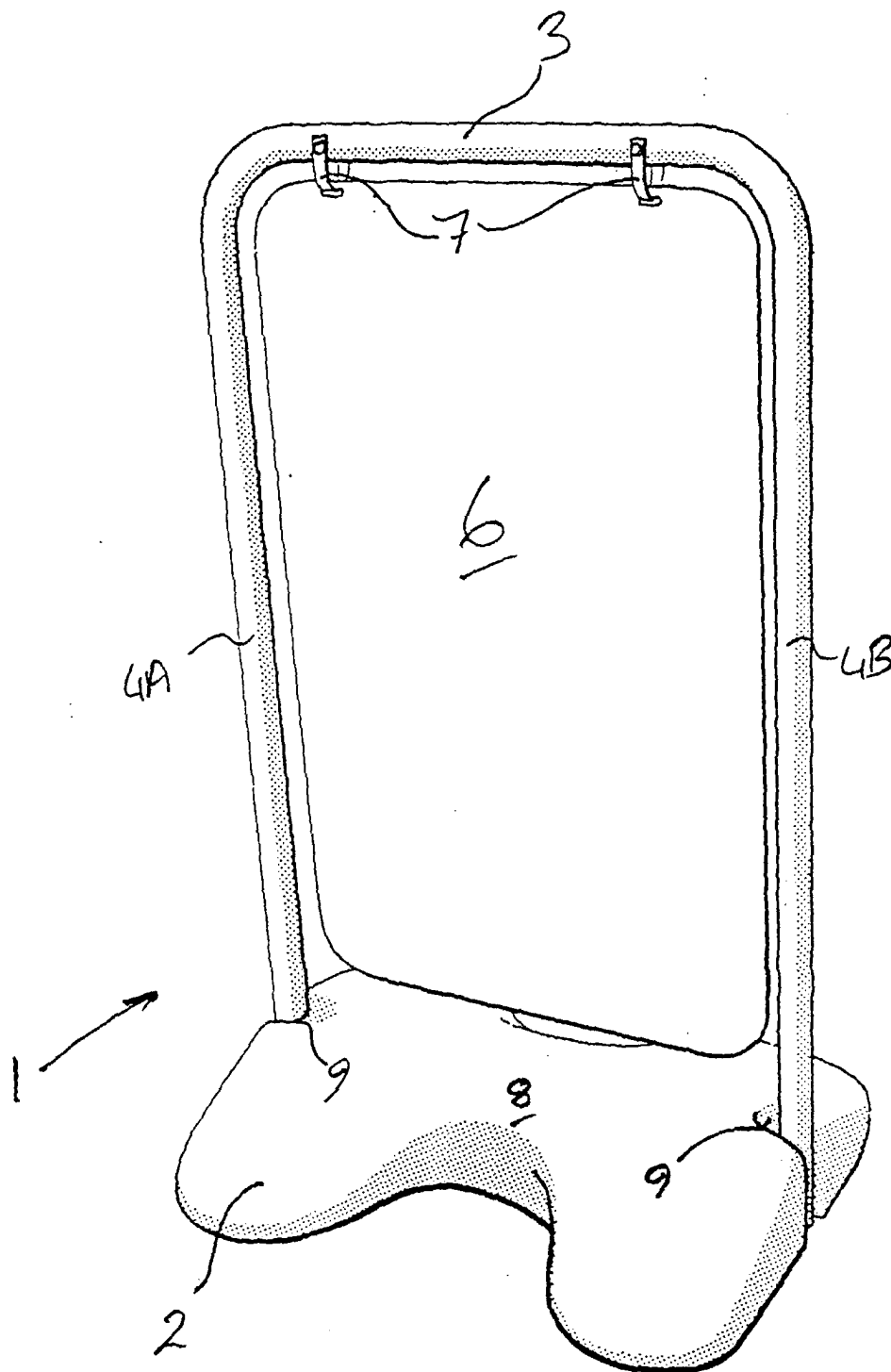


FIGURE 4

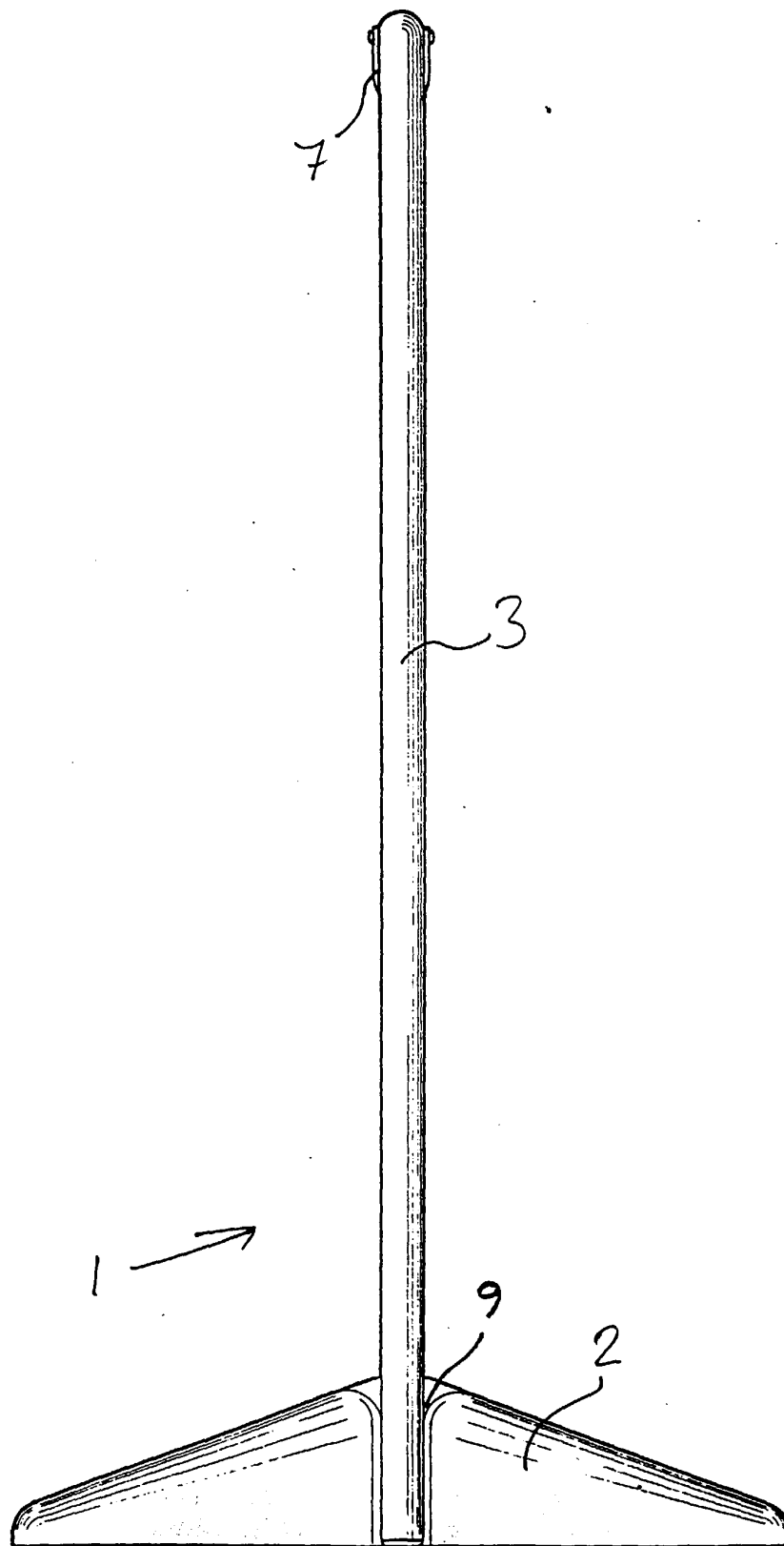


FIGURE 5

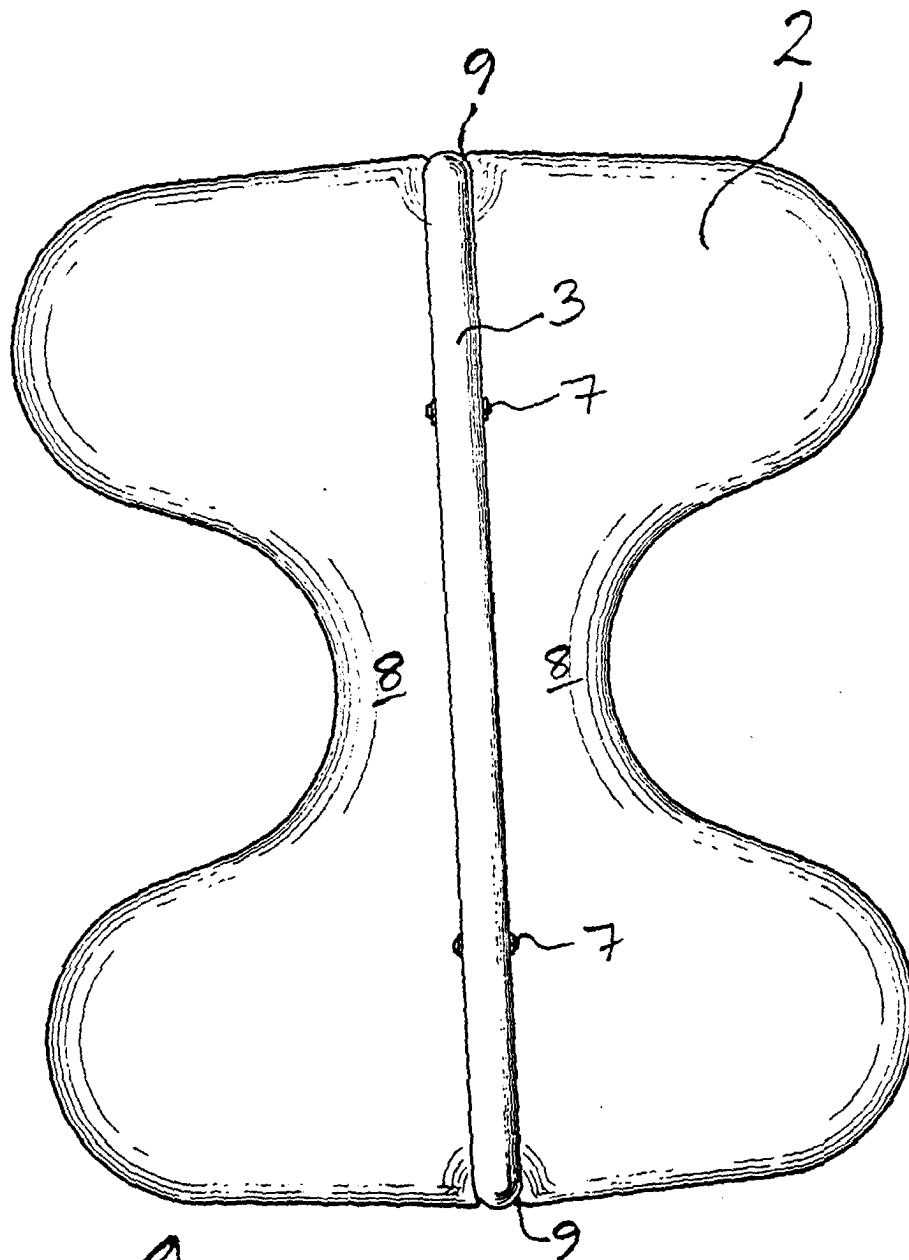


FIGURE 6

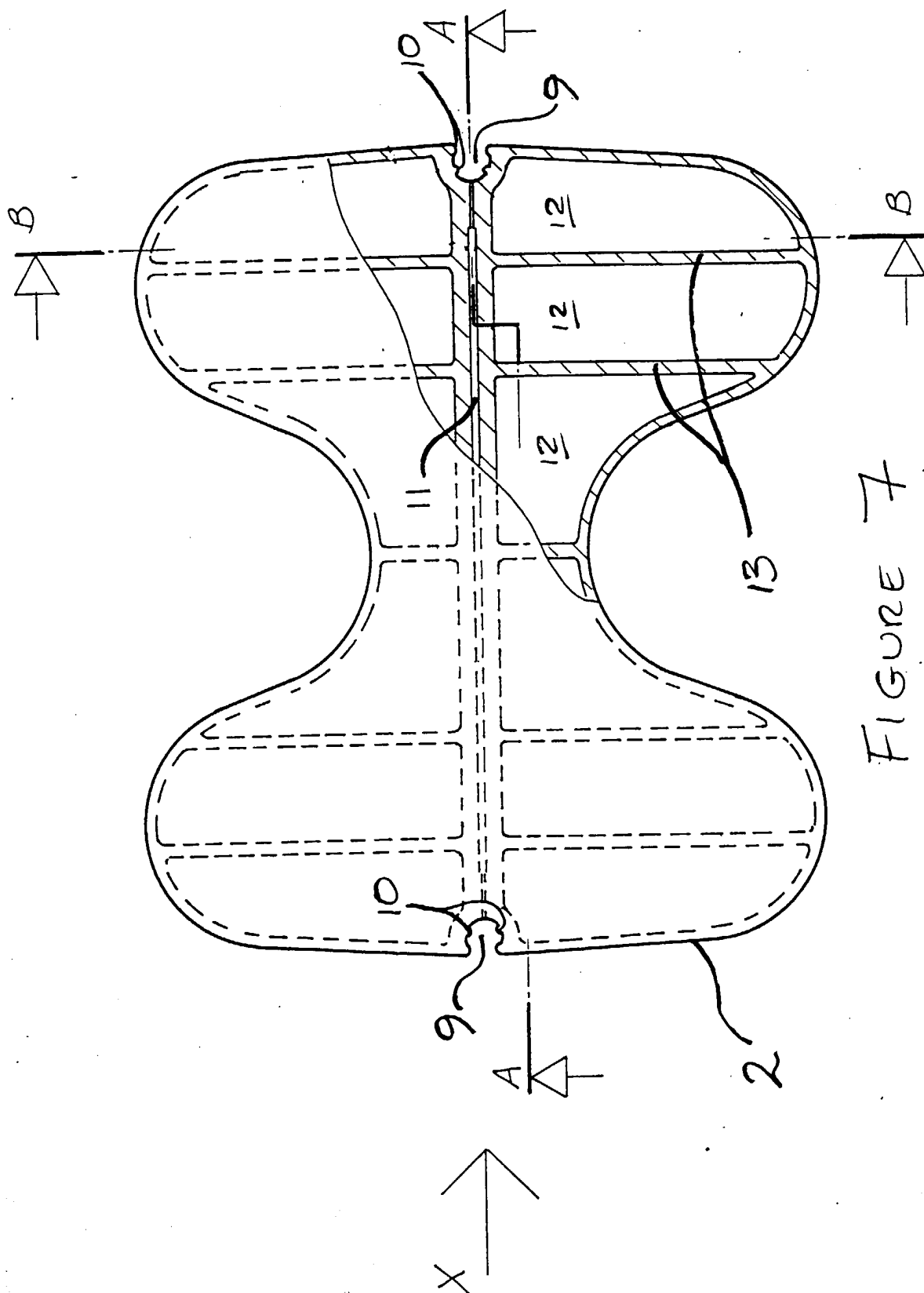


Figure 7

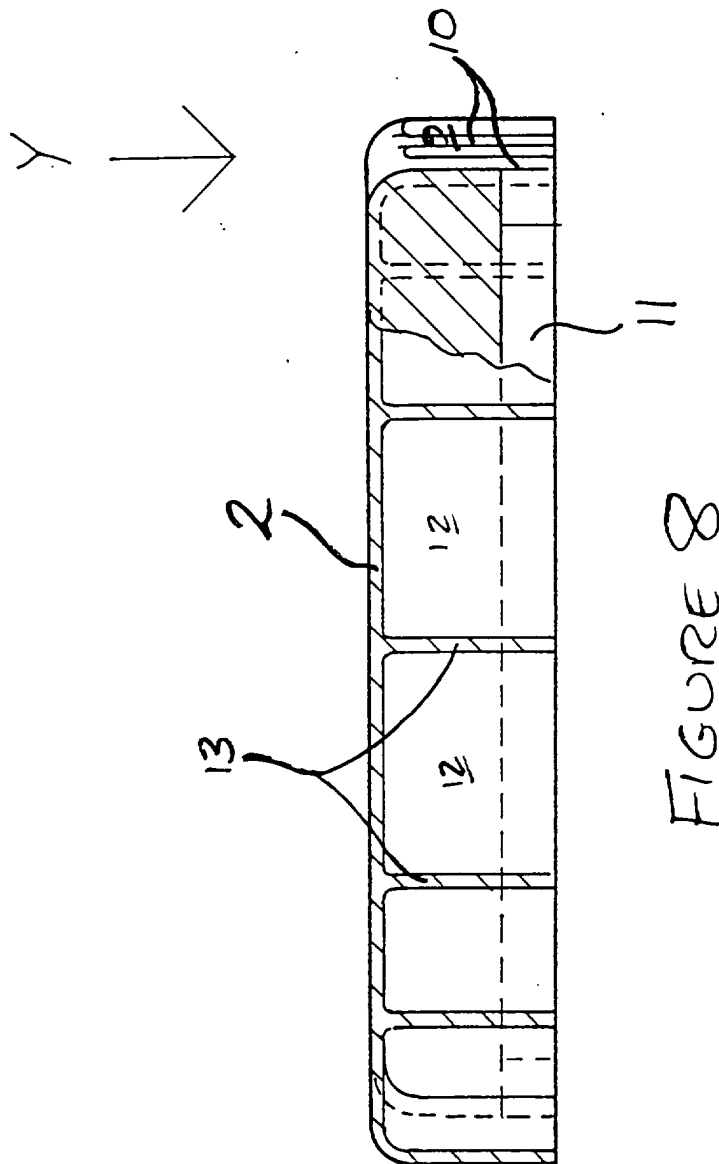


FIGURE 8

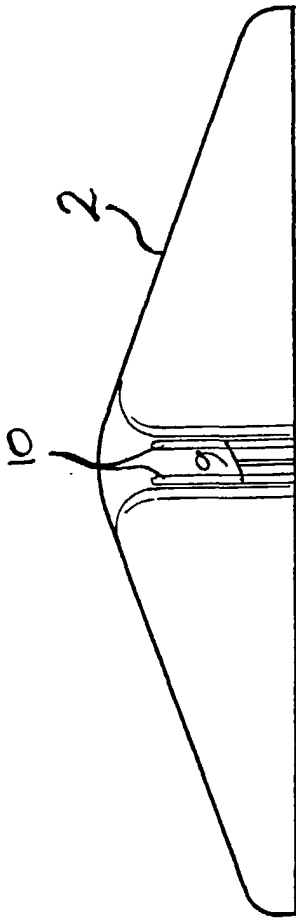


FIGURE 9A

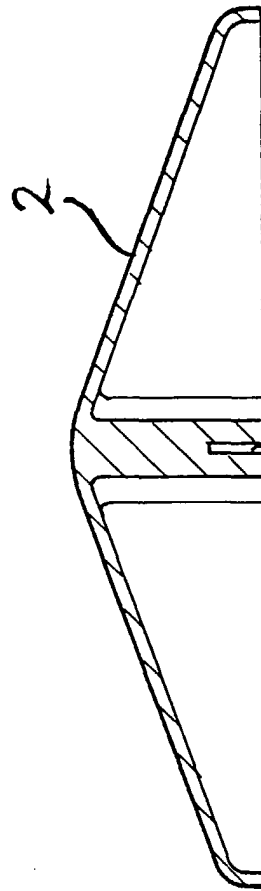
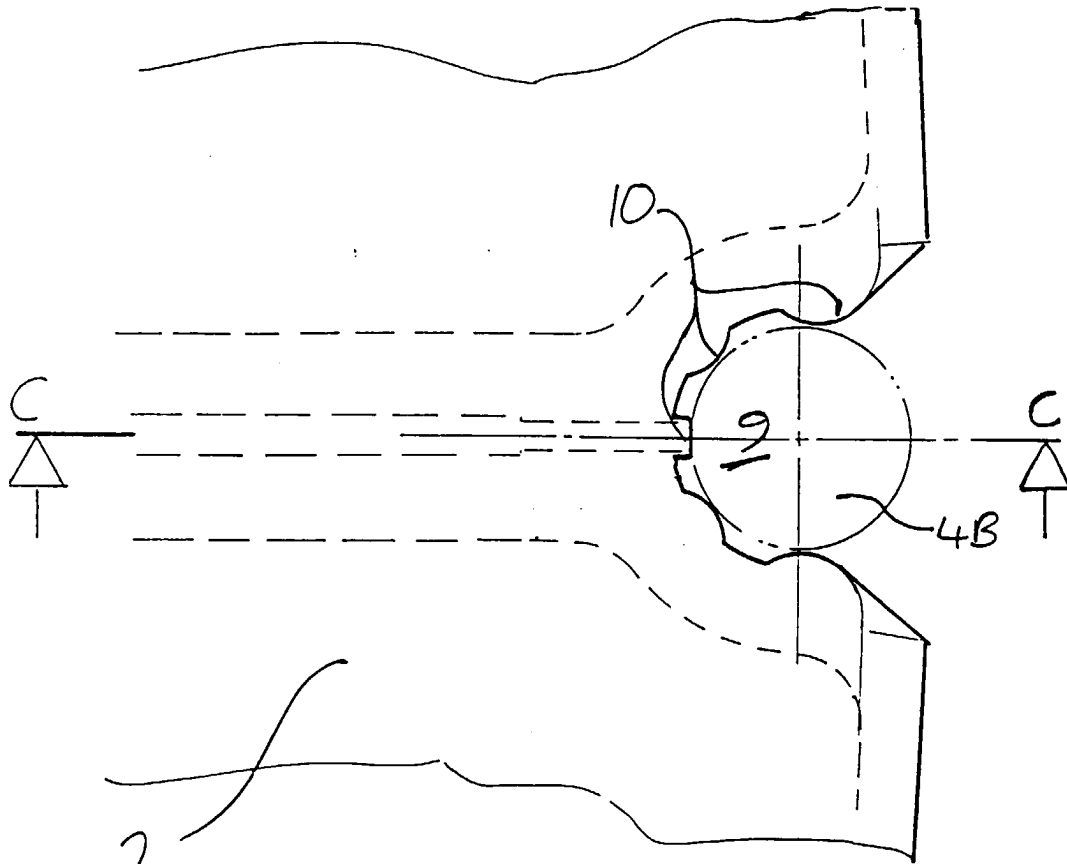


FIGURE 9B



2 FIGURE 10

