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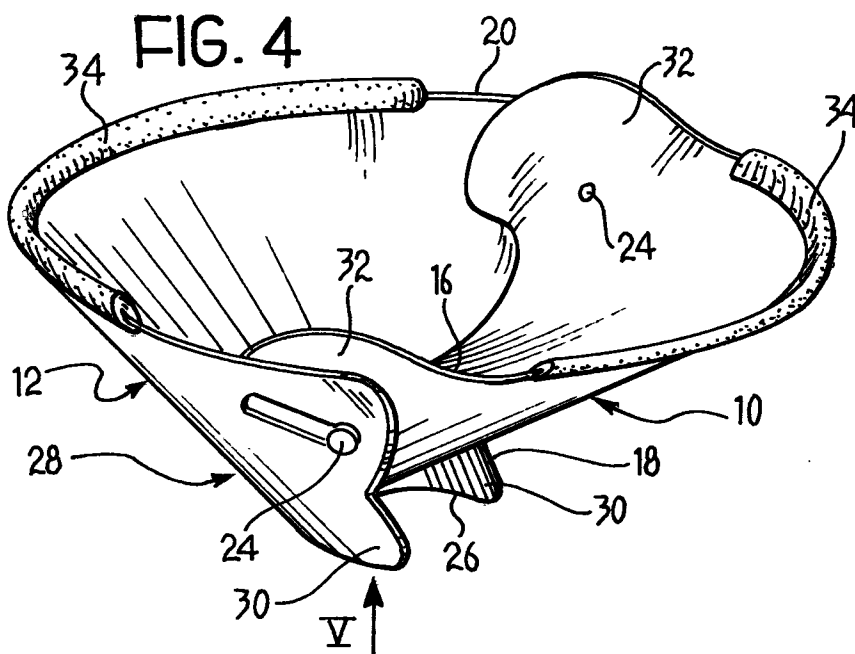
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(54) **A folding cup**

(57) The folding cup is of the type comprising two leaves (10, 12) of thin, resiliently-deformable, sheet material. A radially inner edge (18) of an outer leaf (12) has a recess (26) designed in a manner such that, when the cup is in the condition of use, the recess defines a foot (28) for supporting the cup in an upright position. The inner leaf (10) of the cup advantageously has

respective lugs (32) constituting gripping handles on its diametrically-opposed ends. The radially outer edge (16, 20) of at least one of the leaves (10, 12) constituting the rim of the cup is also advantageously enclosed by a covering lip-rest (34) of plastics material.



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Description

[0001] The present invention relates to a folding cup of the type comprising two leaves of thin, resiliently-deformable sheet material, each substantially half-moon-shaped in plan and having opposed edges both of which are generally arcuate and convex, in which the two leaves are interconnected, towards the two ends of their half-moon shape, by a pair of pins fixed to one of the leaves and slidable in corresponding slots of the other leaf, the arrangement being such that the two leaves can adopt a rest configuration in which they are fitted flat against one another and a deformed configuration of use in which they constitute a substantially conical vessel in which a radially inner arcuate edge of an inner leaf of the vessel is kept resiliently in leaktight contact with the surface inside the cone of an outer leaf of the vessel.

[0002] Cups of this type, which have been known for more than half a century, are intended in particular, for use by mountaineers or hikers or by any person who wishes to carry a cup conveniently, by virtue of its flattened shape, in a pocket, in order then to unfold the cup, giving it the shape of a vessel in order to quench his thirst at a fountain or a spring along the way.

[0003] An example of a cup of this type is given by the document IT-U-204 876 which relates to special rivets constituting the pins connecting the two leaves.

[0004] All folding cups of the type in question have the disadvantage that they cannot be put down in an upright position on a supporting surface since they do not have feet.

[0005] A first object of the invention is to provide a folding cup of the type in question which can be put on a horizontal surface in the deformed condition of use without the cup leaning over and spilling its contents.

[0006] According to the invention, this object is achieved by means of a folding cup of the type in question, characterized in that the radially inner edge of the outer leaf has, in a central region, a profile designed so as to define, in the deformed configuration of use, at least three non-aligned regions lying in a plane substantially perpendicular to the axis of the cone and situated on the opposite side of the tip of the cone to that on which the vessel is disposed, and in that this profile is substantially centered relative to the projection of the centre of gravity of the cup in this plane.

[0007] By virtue of this concept, the profile of the central region of the outer leaf of the cup constitutes a supporting foot which prevents the cup from leaning over and spilling its contents when it is put on a horizontal surface.

[0008] In order to quench one's thirst with a folding cup of known type, it is necessary to grasp the rim of the cup between the thumb and the index finger of one hand or of both hands, inevitably dipping one's thumb in the water contained in the cup, with consequent problems of hygiene, considering that a hiker's hands are

not always clean.

[0009] Another object of the invention is to provide a cup which can be gripped, in order to drink therefrom, without dipping one's thumb or thumbs in the water contained therein.

[0010] According to the invention, this object is achieved by means of a folding cup, characterized in that the ends of the substantially half-moon-like shape of the inner leaf are shaped in a manner such that, in the configuration of use, they constitute lugs projecting from the rim of the cup in diametrically opposed positions in order to act as gripping handles.

[0011] Folding cups according to the prior art are formed with leaves made of thin stainless-steel sheet.

[0012] The sheet steel used may have a thickness of a few tenths of a millimeter.

[0013] Since the leaves are produced by blanking, their edges which, in the condition of use, constitute the rim of the cup, are quite sharp and are thus troublesome to the person drinking from the cup.

[0014] Another object of the invention is to provide a folding cup of the type in question which does not have this disadvantage.

[0015] According to the invention, this further object is achieved by means of a folding cup, characterized in that the radially outer edge of at least one of the leaves is enclosed by a lip-rest covering of plastics material.

[0016] Further characteristics of the invention will become clearer from a reading of the following detailed description, given with reference to the appended drawings, provided by way of non-limiting example, in which:

Figure 1 is a plan view of a folding cup according to the invention in the flattened, rest condition,

Figures 2 and 3 are half plan views of the two leaves constituting the cup of Figure 1, in which it is intended that the other half which is not shown is a mirror image of that shown,

Figure 4 is a perspective view of the cup of Figure 1 in the deformed configuration of use,

Figure 5 is a view from below, as indicated by the arrow V of Figure 4, and

Figure 6 is a partial section taken in either of the planes indicated VI-VI of Figure 1, on an enlarged scale.

[0017] With reference to Figures 1 to 5, a folding cup comprises two leaves, generally indicated 10 and 12, respectively.

[0018] For the reasons which will be explained below, the leaf 10 will be called the "inner leaf" and the leaf 12 will be called the "outer leaf".

[0019] The two leaves 10, 12 are preferably made of blanked stainless steel sheet but could also be made of

any other suitable thin, resiliently-deformable sheet material, such as a plastics material suitable for foods.

[0020] Both leaves 10, 12 have, amongst other things, generally opposed edges both of which are arcuate and convex.

[0021] In particular, the inner leaf 10 has an arcuate, radially inner edge 14 and an arcuate radially outer edge 16; the outer leaf 12 in turn has a radially inner arcuate edge 18 and a radially outer arcuate edge 20.

[0022] Further details of the shapes of the profiles of the leaves 10 and 12 will be referred to below.

[0023] For now it will suffice to say that the outer leaf 12 has a respective slot 22 towards each end of its half-moon shape, in known manner; the inner leaf 10, for its part, has respective pins 24 fixed to the leaf in positions corresponding to those of the slots 22, in the form of rivets slidable in the slots 22.

[0024] The arrangement is such that the two leaves 10 and 12 can adopt a rest configuration (Figure 1) in which they are fitted flat against one another, and a deformed configuration of use (Figures 4 and 5) in which they constitute a substantially conical vessel, in known manner. In this vessel configuration, the radially inner arcuate edge 14 (Figure 5) of the leaf 10 which is on the inside of the vessel is kept resiliently in leaktight contact with the surface inside the cone of the leaf 12 which is on the outside of the vessel.

[0025] According to the invention, the central region of the arcuate profile of the radially inner edge 18 of the outer leaf 12 is designed as a recess 26 which is substantially V-shaped with a rounded vertex. This recess 26 is designed in a manner such that, in the configuration of use shown in Figures 4 and 5, it lies entirely in a plane substantially perpendicular to the axis of the cone of the vessel and situated on the opposite side of the tip of the cone to that on which the vessel is disposed. This profile defined by the recess 26 is substantially centered relative to the projection of the centre of gravity of the cup in this plane.

[0026] When the cup is in the configuration of use, a type of support foot, indicated 28 in Figure 4, is thus produced, enabling the cup to be put in an upright position on a horizontal surface without risk of spilling its contents.

[0027] The profile of the radially inner edge 18 of the outer leaf 12 is preferably flanked by a pair of horn-shaped projections 30. These projections 30 have the function of enlarging the bearing polygon in which the centre of gravity of the cup lies.

[0028] The described and illustrated shape of the central region 26 of the edge 18 is not limiting of the scope of the invention; in order to form a support foot for the cup, it would thus, for example, suffice for this profile to define at least three non-aligned regions lying in the plane substantially perpendicular to the axis of the cone in the deformed configuration of use of the cup. For example, one of these three points could correspond to the vertex of the V-shape and the other two could corre-

spond to the ends of the horns 30.

[0029] Still with reference to Figures 1 to 5, the ends of the substantially half-moon-like shape of the inner leaf 10 are shaped in a manner such that, in the configuration of use of Figures 4 and 5, they constitute rounded lugs 32. These lugs 32 project from the rim of the cup in diametrically opposed positions and act as gripping handles to allow the person quenching his thirst to grip the cup by grasping at least one of the lugs 32 between his thumb and index finger.

[0030] This avoids the risk of the person's thumb being immersed in the water contained in the cup.

[0031] If, as is preferred, the two leaves 10, 12 are constituted by blanked stainless steel elements, their radially outer edges 16, 20, which are intended to constitute the rim of the cup, are enclosed by a lip-rest covering of plastics material, generally indicated 34 for both edges 16 and 20.

[0032] For aesthetic reasons, the covering 34 may be of a bright colour.

[0033] In order to anchor the coverings 34, the two leaves 10, 12 preferably have a series of openings in the form of holes 36 adjacent their radially outer edges 16, 20.

[0034] As shown in Figure 6, each lip-rest covering 34 is moulded onto the radially outer edge 16, 20 of the respective leaf in a flattened channel-shape. The two opposed flanges 38 of the channel-shape of the covering 34 are interconnected by anchoring bridges 40 which extend through the openings or holes 36.

[0035] Naturally, a folding cup according to the invention could also have only one covering 34 on a radially outer edge of one of its leaves.

Claims

1. A folding cup, of the type comprising two leaves (10, 12) of thin, resiliently-deformable material, each substantially half-moon-shaped in plan with generally arcuate, convex opposed edges (14, 16, 18, 20), in which the two leaves (10, 12) are interconnected, towards the two ends of their half-moon-shape, by a pair of pins (24) fixed to one of the leaves (10) and slidable in corresponding slots (22) of the other leaf (12), the arrangement being such that the two leaves (10, 12) can adopt a rest configuration in which they are fitted flat against one another and a deformed condition of use in which they constitute a substantially conical vessel in which a radially inner arcuate edge (14) of an inner leaf (10) of the vessel is kept resiliently in leaktight contact with the surface inside the cone of an outer leaf (12) of the vessel, characterized in that the radially inner edge (18) of the outer leaf (12) has, in a central region, a profile (26) designed so as to define, in the deformed configuration of use, at least three non-aligned regions lying in a plane substantially perpendicular to the

axis of the cone and situated on the opposite side of the tip of the cone to that on which the vessel is disposed, and in that this profile (26) is substantially centered relative to the projection of the centre of gravity of the cup in this plane.

2. A folding cup according to Claim 1, characterized in that the central region of the profile of the radially inner edge (18) of the outer leaf (12) is designed as a recess (26) which is substantially V-shaped with a rounded vertex and which, in the configuration of use, lies entirely in the aforesaid perpendicular plane. 5
3. A folding cup according to Claim 2, characterized in that, in the profile of the radially inner edge (18) of the outer leaf (12), the recess (26) is flanked by a pair of horn-shaped projections. 10
4. A folding cup according to any one of Claims 1 to 3, characterized in that the ends of the substantially half-moon-like shape of the inner leaf (10) are shaped in a manner such that, in the configuration of use, they constitute lugs (32) projecting from the rim of the cup in diametrically opposed positions in order to act as gripping handles. 15
5. A folding cup according to any one of the preceding claims, characterized in that the thin sheet material forming the leaves (10, 12) is a stainless steel sheet, and in that the radially outer edge of at least one of the two leaves (10, 12) is enclosed by a lip-rest covering (34) of plastics material. 20
6. A folding cup according to Claim 5, characterized in that the lip-rest covering (34) is moulded onto the radially outer edge (16, 20) of the respective leaf (10, 12) in a flattened channel-shape and the two opposed flanges (38) of the channel-shape are interconnected by anchoring bridges (40) which extend through holes (36) formed in the leaf (10, 12) adjacent the edge (16, 20). 25
7. A folding cup, of the type comprising two leaves (10, 12) of thin, resiliently-deformable material, each substantially half-moon-shaped in plan with generally arcuate, convex opposed edges (14, 16, 18, 20), in which the two leaves (10, 12) are interconnected, towards the two ends of their half-moon shape, by a pair of pins (24) fixed to one of the leaves (10) and slidable in corresponding slots (22) of the other leaf (12), the arrangement being such that the two leaves (10, 12) can adopt a rest configuration in which they are fitted flat against one another and a deformed condition of use in which they constitute a substantially conical vessel, in which a radially inner arcuate edge (14) of an inner leaf (10) of the vessel is kept resiliently in leaktight 30

contact with the surface inside the cone of an outer leaf (12) of the vessel, characterized in that the ends of the substantially half-moon-like shape of the inner leaf (10) are shaped in a manner such that, in the configuration of use, they constitute lugs (32) projecting from the rim of the cup in diametrically opposed positions in order to act as gripping handles.

8. A folding cup of the type comprising two leaves (10, 12) of resiliently-deformable stainless steel sheet, each substantially half-moon-shaped in plan with generally arcuate, convex opposed edges (14, 16, 18, 20), in which the two leaves (10, 12) are interconnected, towards the two ends of their half-moon shape, by a pair of pins (24) fixed to one of the leaves (10) and slidable in corresponding slots (22) of the other leaf (12), the arrangement being such that the two leaves (10, 12) can adopt a rest configuration in which they are fitted flat against one another, and a deformed condition of use in which they constitute a substantially conical vessel, in which a radially inner arcuate edge (14) of an inner leaf (10) of the vessel is kept resiliently in leaktight contact with the surface inside the cone of an outer leaf (12) of the vessel, characterized in that the radially outer edge (16, 20) of at least one of the two leaves (10, 12) is enclosed by a lip-rest covering (34) of plastics material. 35
9. A folding cup according to Claim 8, characterized in that the lip-rest covering (34) is moulded onto the radially outer edge (16, 20) of the respective leaf (10, 12) in a flattened channel-shape and the two opposed flanges (38) of the channel-shape are interconnected by anchoring bridges (40) which extend through holes (36) formed in the leaf (10, 12) adjacent the edge (16, 20). 40

FIG. 1

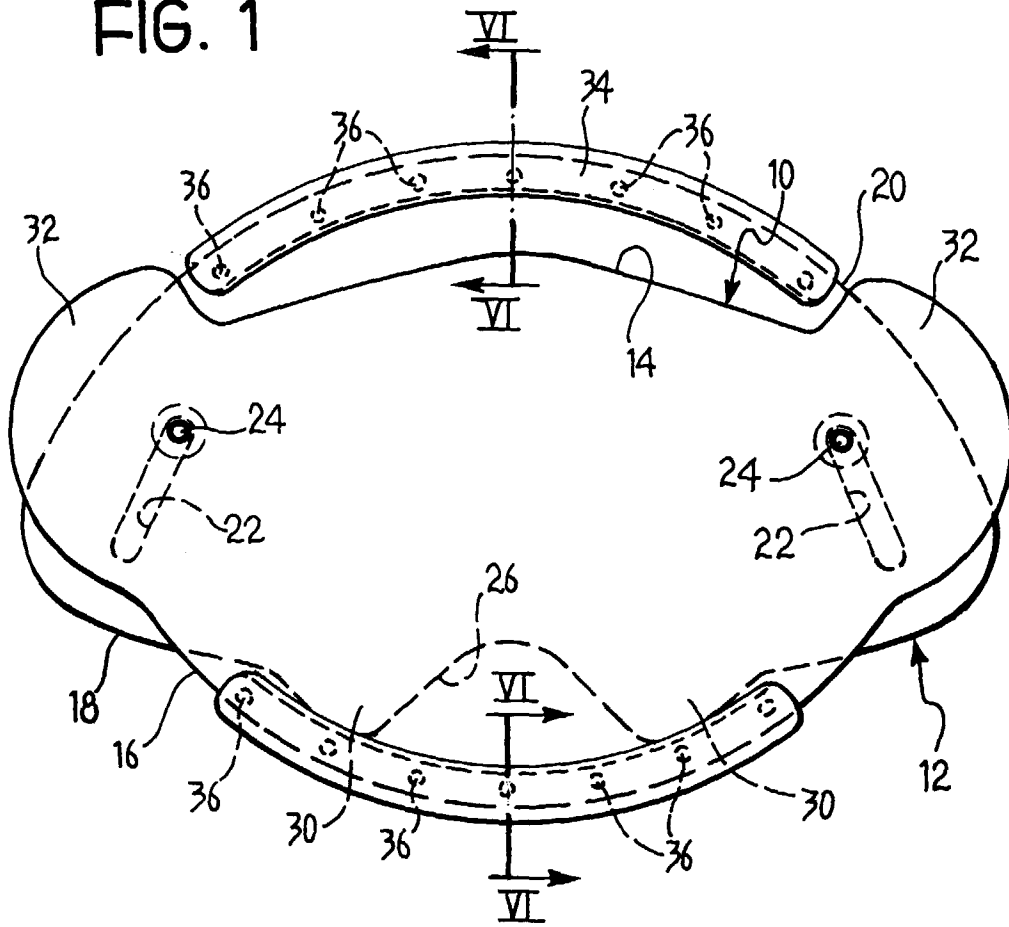


FIG. 2

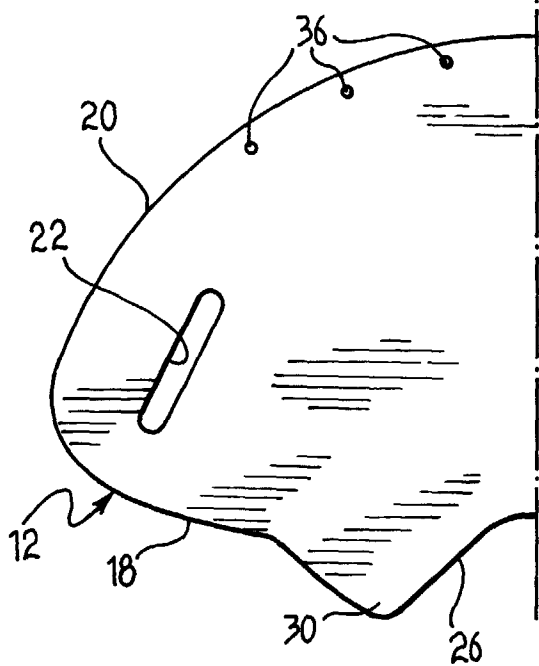
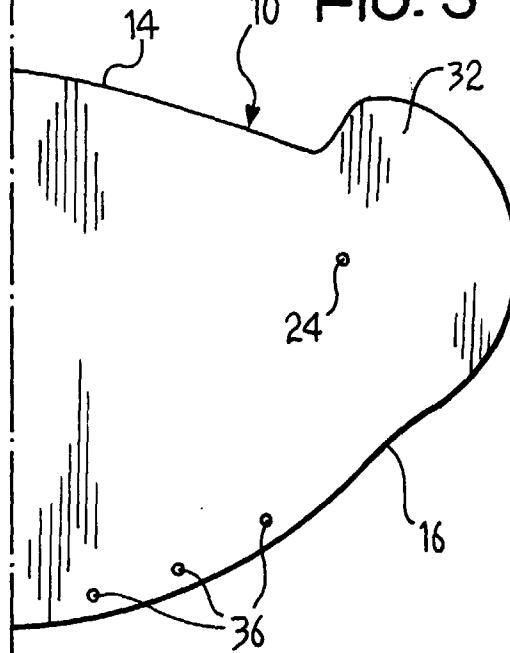
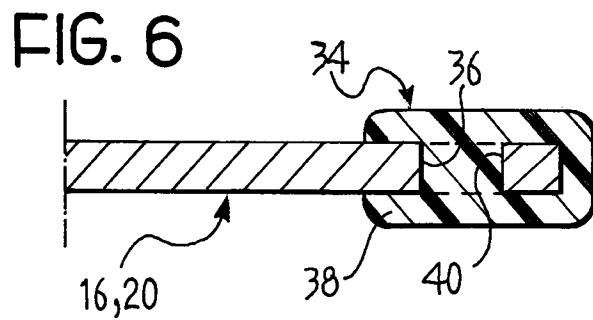
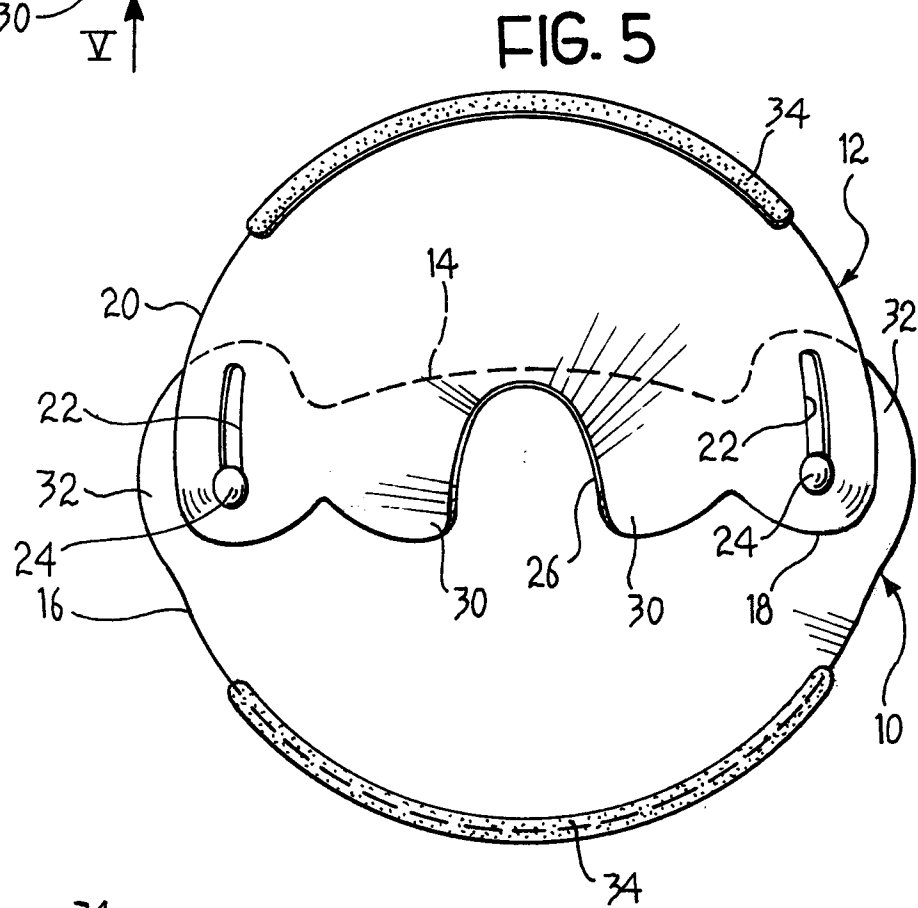
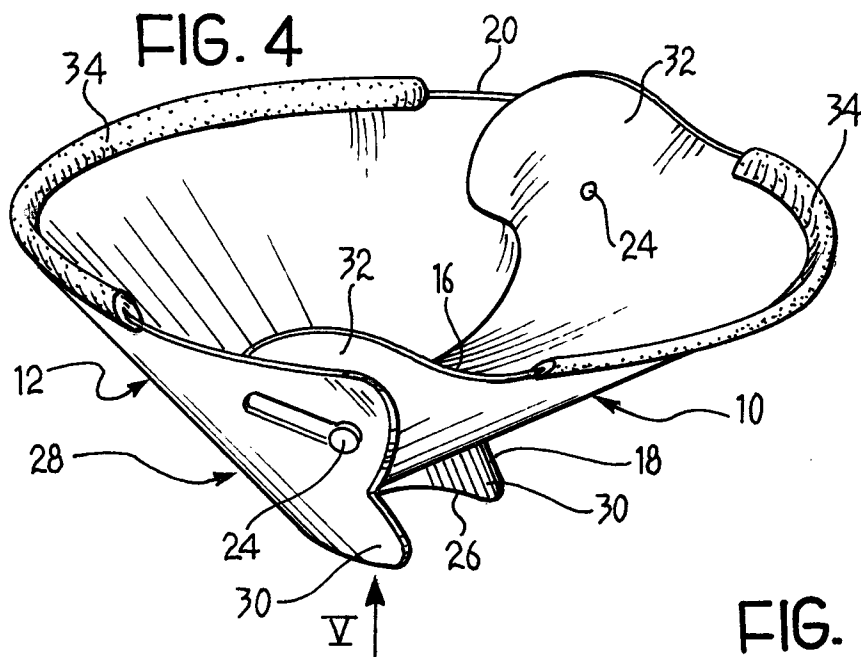


FIG. 3







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EUROPEAN SEARCH REPORT

Application Number
EP 98 12 4838

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
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Y	* the whole document *	5,6,8,9	
Y	GB 2 304 323 A (DAVIES PHILIP MARK ;CAINER JOHNATHAN SCOTT (GB)) 19 March 1997 * page 1; figures *	5,6,8,9	
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6) A45F
Place of search BERLIN		Date of completion of the search 23 March 1999	Examiner Olsson, B
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 98 12 4838

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23-03-1999

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