



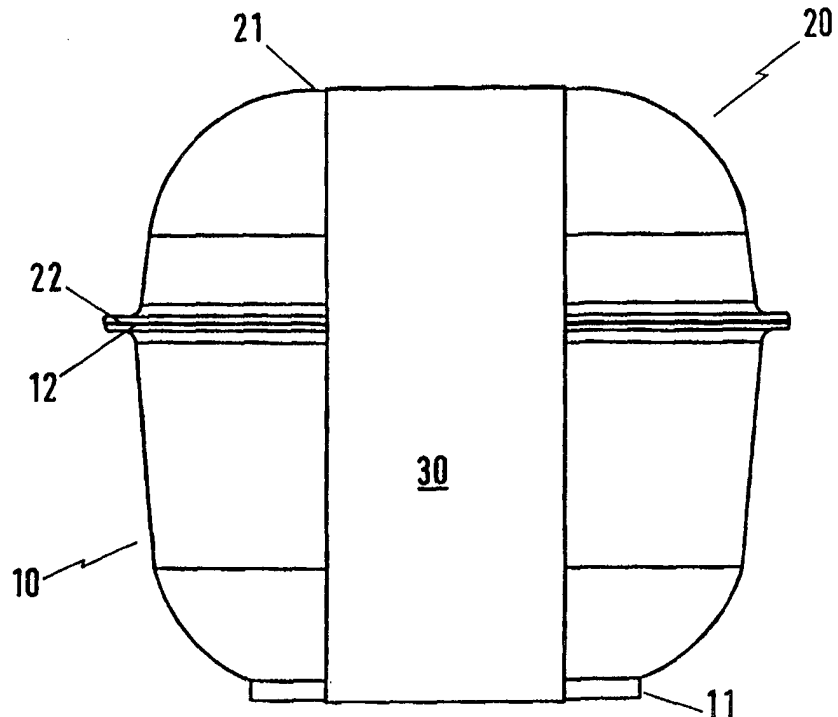
## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<p>(21) International Application Number: PCT/IE97/00075</p> <p>(22) International Filing Date: 7 November 1997 (07.11.97)</p> <p>(30) Priority Data: S960795 8 November 1996 (08.11.96) IE</p> <p>(71) Applicant (for all designated States except US): HIGH MEADOW PATENTS LIMITED [IE/IE]; 31 Waterloo Road, Ballsbridge, Dublin 4 (IE).</p> <p>(72) Inventor; and (75) Inventor/Applicant (for US only): ENNIS, Declan, Joseph [IE/IE]; 31 Waterloo Road, Ballsbridge, Dublin 4 (IE).</p> <p>(74) Agent: MACLACHLAN &amp; DONALDSON; 47 Merrion Square, Dublin 2 (IE).</p>	<p>(81) Designated States: AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), EE, ES, FI, FI (Utility model), GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p><b>Published</b> <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p>	

(54) Title: A TWO-PART STORAGE CONTAINER

## (57) Abstract

A two-part container having upper and lower parts (10, 20) each part being usable to house a product suitable for use with the product housed in the other part but which is stored separately. Each part (10, 20) has a top portion (12, 22) with a sealable aperture (18, 28) which is opened to access the product. The parts of the container are releasably secured together, the top portions (12, 22) overlying one another to protect the apertures (18, 28) from accidental puncturing. For example, the two-part container may be used for: a soap powder or washing material stored in one part and a fabric softener or conditioner stored in the other part; a yogurt, fromage frais or soft ice-cream stored in one part and nuts, fruit or a biscuit crumb stored in the other part; and a cereal, cereal clusters or muesli stored in one part and milk in the other part.



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A TWO-PART STORAGE CONTAINER

The present invention relates to a two-part storage container and more particularly to a two-part storage  
5 container which is used to store materials that are normally used together but which must be stored separately.

Many two-part containers are used to store materials which  
10 are used together but must be stored apart, particularly so where one of the materials to be stored would be destroyed, lose its texture, form an unsuitable solution, become sour or make one or both of the products stale. Two-part containers are generally substantially  
15 rectangular in shape and are of limited depth. The containers are covered by a foil which may be peeled back by the user. Normally one half or one corner of the rectangle is provided for one of the materials to be stored.

20 The above arrangements provide certain disadvantages. Firstly, the protective foil which covers the materials is easily punctured or forced inwardly, for example by pressure downwardly on the container tops due to improper  
25 stacking procedures. Any puncturing of the foil makes the article unsuitable for sale. Secondly, when the materials are to be used it is often desirable that one is poured into the other, this is not normally effected easily even where a scoreline is provided between one part of the  
30 container and the other. Additionally, due to the configuration of the rectangular container or the triangular part of a container, where a corner is cut from the rectangular container, there can be a high degree of wastage. Finally, the configuration or the foil wrapper  
35 of the known two-part containers do not allow for the

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storage of a spoon where the articles contained within the container are edible products. For convenience foods provided in such containers, a spoon must be supplied separately.

5

In one known solution described in WO 96/15950, a single use container having two parts is provided, each part hermetically sealing a product therein, the container including a wall separating the two parts. The wall  
10 includes an orifice which has a seal. The seal is broken to allow the product from one part to flow into the other part under gravity. A spoon is stored in one of the parts together with the product therein.

15 The above solution also presents certain disadvantages. Firstly, when the seal is broken the flow of material from one part to the other is controlled only by gravity. A user cannot decide to use a different ratio of one product to the other by controlling the flow. Secondly, this  
20 arrangement does not perform well with viscous or particulate products which would not flow freely through the orifice. In such a case, a relatively large percentage of one product would not be readily available for use by a consumer. Thirdly, the two parts of the  
25 container share a wall and are not separable. Therefore, a consumer has no access to the orifice to reseal the orifice. No consideration is given to the interruption of the use or consumption of the products or the subsequent re-use or continued consumption thereof. Finally, as the  
30 spoon is stored in one part together with the product, a user must open that part to extract the spoon before the products are mixed. As the product is presented as a convenience package, a consumer may not have opportunity to clean their hands before attempting to retrieve the  
35 spoon from within the product.

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It is an object of the present invention to seek to alleviate the above disadvantages and to provide an improved two-part container.

5

Accordingly, the present invention provides a two-part container, in which each part includes a sealable aperture to access the contents, the two parts of the container being releasably securable together, one part protecting the aperture of the other part from accidental opening, wherein each part is usable to house contents separate from the contents of the other part.

Advantageously, one part comprises a substantially open container having a relatively large aperture sealable by a layer of foil and the other part comprises a substantially closed container having a relatively small aperture which is closed by a resealable foil strip.

In one arrangement, the two parts are securable together to seal the contents of the open container when the two top portions overlie one another.

This arrangement protects a foil covered aperture from being accidentally punctured when the two parts of the containers are secured to and overlying one another for storage or transportation.

In one particular arrangement, the first one part is charged with a particulate or solid material and the other part is charged with a liquid, the liquid being pourable into the particulate or solid material for use.

In another arrangement, one part is charged with a liquid, gel or creamy material and the other part is charged with

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a particulate material, the particulate material being added to the liquid, gel or creamy material prior to use.

Conveniently, the sealable apertures are positioned facing  
5 one another so that the container parts are securable together.

Preferably, the container or part thereof is provided with a housing to retain an implement such as a fork, spoon,  
10 measuring scoop, applicator or the like.

Advantageously, one part is profiled for use as a bowl.

Ideally, one part has an aperture which is profiled to  
15 ensure that flow of the contents therefrom is regulated so that spillage is avoided and so that only the required amount of the contents is used.

Conveniently, the aperture is resealable so that any  
20 contents remaining in the container may be used subsequently.

Preferably, the two parts are secured together by a band wrapped around the container when the two apertures are  
25 positioned facing one another.

Advantageously, the band secures an implement to the container, the band hygienically encompassing the  
30 implement.

Conveniently, the band comprises a plastics material which is shrink-wrapped around the container.

Preferably, the or each part is nestable with a  
35 corresponding part so that, when empty, the or each part

is nested with corresponding parts for efficient storage and/or transportation.

The two-part container may be used for any products which  
5 are used together but which must be stored separately.  
For example, a soap powder or washing material may be  
stored in a base part and a fabric softener or conditioner  
may be stored in the corresponding overlying part; a  
yogurt, fromage frais or soft ice-cream may be stored in  
10 the base part and nuts, fruit or a biscuit crumb may be  
stored in the overlying part; and a cereal, cereal  
clusters or muesli may be stored in the base part and milk  
may be stored in the overlying part.

15 The present invention will now be described more  
particularly with reference to the accompanying drawings,  
which show by way of example only one embodiment of the  
two-part container according to the invention. In the  
drawings:

20 Figure 1 is a side elevation of the two-part container in  
a storage or transport mode;

Figures 2a to 2c are a side elevation, top plan view and a  
25 sectional side elevation taken along the lines A-A of  
Figure 2a of the lower part of the container,  
respectively;

Figures 3a to 3c are a side elevation, a top plan view and  
30 a sectional side elevation taken along the lines A-A of  
Figure 3a of the upper part of the container,  
respectively; and

Figure 4 is a bottom plan view of the upper part of the  
35 container.

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Referring to the drawings, the two-part container comprises a lower container 10 and an upper container 20, each container 10,20 having a base 11,21 and a top surface 5 12,22 which surfaces are placed adjacent one another by inverting the upper container 20 to lie over the lower container 10 to be held together by a shrink wrap band 30 for storage and transport.

10 The lower container 10 is shown in detail in Figures 2a to 2c and has a substantially bowl-shaped profile which includes a steadying rim 14 at its base 11. The bowl includes a flared rim 16 which defines an access aperture 18 over which a foil is attached to keep the contents 15 fresh and to form the top surface 12.

The upper container 20 is of relatively smaller capacity than that of the first container 10. The upper container 20 has a substantially bowl-shaped profile including a 20 steadying rim 24 at its base 21 and a flared rim 26 defining the top surface 22. Access apertures 28 which are sealed using a foil strip F, as shown in Figure 4, are provided on the top surface 22. The apertures 28 are 25 profiled to allow flow to be easily controlled. The base 21 of the upper container includes a recess 29 in which a scooping implement such as a spoon S is retained. For storage and transport, the spoon is protected from dust and dirt by the shrink wrap band 30.

30 The shrink wrap band 30 optionally surrounds the two-part container. In one arrangement (not shown) the lower container 10 is not provided with a sealing foil and the contents are kept fresh by the sealing action of the overlying upper container 20 and the enclosing shrink 35 wrap 30.

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All of the components of the two-part container, except the foils, are comprised of a thermoformable polystyrene or polyethylene material or optionally a thermoformable plastics material mix. The upper and lower containers are formed using standard moulding techniques.

Generally, the upper and lower containers 10,20 are manufactured at a site remote from the filling, sealing and packing site(s) of the products to be used therein. To facilitate the transportation and or storage of empty containers, the walls of the containers are angled  $\alpha 10, \alpha 20$  so they may be nested with further identical containers (not shown).

The two-part container of the present invention is suitable for conveniently providing a breakfast cereal. The cereal is stored in the bowl shaped lower container 10 and is foil-sealed therein to retain freshness and crispness of the cereal and a treated milk product is stored in the upper container 20. To prolong the shelf life of the breakfast cereal product, the milk component is treated to reduce the butter-fat content and treated using various other processes to prolong the shelf life of the milk without altering its taste characteristics.

Alternative uses of the two-part container include; soap powder and fabric conditioner, yoghurt and nuts; ice-cream and fruit coulis; and cosmetic moisturiser and foundation make-up (with make-up applicator replacing the scooping implement). Where the container is adapted to be used in a microwave oven or can tolerate boiling water, one or both containers may hold a cookable foodstuff and the other may hold a sauce or gravy.

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The spoon S illustrated in Figures 3a and 3c is formed with a folded shank so that the spoon S is held within the recess 29 of the upper container 20. The spoon 3 can include graduations for the measured mixing of the contents of one container with the other or for measured dispensing of one or both of the products.

In a preferred arrangement the lower container 10 is 55mm high and has an outer dimension  $\phi 1$  of 105mm including the rim 16 or an outer diameter  $\phi 2$  of 97mm excluding the rim 16. The base 11 includes the steadying rim 14 which has an outer diameter  $\phi 3$  of 60mm and an inner diameter  $\phi 4$  of 30mm. The flared rim 16 at the top surface 12 of the container is 1mm thick and the base 11 is 3mm high. The nesting angle  $\alpha 10$  of the lower container 10 is  $5^\circ$ .

The upper container 20 is 34mm high and has an identical outer diameter  $\phi 5$  including the rim 26 as that of the lower container 10 of 105mm, the outer diameter  $\phi 6$  excluding the rim 26 is 95mm. The thickness of the rim 26 is 1mm and the nesting angle  $\alpha 20$  of this container is  $7^\circ$ .

It will of course be understood that the invention is not limited to the specific details described herein, which are given by way of example only, and that various modifications and alterations are possible within the scope of the invention as defined in the appended claims.

30

CLAIMS:

1. A two-part container, in which each part (10,20) includes a sealable aperture (18,28) to access the contents, the two parts (10,20) of the container being releasably securable together, one part protecting the aperture of the other part from accidental opening, wherein each part is usable to house contents separate from the contents of the other part.
2. A two-part container as claimed in claim 1, in which one part (10) comprises a substantially open container having a relatively large aperture (18) sealable by a layer of foil and the other part (20) comprises a substantially closed container having a relatively small aperture (28) which is closed by a resealable foil strip (F).
3. A two-part container as claimed in claim 1 or claim 2, in which the sealable apertures (18,28) are positioned facing one another so that the container parts (10,20) are securable together.
4. A two-part container as claimed in any one of the preceding claims, in which the container or part (10,20) thereof is provided with a housing (29) to retain an implement (S) such as a fork, spoon, measuring scoop, applicator or the like.
5. A two-part container as claimed in any one of the preceding claims, in which one part (10) is profiled for use as a bowl.
6. A two-part container as claimed in any one of the preceding claims, in which one part (20) has an aperture

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(28) which is profiled to ensure that flow of the contents therefrom is regulated so that spillage is avoided and so that only the required amount of the contents is used.

5 7. A two-part container as claimed in claim 6, in which the aperture (28) is resealable so that any contents remaining in the container may be used subsequently.

8. A two-part container as claimed in any preceding claim  
10 in which the two parts (10,20) are secured together by a band (30) wrapped around the container when the two apertures are positioned facing one another.

9. A two-part container as claimed in claim 8, in which  
15 the band (30) secures an implement (S) to the container, the band hygienically encompassing the implement (S).

10. A two-part container as claimed in claim 8 or claim  
20 9, in which the band (30) comprises a plastics material.

11. A two-part container as claimed in claim 10, in which the plastics material is shrink-wrapped around the container.

25 12. A two-part container as claimed in any preceding claim, in which one part (10) is charged with a particulate or solid material and the other part (20) is charged with a liquid, the liquid being pourable into the particulate or solid material for use.

30 13. A two-part container as claimed in any preceding claim, in which one part (10) is charged with a liquid, gel or creamy material and the other part (20) is charged with a particulate material, the particulate material  
35 being added to the liquid, gel or creamy material prior to

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use.

14. A two-part container as claimed in any one of the preceding claims, in which the or each part (10,20) is nestable with a corresponding part (10,20) so that, when  
5 empty, the or each part (10,20) is nested with corresponding parts for efficient storage and/or transportation.

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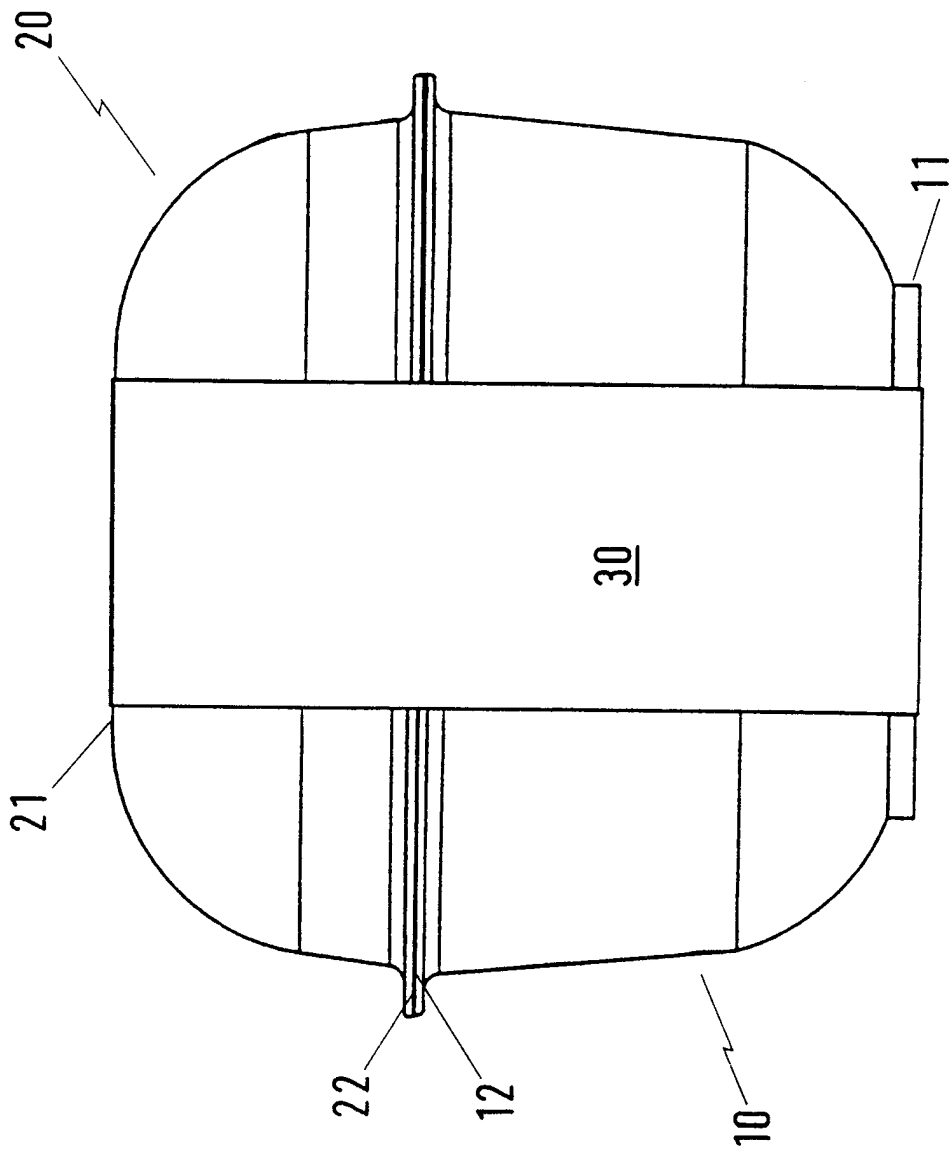


FIG 1

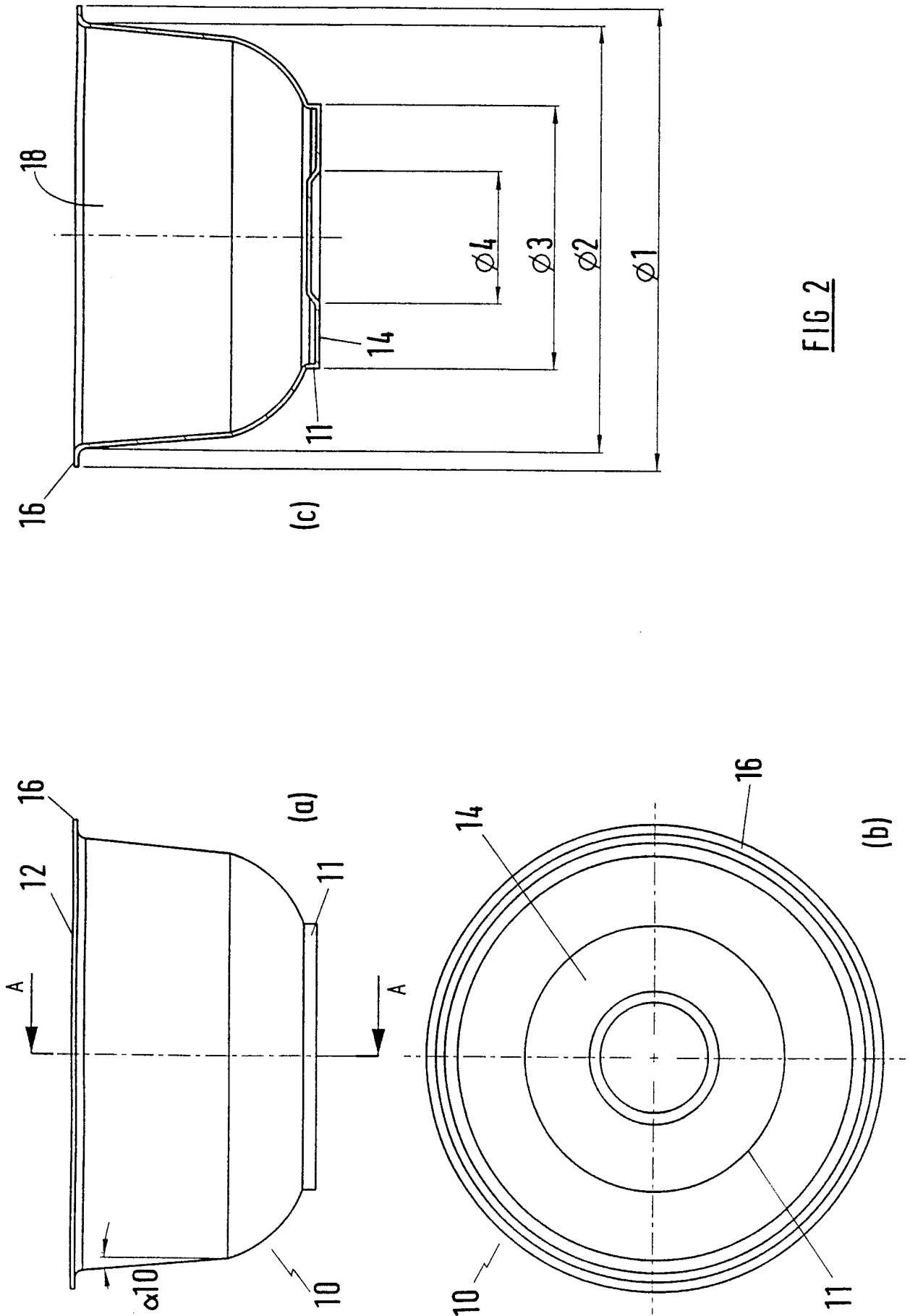


FIG 2



4/4

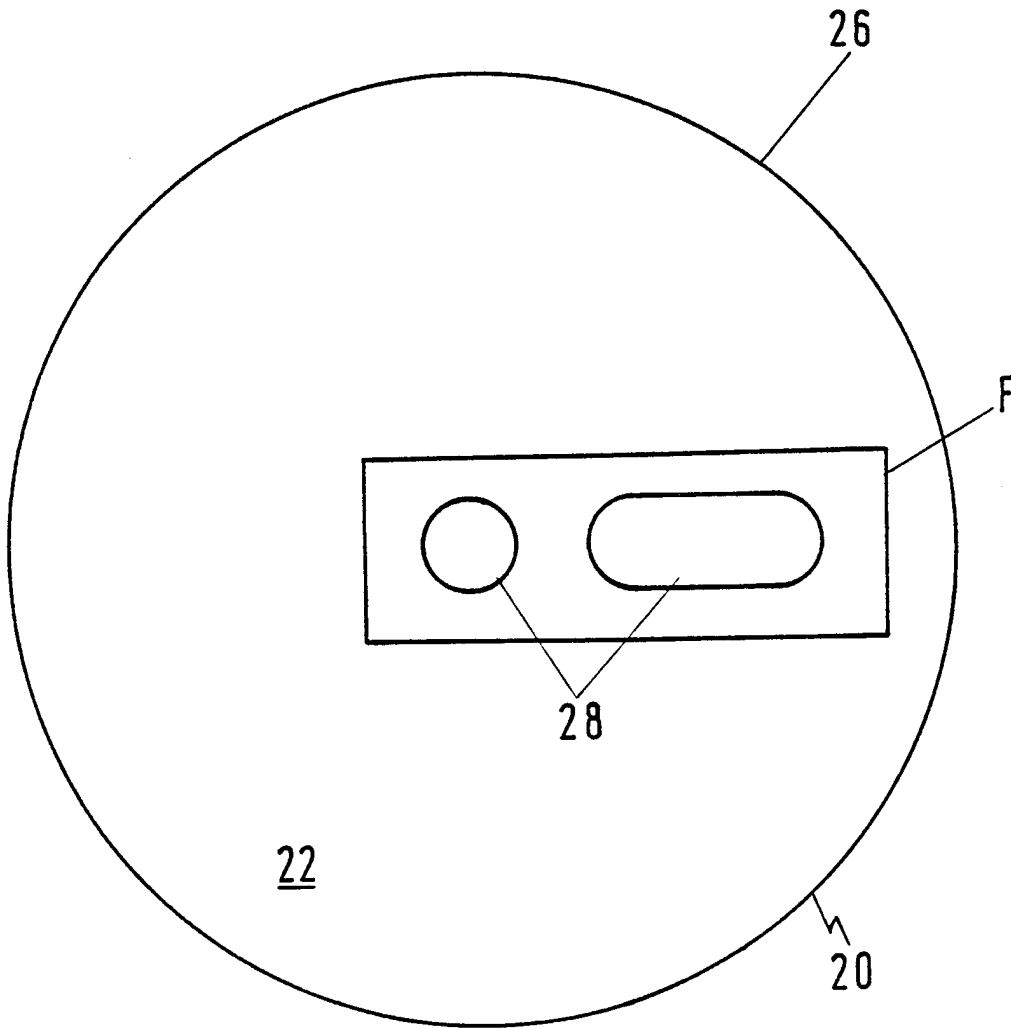


FIG 4

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IE 97/00075

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC 6 B65D81/32				
According to International Patent Classification (IPC) or to both national classification and IPC				
<b>B. FIELDS SEARCHED</b>				
Minimum documentation searched (classification system followed by classification symbols) IPC 6 B65D				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched				
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)				
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>				
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X	DE 86 03 890 U (MEIEREI-ZENTRALE) 17 April 1986 see the whole document ---	1, 3, 5, 8, 12-14		
X	DE 33 14 097 A (FERRERO) 1 December 1983 see the whole document ---	1, 3, 5, 12-14		
X	DE 20 29 648 A (HAMM) 23 December 1971 see the whole document ---	1, 3, 5, 12-14		
A	GB 2 218 962 A (ASEPTA) 29 November 1989 see the whole document ---	1, 4		
X	FR 2 142 762 A (DE PARIENTE & CAZAS) 2 February 1973 see figures 10-12 ---	1, 3		
-/--				
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.				
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° Special categories of cited documents :				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none; vertical-align: top;">                     "A" document defining the general state of the art which is not considered to be of particular relevance                      "E" earlier document but published on or after the international filing date                      "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)                      "O" document referring to an oral disclosure, use, exhibition or other means                      "P" document published prior to the international filing date but later than the priority date claimed                 </td> <td style="width: 50%; border: none; vertical-align: top;">                     "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention                      "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone                      "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.                      "&amp;" document member of the same patent family                 </td> </tr> </table>			"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  <div style="text-align: center; font-weight: bold;">Gino, C</div>			

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International Application No  
PCT/IE 97/00075

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Information on patent family members

International Application No

PCT/IE 97/00075

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