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Published:

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(54) Title: A DISPOSABLE LID

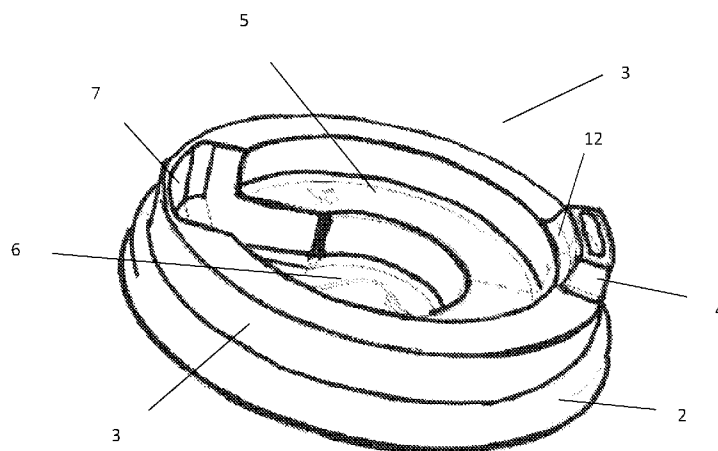


Fig. 4

(57) Abstract: A disposable lid (1) for a disposable drinking cup or container comprises an annular mounting means (2) for securing the lid to the open end of a cup or a container, a raised rim section (3) comprising a drinking spout (4) and a finger recess (7) and a base section comprising a substantially annular stacking ledge (5) and a nose recess (6), wherein the drinking spout protrudes and extends vertically upward from the raised rim section and the finger recess is located at a side of the raised rim section directly opposed to the drinking spout.



WO 2016/038568 A1

“A Disposable Lid”

Introduction

- 5 The invention relates to a disposable drinking cup lid which allows a person to drink on the move.

Disposable lids for disposable drinking cups are well known. Typically the cups and lids are disposed of after a single use. Different kinds of disposable lids are available
10 which attempt to enhance the drinking experience and prevent spillage or leakage from the lid when the lid is attached to the drinking cup or container.

There is however a need for an improved, more user friendly, disposable lid for a drinking cup or container which allows a person to take a drink more comfortably
15 while on the move.

Statements of Invention

According to the invention there is provided disposable lid for a disposable drinking
20 cup or container comprising:-

an annular mounting means for securing the lid to the open end of a cup or a container;

25 a raised rim section comprising a drinking spout and a finger recess; and

a base section comprising a substantially annular stacking ledge and a nose recess;

30 wherein the drinking spout protrudes and extends vertically upward from the raised rim section and the finger recess is located at a side of the raised rim section directly opposed to the drinking spout.

In one embodiment of the invention the annular mounting means comprises a continuous snap fit ring around the underside of the annular mounting means.

5 In one embodiment of the invention the nose recess is located in the centre of the lid and extends vertically downward from the stacking ledge.

In another embodiment of the invention the raised rim section, the stacking ledge and nose recess comprise a stepped formation.

10 In one embodiment of the invention the protruding drinking spout extends upward from the raised rim section and the outer side of the spout is flush with the outer wall of the raised rim section. Most preferably the drinking spout allows rapid flow of liquid from the cup.

15 In one embodiment of the invention the inner sidewall of the raised rim section is biased wherein the width of the raised rim section is wider at the base than at the top.

In one embodiment of the invention the finger recess comprises an indent in the raised rim section extending downward into the stacking ledge or shelf. Most preferably the
20 sidewall of the finger recess is adjacent the outer wall of the raised rim section.

In one embodiment of the invention the finger recess comprises a concave shape.

In another embodiment of the invention the stacking ledge supports stacking of single
25 and double walled cups.

Brief Description of the Invention

The invention will be more clearly understood from the following description thereof
30 with reference to the accompanying drawings in which:

Fig. 1 is a perspective view of a disposable drinking cup lid according to the invention;

35 Fig. 2 is a side perspective view of the lid of Fig. 1;

Fig. 3 is a perspective view of the lid of Fig. 1 from the front;

Fig. 4 is perspective view of the lid of Fig. 1 from the top;

5 Fig. 5 is a perspective view of the lid of Fig. 1 from below;

Fig. 6 is a partial cross sectional view of a lid according to the invention with the base of a disposable cup stacked on the lid;

10 Fig. 7 is a perspective view of a lid according to another embodiment of the invention; and

Fig. 8 is a side perspective view of the lid of Fig. 7.

15 Detailed description

Running is a very popular sport and in recent years it has increased in popularity. There has been a large increase in the number of races available for runners and walkers to participate in. Typically during these races cups of water or other liquids
20 are dispensed to the athletes at water stations. The athletes are competing against the clock so drinking while keeping mobile is important. However it is quite difficult to drink on the move. More often than not the athlete ends up with at least some of the drink spilt over themselves. Liquid sloshes over the sides of the disposable cup if it is an open ended cup. In addition water or liquid invariably ends up going up the
25 runner's nose as they try to drink while running.

The present invention provides an improved disposable cup lid for a disposable cup especially for use at jogging/ running events or for drinking on the move in general. The lid may be easily and securely attached to any standard sized disposable cup or
30 container. The disposable cup lid of the present invention when attached to the top of a cup provides the user with a spill free drinking experience and allows the athlete to continue running safely while drinking.

The disposable lid of the present invention has an annular mounting means for securing the lid securely to the open end of a cup or a container. The lid has a raised rim with a protruding drinking spout having an opening large enough to allow rapid flow of the contents from the cup or container. The lid has an annular stacking ledge,
5 a nose recess and a finger recess.

The lid of the present invention allows a person to quickly, safely and comfortably consume liquids in particular while running or on the move.

10 Fig. 1 shows the disposable lid 1 of the invention. The lid has an annular mounting means 2 for securing the lid to the open end of a cup or a container. The lid has a raised rim section 3 and a protruding drinking spout 4. The lid 1 has a substantially annular stacking ledge or shelf 5 and a nose recess 6.

15 A finger recess 7 is located in the raised rim section 3 at a side directly opposed to the protruding drinking spout. The finger recess 7 extends through substantially a section of the raised rim section 3. The finger recess comprises an indent in the raised rim section 3 extending downward into the stacking ledge or shelf 5. The longitudinal sidewall of the finger recess 7 is adjacent the outer wall of the raised rim section 3.
20 The longitudinal sidewall of the finger recess 7 is biased inward as it extends downward into the stacking ledge or shelf 5. The finger recess 7 allows one to hold a cup by gripping the finger recess 7 with one finger. In this way a person may grip several cups in one hand by means of the finger recess 7 in the lid 1. The finger recess 7 allows a person to hold up to three cups in one hand. When dispensing
25 drinks during a race it is advantageous that the person dispensing the drinks can hold several cups with one hand so that the runners can reach for a cup without any delay.

The protruding drinking spout 4 extends vertically upward from the raised rim section 3. One side of the protruding drinking spout 4 extends vertically flush with the outer
30 side of the raised rim section 3. The drinking spout 4 is flush with the outer wall of the raised rim section 3 and is raised above the raised rim section 2. This reduces any residue from drips being left behind on the annular mounting means 2 causing distraction to the drinker when drips land on their clothes.

The other side of the protruding spout 4 is set back slightly from the inner side of the raised rim section 3 providing a narrow rim 12. In this way the protruding drinking spout 4 does not interfere with the stacking ability of the lid 1. The drinking spout 4 set back slightly allows double walled disposable cups to sit flush within the stacking groove as shown in particular in Fig. 6.

The protruding drinking spout 4 allows a runner to easily locate the drinking spout 4 while running without having to look down and risk tripping or falling as they run. As the drinking spout 4 extends above the raised rim section 3 it also reduces the risk of any liquid spilling out of spout 4 accidentally as the liquid in the cup moves about when the drinker and cup are in motion.

The protruding spout 4 also allows a user to purse their lips over the spout. As a result one is less likely to burn ones lips as the liquid bypasses the sensitive outer lip area.

Fig. 6 illustrates the stacking ability of the lid 1. The base of a disposable cup 10 may be securely stacked on the stacking ledge or shelf 5 of the disposable lid 1. Up to three cups may be securely stacked one on top of the other.

The inner sidewalls of the raised rim section 3 are biased such that the sidewalls are narrower at the base along the stacking ledge 5 than at the top. This provides a friction / resistance fit. The biased sides correspond to the curvature of most cups giving them a more secure grip. The biased sides allows single and/or double walled disposable cups to be stacked securely on the stacking ledge 5. There is a break in the raised rim section 3 for the finger recess 7. Two cups or more cups may be securely stacked on top of one another and the lower cup may be held using the finger recess 7 without touching the hot or cold contents within the lower cup. Alternatively two or more cups may be gripped using one hand using the finger recess 7. Using the finger recess 7 in the lid 1 to grip a cup also avoids contact with the hot or cold contents within the cup.

The disposable lid 1 of the present invention may be sized to fit any size or type of disposable drinking cup or container typically used at running events. Disposable

cups are usually made from a lightweight material. The annular mounting means 2 on the disposable lid 1 of the invention comprises a snap fit ring which provides a leak free seal between the lid 1 and the open rolled rim of the cup or container.

- 5 The nose recess 6 is located in the centre of the lid 1. The nose recess 6 allows an athlete to take a drink from a cup or container while on the move without having to tilt their neck too far backward. In this way the runner is able to keep an eye on the road ahead while drinking and prevent the incidence of falls or collisions. The nose recess 6 may have rounded edges. The base of the nose groove may be embossed with a
10 logo such as an image indicating its function.

The, raised rim section 3, the stacking ledge or shelf 5 and the nose recess 6 form a substantially stepped formation.

- 15 Conventionally disposable lids have a multi broken snap fit formed by a concave groove around the lid lip when used for cold drinks such as soft drinks and milk shakes. When the lid is attached to the rolled rim of a disposable cup or container, the ring sits under the rim of the cup and holds it in place. The broken ring allows the lid to be easily removed and replaced several times. In contrast the disposable lid 1 of
20 the present invention has a substantially continuous snap-fitting ring formed by a concave groove 11 around the lid lip. The substantially continuous snap fitting ring 2 on the lid 1 of the present invention is much more restrictive than the broken ring conventionally used for disposable lids on cold drinks. The continuous ring holds onto the top edge or rolled rim of a disposable cup more securely. The continuous
25 snap fitting ring 2 has more strength.

- The stacking ledge or shelf 5 on the lid 1 allows for several cups to be stacked one on top of the other. The substantially annular stacking ledge 5 uses simple resistance fit to hold the cups in place when stacked. This is an important feature when dispensing
30 drinks at a race meeting. Disposable cups are pre-filled and stacked prior to the commencement of a race to prevent any delay in dispensing water to the runners at a water station. Lots of filled drinking cups need to be ready to be dispensed very quickly to the runners as they are running past the water station. The runners are watching their time and do not want to be delayed waiting to get a drink.

Typically at race meetings open cups are used and there are only so many cups that can be lined out on a table ready for dispensing as the runners go past. In contrast using the lid of the present invention securely attached to the top of a drinking cup several filled cups may be securely stacked one on top of each other. Up to three cups
5 may be securely stacked on top of one another. This would also keep the space required for a water station to a minimum.

The finger recess 5 provides a deep recess for a single finger to enable several cups to be lifted in one hand. When dispensing cups of water to the runners it is helpful to be
10 able to hold as many cups in one hand so that there is no delay handing the drinks out as quickly as possible. The combination of the finger recess and the snap fit ring mounting means on the disposable lid 1 allows several cups to be held in one hand as the lid is able to support the weight of a cup with liquid.

15 The finger recess 5 allows a person to securely form a clamp hold on the cup by placing their thumb in the finger recess and their fingers below the cup thereby avoiding any heated or cold beverage contained in the cup. In addition the elevated raised rim section above the rim of a cup creates a cooler pocket between the contents of the cup and the lid. Using a clamp hold reduces any risk of burning fingers by
20 coming in direct contact with the main body of cup.

Once the athlete receives a cup having the lid of the present invention on top there is no risk of any spillage or leakage as they run with the drink or take a drink from the cup. The lid held securely in place on the cup means there are no spills as the
25 drinking cups are dispensed to the runners or as the athlete takes a drink. The snap fit ring provides a leak free and dripless closure on the cup. This also eliminates the problem of water going up an athlete's nose as they drink while running.

Figs. 7 and 8 show a disposable lid 15 according to another embodiment of the
30 invention. The lid 15 is substantially similar to the lid 1 which has been described with reference to Figs. 1 to 6, and similar components are identified by the same reference numerals.

In this embodiment the finger recess 16 has a concave shape. The concave shape allows a person to easily hold a number of cups stacked one on top of each other by gripping with their thumb the concave shaped finger recess 16 on the lower cup.

- 5 The disposable lids of the invention are lightweight vacuum-formed lids. They are disposable lids for attachment to a disposable cup. The lids are intended for single use and are preferably manufactured from a recyclable material. They may be manufactured from styrene, polyurethane, polypropylene or any other suitable material.

10

The disposable lids of the invention may have a vent(s) to prevent a vacuum from forming in the cup.

- 15 While the disposable lids of the invention are primarily intended for a drinking cup or container for use by athletes at running events they may also be used for securely covering any disposable cup or container for any mobile or "on the move" drinking. The disposable lids may be used on a cup or container holding hot and or cold beverages.

- 20 The lids provides a leak and spill free closure for any disposable beverage container. They may also be used for cups or containers holding hot beverages such as tea and coffees. The finger recess in the lids allows one to handle and carry disposable cups more easily.

- 25 The stacking ledge or shelf using simple resistance fit allows several cups to be securely stacked on top of each other.

The invention is not limited to the embodiments herein before described which may be varied in detail.

30

Claims

1. A disposable lid for a disposable drinking cup or container comprising:-

5 an annular mounting means for securing the lid to the open end of a cup or a container;

a raised rim section comprising a drinking spout and a finger recess;
and

10

a base section comprising a substantially annular stacking ledge and a nose recess;

15

wherein the drinking spout protrudes and extends vertically upward from the raised rim section and the finger recess is located at a side of the raised rim section directly opposed to the drinking spout.

20

2. A disposable lid as claimed in claim 1 wherein the annular mounting means comprises a continuous snap fit ring around the underside of the annular mounting means.

25

3. A disposable lid as claimed in any preceding claim wherein the nose recess is located in the centre of the lid and extends vertically downward from the stacking ledge.

30

4. A disposable lid as claimed in any preceding claim wherein the raised rim section, the stacking ledge and nose recess comprise a stepped formation.

5. A disposable lid as claimed in any preceding claim wherein the drinking spout extends upward from the raised rim section and the outer side of the protruding spout is flush with the outer wall of the raised rim section.

35

6. A disposable lid as claimed in any preceding claim wherein the drinking spout allows rapid flow of liquid from the cup.

7. A disposable lid as claimed in any preceding claim wherein the inner sidewall of the raised rim section is biased wherein the width of the raised rim section is wider at its base than at the top.
- 5 8. A disposable lid as claimed in any preceding claim wherein the finger recess comprises an indent in the raised rim section extending downward into the stacking ledge or shelf.
- 10 9. A disposable lid as claimed in claim 8 wherein the sidewall of the finger recess is adjacent the outer wall of the raised rim section.
10. A disposable lid as claimed in any preceding claim wherein the finger recess comprises a concave shape in the raised rim section.
- 15 11. A disposable lid as claimed in any preceding claim wherein the stacking ledge supports stacking of single and double walled cups.
- 20 12. A disposable lid substantially as hereinbefore described with reference to the drawings.

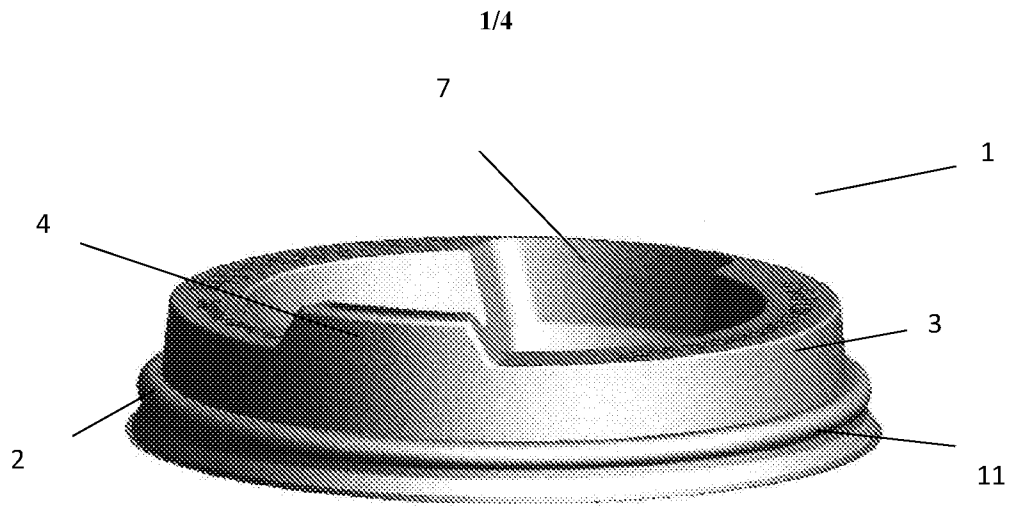


Fig. 1

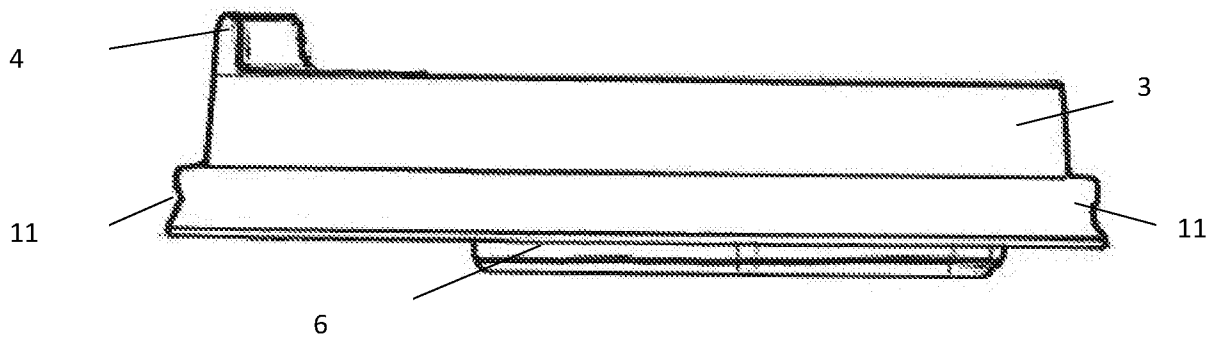


Fig. 2

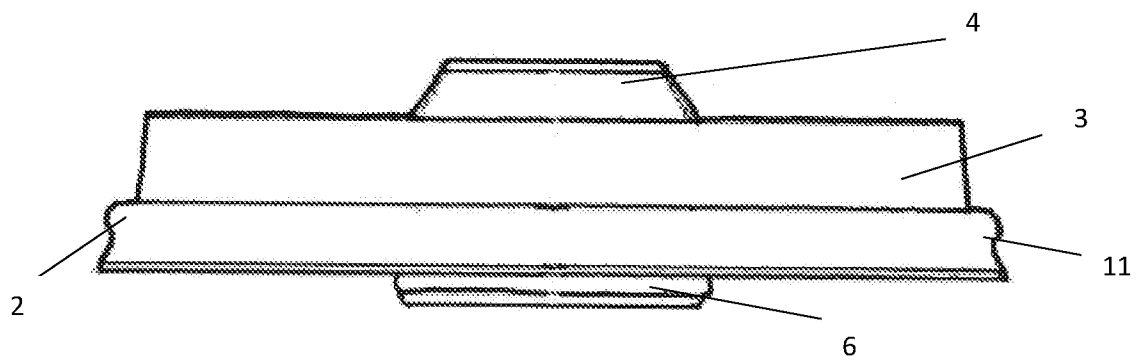


Fig. 3

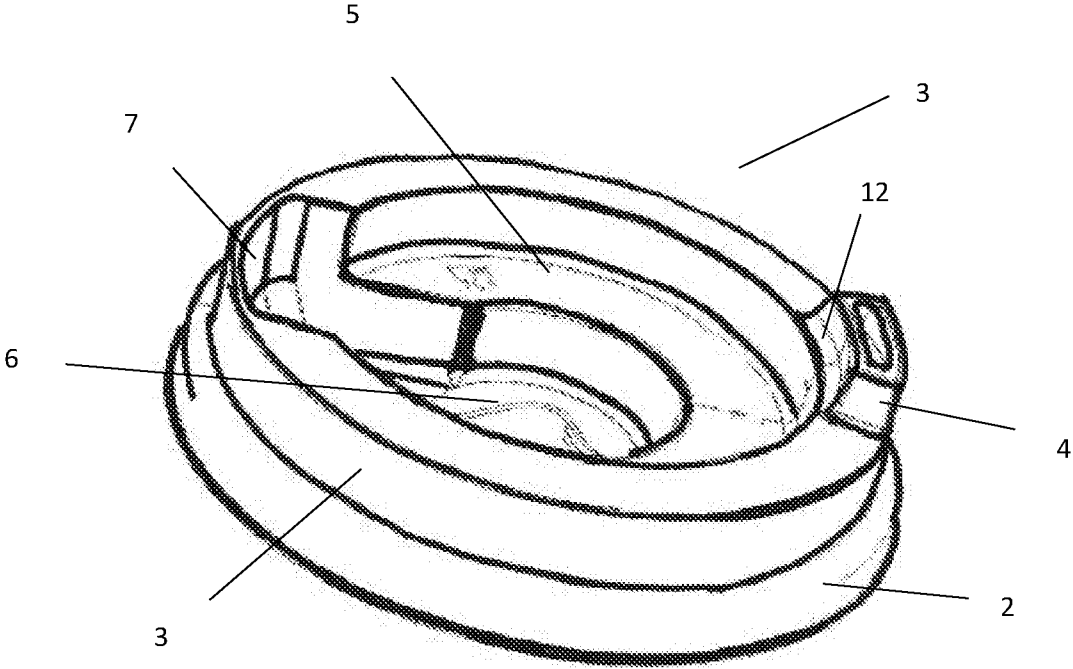


Fig. 4

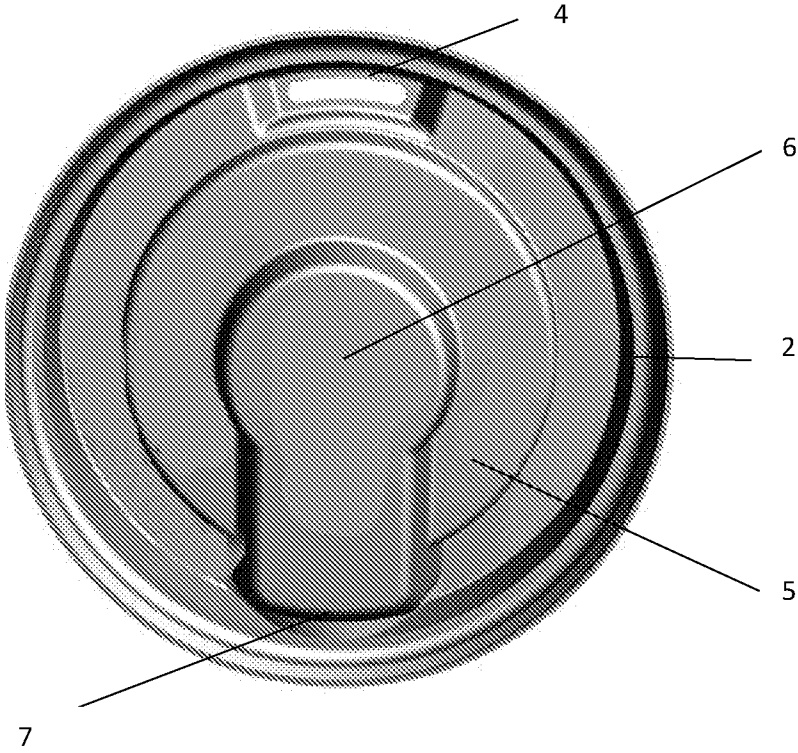


Fig. 5

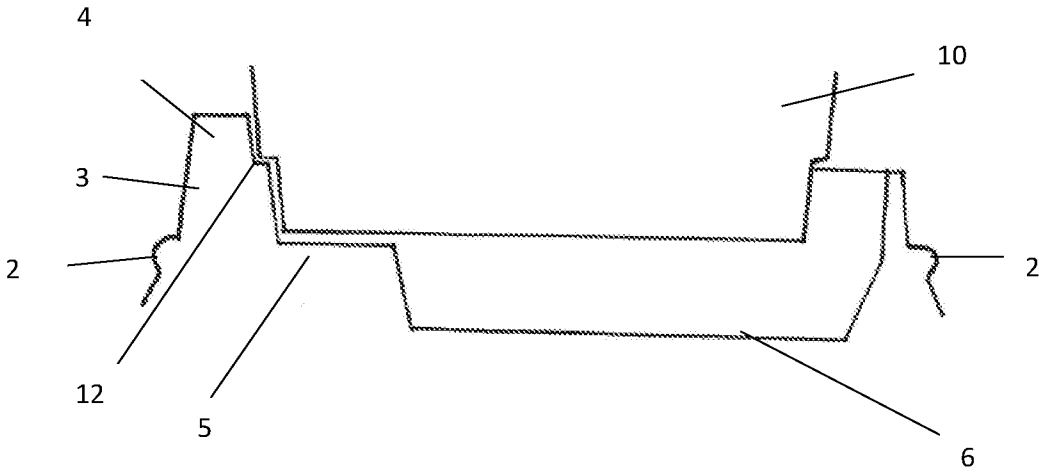


Fig. 6

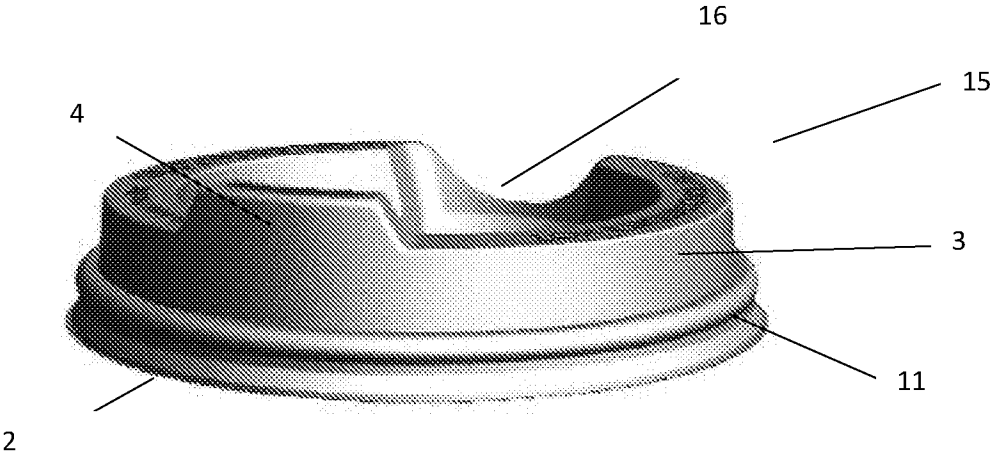


Fig. 7

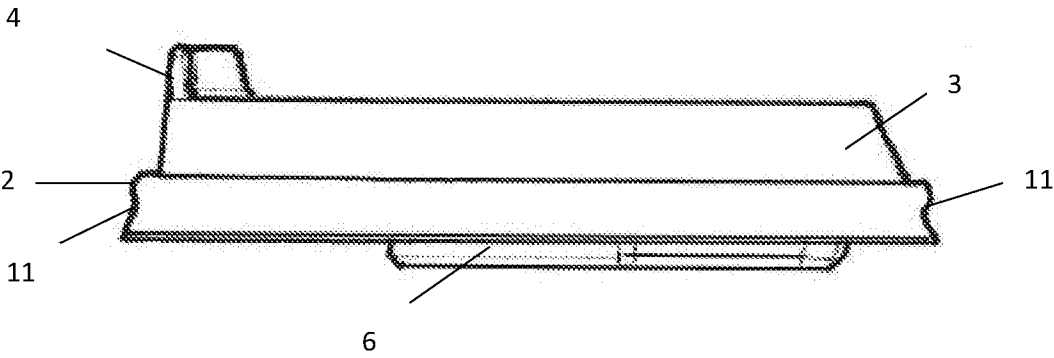


Fig. 8

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2015/056946

A. CLASSIFICATION OF SUBJECT MATTER

INV. B65D43/02
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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 practicable, search terms used)

EP0-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GB 2 307 633 A (AMT ENTERPRISES LTD AMT ESPRES [GB]) 4 June 1997 (1997-06-04) the whole document	1-11
A	----- US 2011/198351 A1 (D AMATO GIANFRANCO [IT]) 18 August 2011 (2011-08-18) paragraph [0043]; figures	1-11
Y	----- US 2009/050641 A1 (IVEY JASON ALAN [US]) 26 February 2009 (2009-02-26) paragraphs [0017], [0031]	1-11
A	----- AU 2011 100 258 A4 (REMA IND & SERV PTY LTD) 14 April 2011 (2011-04-14) page 9, line 15 - page 10, line 11; figures	1-11

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent 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

Date of the actual completion of the international search

14 December 2015

Date of mailing of the international search report

22/12/2015

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2015/056946

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 12
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: 12

The subject matter of claim 12 is defined by reference to the drawings which is not allowed by the PCT (see rule 6.2 PCT). The claim does not define any clear structural features or limitations, consequently the scope of the claim is not clear (Art. 6 PCT) and a meaningful search is not possible (Art 17 PCT).

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guidelines C-IV, 7.2), should the problems which led to the Article 17(2) declaration be overcome.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2015/056946

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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AU 2011100258	A4	14-04-2011	NONE
