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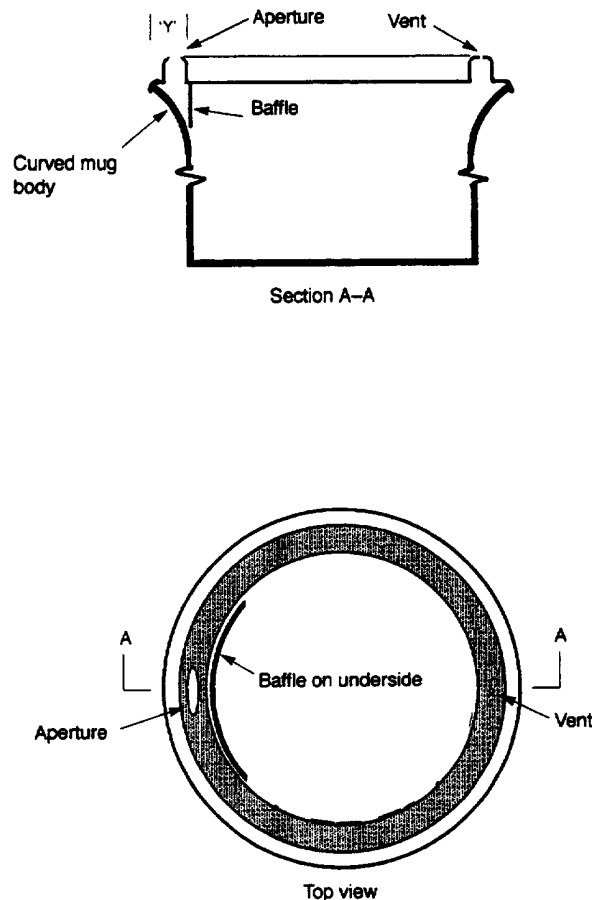
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(72) Inventor(s) James Barrie Harper	(58) Field of Search UK CL (Edition O) A4A ALC ALN ALQ ALX , B8T TCA TDAX TWX INT CL ⁶ A45F 3/16 3/18 , A47G 19/22 , A61J 9/00 9/04, B65D 47/06 51/24 ONLINE:WPI
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(54) **Splash-resistant lidded drinking cup**

(57) A baffle is incorporated in the lid of a drinking cup or mug to prevent liquid gaining unimpeded direct access to a drinking aperture in the lid thus reducing the risk of accidental splashing, especially when used in a vehicle. The design of the cup and lid is co-ordinated so that the baffle depends from the lid in close proximity to the side wall of the cup to provide a restricted or tortuous route for liquid to the aperture. The lid is also provided with a vent.

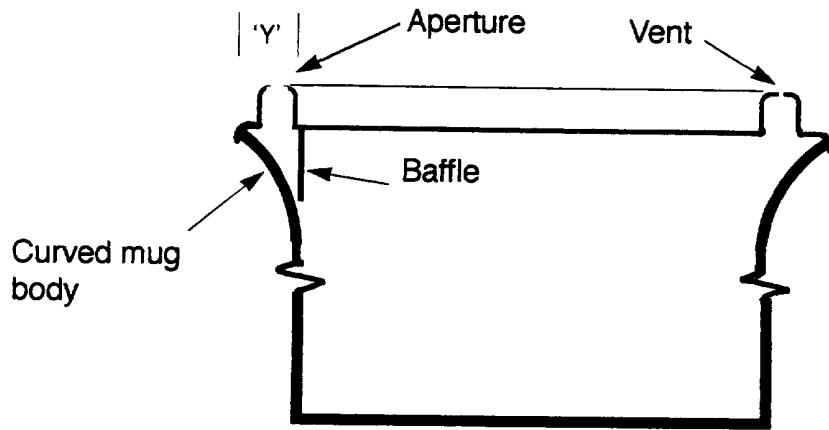
Drawing No.1



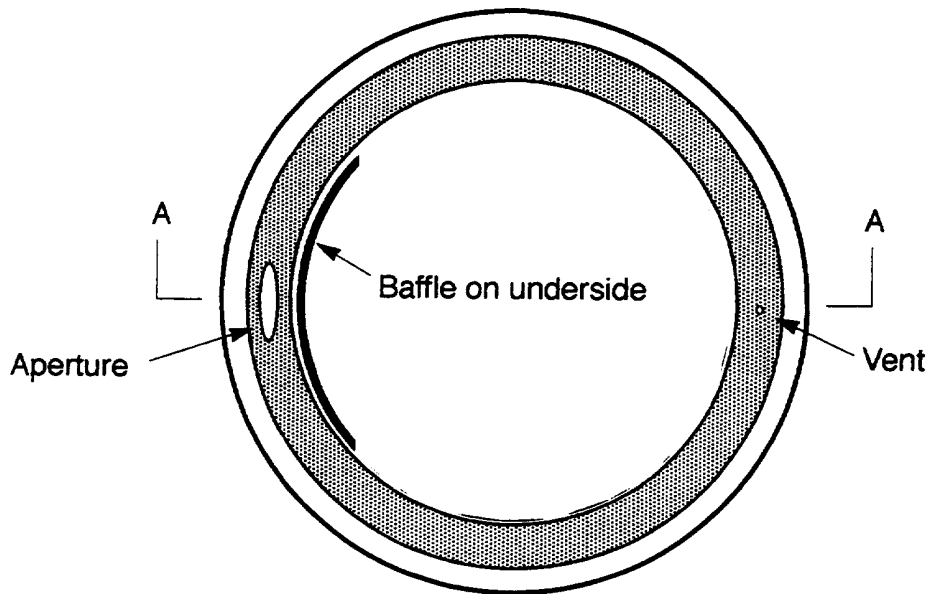
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Drawing No.1

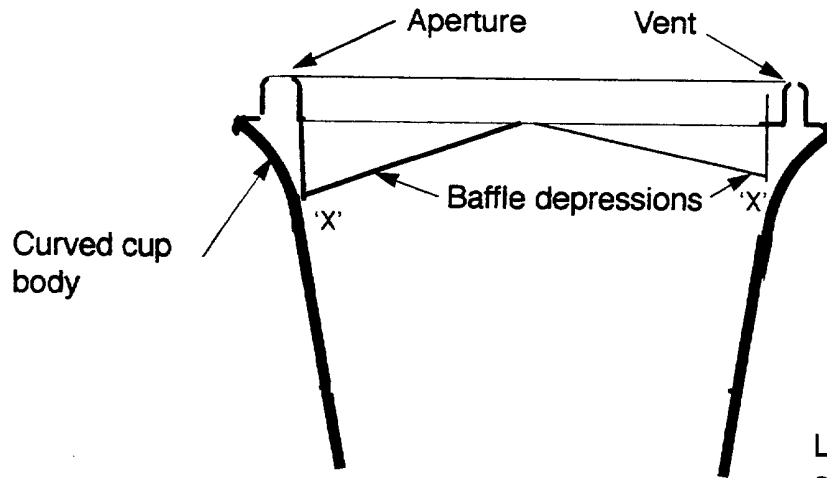


Section A-A

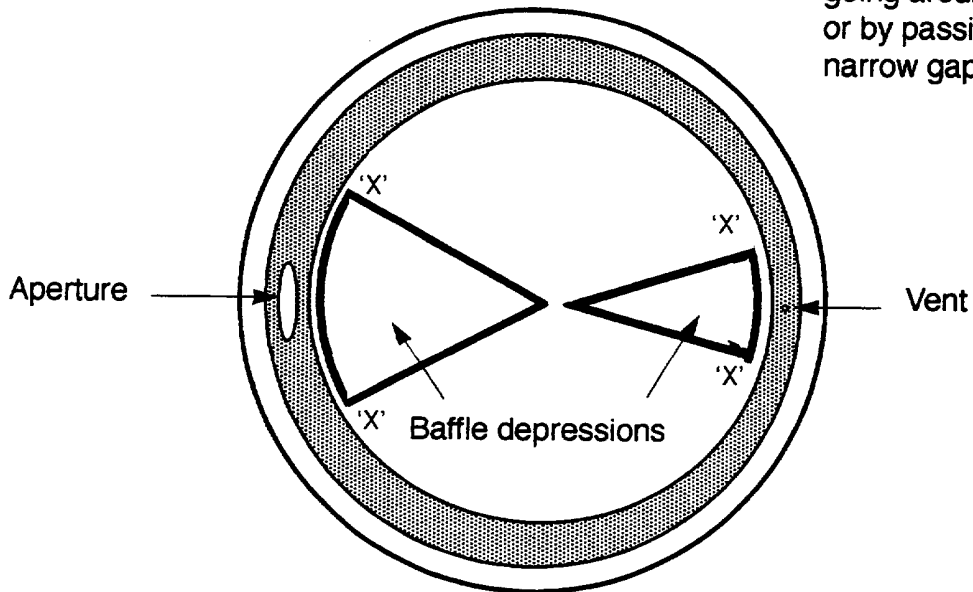


Top view

Drawing No.2



Liquid can only gain access to aperture by going around the baffle or by passing through narrow gaps at 'X'.



Klipman 'Spill resistant lid' – for cups and mugs

Description

Many cups and mugs, made for travelling, have fitted lids which are so designed as to reduce the risk of spilling whilst still allowing a drink to be sipped without removing the lid. Such mugs are extensively used for drinking in motor vehicles – often on the move. Cups and mugs are either disposable, for single use, or 'rotatable' for re-use time after time.

Disposable cups and lids are designed for stacking whereas rotatable mugs and lids are not.

In several forms of disposable lid a raised portion contains a small aperture through which the drink can be sipped without the need to remove the lid from the cup. They may be called 'Sip Thru' or 'Travel' Lids and are not to be confused with 'Tear Top' or 'Lift Tab' lids. They are quite effective with careful use but are not spill proof when shaken quickly sideways, which can cause a 'blob' of liquid to be expelled violently upwards through the aperture only to drop down onto the clothing of a vehicle occupant – possibly causing staining. Such an occurrence is a deterrent to drinking 'In-car', it can be dangerous and is therefore counter-productive in the provision of drink services to motorists such as available at service station forecourts.

Rotatable mugs have a moulded lid, often containing a lower portion – as opposed to a raised portion – again containing an aperture but which allows limited egress of liquid for drinking.

The purpose of the present invention is to provide a lid which is highly spill resistant and which prevents the 'blob' syndrome from occurring. This requires the lid design and the mug design to be co-ordinated so that together they form a convoluted passage for the movement of liquid thereby slowing it down and preventing a blob from forming and being expelled through the aperture.

In the present design this is achieved by forming a baffle in the lid which, by its proximity to the curved (or stepped) body of the mug or cup, blocks the direct access of liquid to the aperture. The principle can be applied to either disposable or rotatable lids. In the case of the latter it would be necessary for the baffle to be formed by a depression to facilitate stacking but in the case of the former it might be of solid form to facilitate injection moulding.

The first novelty in this approach is the combination of the design of the cup (or mug) wall with the design of the lid so as to enable a baffle, formed in the lid, to be in close proximity to and able to work in association with, the cup wall to provide a tortuous route for the liquid within the cup to gain access to the outlet aperture. Hitherto lids have been designed to fit existing mug designs and it has not been possible to maximise the resistance to spillage in the way now envisaged.

The second novelty is to form the aperture within the width of the outer extremity of the cup or mug and the inner wall as shown at 'Y' in drawings 1&2 in such a way as to enable the baffle to be positioned inside the aperture but close to the inner wall when the lid is placed in position.

Claims

1. I claim the innovative step of co-ordinating the design of the cup or mug with the design of the lid so as to be able to incorporate a means of greatly improving the resistance to spillage of drinks by the mug wall and the lid being associated in a much more effective way than achieved hitherto.

2. I claim the innovation of incorporating a baffle in the construction of a lid which, working in close association with the cup or mug wall, or independently of it, creates a restricted or tortuous route for the liquid to gain access to the outlet aperture (rather than restricting the size of the aperture itself) thereby effectively increasing the resistance to spillage.

Amendments to the claims have been filed as follows

1. I claim the innovative step of co-ordinating the design of the cup or mug with the design of the lid so as to be able to incorporate a means of greatly improving the resistance to spillage of drinks by the mug wall and the lid being associated in a much more effective way than achieved hitherto.

2. I claim the innovation of incorporating a baffle in the construction of a lid which, working in close association with the cup or mug wall or independently of it, creates a restricted or tortuous route for the liquid to gain access to the exit aperture (rather than restricting the size of the aperture itself) thereby effectively increasing the resistance to spillage.



Application No: GB 9605316.0
Claims searched: -

Examiner: Stephen Smith
Date of search: 14 May 1997

**Patents Act 1977
Search Report under Section 17**

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:
UK CI (Ed.O): A4A(ALC, ALN, ALQ, ALX); B8T(TCA, TDAX, TWX)
Int CI (Ed.6): A45F 3/16, 3/18; A47G 19/22; A61J 9/00, 9/04; B65D 47/06, 51/24
Other: ONLINE:WPI

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 2095099 A (PHILIP) see claim 1	
X	GB 2053865 A (PHILIP) see lines 59-94 of page 2	
X	EP 0265125 A1 (JACKEL) see lines 1-9 of column 3	

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.