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- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

[Continued on next page]

(54) Title: CONTAINER CLOSURE HAVING MEANS FOR INTRODUCING AN ADDITIVE INTO THE CONTENTS OF THE CONTAINER

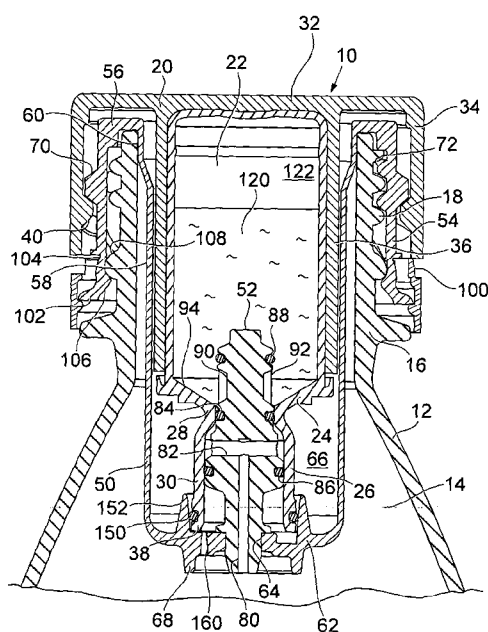


Fig. 1

(57) Abstract: A closure device (10) for releasing an additive liquid (20) into a liquid in a container (12) by operation of the closure device and to a container including such a closure device. The closure device comprises a cap member (20) defining a fluid chamber (22) having a neck (26) at a lower end thereof and a casing (50) substantially surrounding the fluid chamber and having a plug member (52) extending into the neck of the fluid chamber, wherein the neck has an upper portion (28) having a first diameter, and wherein the plug member comprises a primary circumferential seal (84) adapted to seal between the plug member and the upper portion of the neck, an upper circumferential seal (88) adapted to seal between the plug member and the upper portion of the neck, and a nozzle (80) directed away from the fluid chamber and in fluid communication with the exterior surface of the plug member below the primary circumferential seal. The cap member is arranged to be lifted relative to the casing from a closed position, through an open position, to a sealed position.



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18 April 2013

INTERNATIONAL SEARCH REPORT

International application No

PCT/GB2012/051341

A. CLASSIFICATION OF SUBJECT MATTER

INV. B65D51/28

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)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2007/129116 A1 (GIZMO PACKAGING LTD [GB]; BERNARD FRUTIN [GB]) 15 November 2007 (2007-11-15) cited in the application the whole document	1-19, 52-59
A	WO 2007/117070 A1 (LEE JEONG-MIN [KR]; LEE SEONG-JAE [KR]) 18 October 2007 (2007-10-18) the whole document	1-19, 52-59
A	WO 2008/023197 A1 (GIZMO PACKAGING LTD [GB]; FRUTIN BERNARD [GB]) 28 February 2008 (2008-02-28) the whole document	1-19, 52-59



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

24 August 2012

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB2012/051341

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.:
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:
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:

see additional sheet

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.:

1-19, 52-59

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

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-19, 52-59

Primary seal and upper seal on the plug allowing the cap member to be lifted from a closed position, through an open position, to a sealed position : it prevents the risk of the contents dripping from the nozzle, after having released the additive liquid.

2. claims: 20-35, 60-63

Primary seal and a secondary seal on the plug allowing the fluid chamber to be made of a single relatively stiff moulded material, making the conception of the whole closure easier and less expensive to manufacture.

3. claims: 36-51, 64-67

Primary seal, secondary seal and vent allowing the cap member to be lifted from a closed position, through an intermediate position, to an open position. In the intermediate position, the pressurised gas in the main liquid compartment is allowed to pass through the vent and exit to the atmosphere, thereby allowing the additive liquid to be released in the container through the nozzle.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/GB2012/051341

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2007129116 A1	15-11-2007	AT 500159 T AU 2007246847 A1 CA 2650331 A1 DK 2013105 T3 EP 2013105 A1 JP 5105553 B2 JP 2009535269 A NZ 572198 A PT 2013105 E US 2009236244 A1 WO 2007129116 A1	15-03-2011 15-11-2007 15-11-2007 20-06-2011 14-01-2009 26-12-2012 01-10-2009 30-09-2011 09-06-2011 24-09-2009 15-11-2007
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