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AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,
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DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
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KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG,
MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM,
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TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU,

[Continued on next page]

(54) Title: CONNECTOR ASSEMBLY FOR BAG-IN-BOX

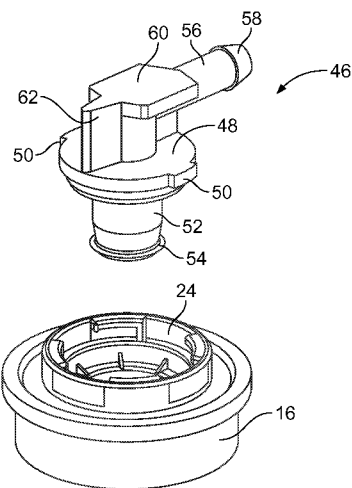


FIG. 7

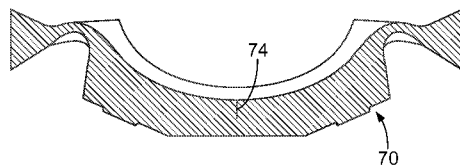


FIG. 8

(57) Abstract: Dispensing assembly 10 for a liquid container 12 including a ring part 16 configured to be mounted to a liquid container, a resilient member 20 positioned in the ring part to be in contact with the liquid contents of the liquid container, a ring member 24 mountable to the ring part to secure the resilient member 20 to the ring part, and a hollow connecting member 46 with an outlet. The connecting member is releasably securable to the ring member and includes a hollow projecting member 52 which, when the connecting member is secured to the ring member, engages the resilient member so as to urge an opening 22 in the resilient member to permit liquid in the container to pass into the connecting member and subsequently out through the outlet.



TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

— *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))*

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INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2015/002107

A. CLASSIFICATION OF SUBJECT MATTER

INV. B65D77/06 B65D47/06
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 B67D

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.
X	WO 2010/080897 A1 (LIQUI BOX CORP [US]; JOHNSON JAMES W [US]) 15 July 2010 (2010-07-15)	1-3,7,14
Y	page 4, line 20 - line 28 page 6, line 10 - line 24 page 7, line 12 - line 17 -----	8
X	EP 2 479 118 A1 (FRES CO SYSTEM USA INC [US]) 25 July 2012 (2012-07-25)	1,2,4
Y	paragraph [0020] - paragraph [0026] -----	8
X	WO 2012/150937 A1 (APTARGROUP INC [US]; HATTON JASON D [US]; GAUS DAVID J [US]; HESS JOHN) 8 November 2012 (2012-11-08)	1-4
	paragraph [0042] - paragraph [0043] -----	

☐ 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

9 February 2016

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Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2010080897 A1	15-07-2010	AU 2010203591 A1	21-07-2011
		CA 2749308 A1	15-07-2010
		CN 102308138 A	04-01-2012
		CN 103538778 A	29-01-2014
		CO 6410252 A2	30-03-2012
		EP 2386040 A1	16-11-2011
		ES 2538472 T3	22-06-2015
		HK 1163782 A1	18-12-2015
		JP 5655008 B2	14-01-2015
		JP 2012514567 A	28-06-2012
		PL 216609 B1	30-04-2014
		US 2010176152 A1	15-07-2010
		WO 2010080897 A1	15-07-2010
EP 2479118 A1	25-07-2012	EP 2479118 A1	25-07-2012
		US 2012187158 A1	26-07-2012
WO 2012150937 A1	08-11-2012	CA 2834683 A1	08-11-2012
		CN 103501625 A	08-01-2014
		EP 2704585 A1	12-03-2014
		ES 2546493 T3	24-09-2015
		RU 2013153580 A	10-06-2015
		US 2014224356 A1	14-08-2014
		WO 2012150937 A1	08-11-2012

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2015/002107

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.:

1-4, 7-10, 14-16

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: 1-4, 7-10, 14-16

Dispensing assembly for a liquid container, having a self-closing resilient member valve

2. claims: 5, 22-24

Dispensing assembly for a liquid container, wherein a connecting member is secured to a ring member by rotating the connecting member with respect to thereto

3. claims: 6, 25-28

Dispensing assembly for a liquid container configured to be connected to a spout

4. claims: 11-13

Dispensing assembly for a liquid container, with a plug

5. claim: 17

Dispensing assembly for a liquid container, wherein a connecting member is secured to the ring member by means of a barb

6. claims: 18-21

Dispensing assembly for a liquid container comprising an actuatable valve
