



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 281 626 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
05.03.2003 Bulletin 2003/10

(51) Int Cl.7: **B65D 39/08, B65D 101/00**

(43) Date of publication A2:
05.02.2003 Bulletin 2003/06

(21) Application number: **02078121.7**

(22) Date of filing: **01.08.2002**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
IE IT LI LU MC NL PT SE SK TR**
Designated Extension States:
AL LT LV MK RO SI

(72) Inventors:
• **Ferrari, Guglielmo**
I-26851 Borgo S. Giovanni (Lodi) (IT)
• **Ferrari, Silvia**
I-26851 Borgo S. Giovanni (Lodi) (IT)

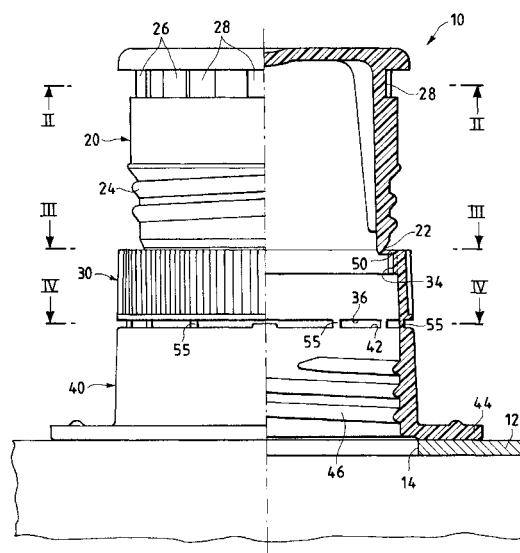
(30) Priority: **02.08.2001 IT MI20011692**

(74) Representative: **De Gregori, Antonella**
Ing. Barzano & Zanardo Milano S.p.A.
Via Borgonuovo 10
20121 Milano (IT)

(54) **Closing device with seal for a container equipped with an opening**

(57) A closing device (10, 110, 210) for a container (12, 112, 212) equipped with an opening (14, 114, 214) at which a cylindrical distribution orifice (40, 140, 240) closed with a cap (20, 120, 220) with interposed threading (24, 46, 124, 146, 224, 246), and seal elements being foreseen (55, 155, 255) between said orifice (40, 140, 240) and said cap (20, 120, 220) to demonstrate a first use for said container (12, 112, 212); the closing device (10, 110, 210) is obtained from the moulding of a single piece and in a first position, immediately after moulding, foresees between the cap (20, 120, 220) and the distribution orifice (40, 140, 240), these sealing elements, that comprise a safety ring (30, 130, 230), that is connected, at least at its first end, to a rim (22, 122, 222) free of the cap (20, 120, 220), by bridge elements (50, 150, 250), and, at least at its second end, to the distributor orifice (40, 140, 240), by these sealing elements (55, 155, 255).

Fig.1



EP 1 281 626 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 02 07 8121

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 5 711 441 A (ADAMS BRIAN M ET AL) 27 January 1998 (1998-01-27)	1, 5, 6	B65D39/08 B65D101/00
A	* column 2, line 42 - column 3, line 35 * * column 4, line 6 - line 22; figures 8, 9 *	8	
A, P	WO 01 74683 A (MODULPAC AB ; MALMBORG BENGT (SE)) 11 October 2001 (2001-10-11) * claim 1; figures *	2, 3	
A	WO 99 50050 A (DUDZIK HENRYK) 7 October 1999 (1999-10-07) * page 6, line 14 - line 22; figures 1, 3, 4 *	2, 3	
A	US 5 249 695 A (ADAMS BRIAN M ET AL) 5 October 1993 (1993-10-05) * column 4, line 4 - line 19; figure 11 *	4	
A	WO 97 12813 A (PORTOLA PACKAGING INC) 10 April 1997 (1997-04-10) * figure 20 *	7	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			B65D
Place of search		Date of completion of the search	Examiner
THE HAGUE		15 January 2003	Bridault, A
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03 92 (P04001)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 02 07 8121

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

15-01-2003

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 5711441	A	27-01-1998	WO	9937547 A1	29-07-1999
			ZA	9800565 A	30-07-1998
			AU	5928698 A	09-08-1999
			CA	2318647 A1	29-07-1999
			EP	1058652 A1	13-12-2000
WO 0174683	A	11-10-2001	AU	4298901 A	15-10-2001
			SE	0001147 A	01-10-2001
			WO	0174683 A1	11-10-2001
WO 9950050	A	07-10-1999	AU	2945499 A	18-10-1999
			EP	1068065 A1	17-01-2001
			WO	9950050 A1	07-10-1999
US 5249695	A	05-10-1993	US	5512228 A	30-04-1996
			US	5597082 A	28-01-1997
			US	5678719 A	21-10-1997
			US	5348184 A	20-09-1994
			AT	203483 T	15-08-2001
			AU	653779 B2	13-10-1994
			AU	1134092 A	10-09-1992
			CA	2062008 A1	06-09-1992
			DE	69231954 D1	30-08-2001
			EP	0502716 A2	09-09-1992
			IE	920680 A1	09-09-1992
			JP	5196141 A	06-08-1993
			MX	9200986 A1	01-09-1992
			WO	9215496 A1	17-09-1992
			US	5397013 A	14-03-1995
			US	5174465 A	29-12-1992
			US	5303837 A	19-04-1994
			US	5271519 A	21-12-1993
			US	5348182 A	20-09-1994
			US	5348183 A	20-09-1994
WO 9712813	A	10-04-1997	WO	9712813 A1	10-04-1997
			AU	3952695 A	28-04-1997
			EP	0873264 A1	28-10-1998