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(54) **Sealing mechanism for a vessel and method of sealing a vessel by means of said sealing mechanism**

(57) A sealing mechanism for a vessel (2; 20) which has an opening portion (3) closable by a cap (1) said cap (1) having a plug portion (4) and a seal plug (5); the plug portion (4) having an end wall (11) for covering the opening portion (3) of said vessel (2), a side wall (12), and a cylindrical wall (15) projecting generally axially from the end wall (11);

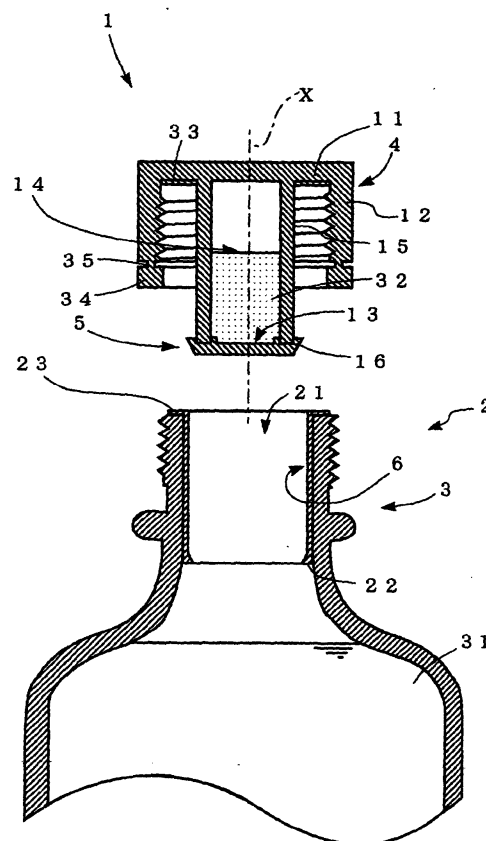
the side wall (12) having an inner circumferential surface arranged to engage an outer circumferential surface of the opening portion (3);

the cylindrical wall (15) being positioned inwardly of the side wall (12), and forming a receiving chamber (14), the receiving chamber having an opening (13) at its end remote from the end wall (11);

the seal plug (5) being removably attachable to the cylindrical wall so as to close the receiving chamber opening (13), and having an outer circumferential portion (16) arranged, in use, to project beyond the outer circumference of the cylindrical wall (15);

wherein the opening portion (3) of said vessel (2; 20) is provided with an inwardly protruding portion (22), which is so dimensioned and arranged that the outer circumferential portion (16) of the seal plug (5) may pass the protruding portion (22) when the cap (1) is applied to the vessel (2; 20), but may not pass the protruding portion (22) when the cap (1) is removed, thereby causing removal of the seal plug (5) from the receiving chamber (14).

Fig.1





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EUROPEAN SEARCH REPORT

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EP 04 25 2858

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	PATENT ABSTRACTS OF JAPAN vol. 1996, no. 03, 29 March 1996 (1996-03-29) -& JP 07 300162 A (YOSHINO KOGYOSH CO LTD), 14 November 1995 (1995-11-14) * paragraphs [0004] - [0011] * * figures 1-6 *	1-3,7	B65D51/28 B65D81/32 B65D8/02
X	FR 1 562 857 A (CENTRE EUROPEEN DU CONDITIONNEMENT PLASTIQUE) 11 April 1969 (1969-04-11) * page 1, column 1, paragraph 3 * * figure 1 *	1	
A	GB 2 371 286 A (BRACKENS ENTPR) 24 July 2002 (2002-07-24) * abstract; figures 1-4 *	2	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			B65D
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 31 August 2004	Examiner Piolat, O
<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>			

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Application Number
EP 04 25 2858

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet 8

- ☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1, 2-3, 7



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**LACK OF UNITY OF INVENTION
SHEET B**

Application Number
EP 04 25 2858

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1,2-3,7

Sealing mechanism for a vessel whereby an inner sleeve is to be arranged in the opening portion of said vessel

2. claims: 1,4-6,8

Sealing mechanism for a vessel whereby an opening portion of the vessel is to be joined to a storage portion of said vessel

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

EP 04 25 2858

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
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31-08-2004

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JP 07300162	A	14-11-1995	NONE	
FR 1562857	A	11-04-1969	FR 94886 E	16-01-1970
GB 2371286	A	24-07-2002	NONE	

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82