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(54) **HERMETIC SEAL FOR FOIL-LINED FIBC , BAG**

(57) The invention described herein generally pertains to a system and method related to a hermetic seal assembly used with a bag to provide a hermetic seal for the bag that can be opened and closed while maintaining the hermetic seal for the bag and materials stored therein.

The hermetic seal assembly can include a lid and a collar, wherein the collar can be releasably affixed to the bag or integrated into an opening of the bag. The lid can include a sampling port and a corresponding removeable cap.

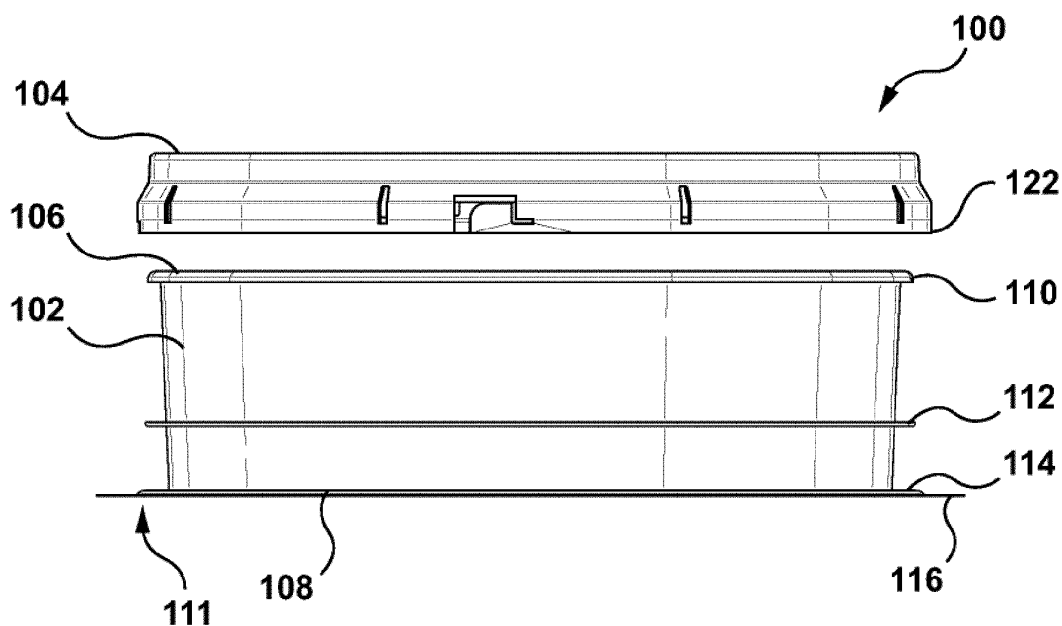


FIG. 1



EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	EP 3 348 496 A2 (LINCOLN GLOBAL INC [US]) 18 July 2018 (2018-07-18) * paragraph [0011] - paragraph [0046]; figures 1-21 *	1-7	INV. B65D88/16
A	WO 2005/115879 A1 (CRACKERBAG S LTD [GB]; JERRUM ANDREW MARK [GB] ET AL.) 8 December 2005 (2005-12-08) * page 7, line 14 - page 17, line 22; figures 1-8B *	1-7	
A	US 2006/096985 A1 (STOLZMAN MICHAEL D [US]) 11 May 2006 (2006-05-11) * paragraph [0021] - paragraph [0035]; figures 1-7 *	1-7	
			TECHNICAL FIELDS SEARCHED (IPC)
			B65D
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 29 April 2020	Examiner Lämmel, Gunnar
CATEGORY OF CITED DOCUMENTS 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 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			

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 EPO FORM 1503 03.82 (P04C01)



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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due 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 those claims for which no payment was due.

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 B

☐ 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:

1-7

☐ The present supplementary 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 (Rule 164 (1) EPC).



LACK OF UNITY OF INVENTION **SHEET B**

Application Number

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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: 1-7

A seal assembly system for a bulk bag, comprising a bag that stores a material, the bag includes an opening; the bag includes an inner layer and an outer layer, wherein the inner layer is a foil laminate and the outer layer is a ribbon-woven structure made of polypropylene; a collar having a top end and a bottom end opposite thereto, an internal wall that defines a through passage that extends between the top end and the bottom end; the collar having a lip on the top end; a web on the bottom end; and the web of the collar is integrated to the inner layer and the outer layer at the opening; a lid that is configured to releasably attach to the lip of the collar to provide a hermetic seal at the opening, wherein the lid comprises a sampling port and a removeable cap configured to seal the sampling port when attached to the sampling port, and provide access to the material when removed from the sampling port, while the lid remains attached to the lip of the collar.

2. claims: 8-14

A bag configured to hold a volume of a material, comprising an opening on the top side of the bag; an inner layer that is configured to provide an airtight enclosure for the material, wherein the airtight enclosure can be accessed via the opening; an outer layer that is positioned around the inner layer, wherein the outer layer provides structural support and integrity with a ribbon weave; the opening includes a neck formed by at least one of the inner layer or the outer layer; a collar having a top end and a bottom end opposite thereto, an internal wall that defines a through passage that extends between the top end and the bottom end, an external wall opposite the internal wall, and the collar having a thickness and a diameter for the through passage; the collar positioned over the neck and with at least one of the inner layer or the outer layer folded over a lip of the collar, wherein at least one of the inner layer or the outer layer are folded onto the external wall of the collar; a lid that is releasably coupled to the collar, the lid when attached to the collar applies a force to press the lid, the outer layer, the inner layer, and the lip of the collar together, wherein the lid comprises a sampling port and a removeable cap configured to seal the sampling port when attached to the sampling port, and provide access to the material when removed from the sampling port, while the lid remains coupled to the collar.

3. claim: 15

**LACK OF UNITY OF INVENTION
SHEET B**

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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:

A seal assembly system for a bulk bag, comprising a bag that stores a material having a first end and a second end opposite thereto, the bag includes an opening at the first end; the bag includes an inner layer and an outer layer, wherein the inner layer is a foil laminate and the outer layer is a ribbon-woven structure made of polypropylene; a collar having a top end and a bottom end opposite thereto, an internal wall that defines a through passage that extends between the top end and the bottom end; the collar further includes an external wall; the collar having a lip on the top end; a web that is perpendicular and outward from the external wall; and a support rib in between the lip and the web; the collar is affixed around a portion of the bag such that the outer layer is in contact with the internal wall and the external wall; a compression member that is configured to be positioned around the collar to compress the outer layer and the inner layer toward the external wall of the collar; and a lid having a top side with a first diameter, the lid is configured to releasably attach to the lip of the collar to provide a hermetic seal at the opening, wherein the lip is in contact with the outer layer, the lid is in contact with the inner layer, and the lid couples to the lip with the outer layer and the inner layer in between, the lid comprises a sampling port having a second diameter that is less than the first diameter, and a removeable cap configured to seal the sampling port when attached to the sampling port, and provide access to the material when removed from the sampling port, while the lid remains attached to the lip of the collar.

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

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5 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.

29-04-2020

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 3348496 A2	18-07-2018	BR 102018000803 A2	30-10-2018
		CA 2991884 A1	17-07-2018
		CN 108328091 A	27-07-2018
		EP 3348496 A2	18-07-2018
		JP 6673946 B2	01-04-2020
		JP 2018115032 A	26-07-2018
		PL 3348496 T3	01-06-2020
		RU 2018101295 A	17-07-2019
		US 2018201438 A1	19-07-2018

WO 2005115879 A1	08-12-2005	NONE	

US 2006096985 A1	11-05-2006	NONE	
